

Clean Energy Tax Credits and Mitigating Investment Risk

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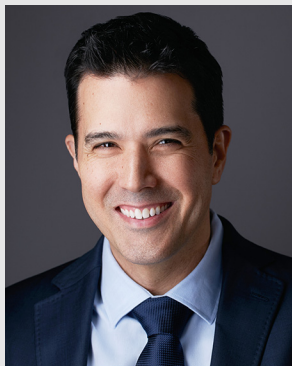
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In this article, the authors examine the section 48 energy investment tax credit, the section 45 renewable electricity production tax credit, and the section 45Q tax credit for carbon capture and sequestration.

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I. Introduction

Promoting the development of renewable energy projects to reduce negative environmental effects is a significant policy objective of the U.S.

government.¹ The IRC uses tax credits to encourage taxpayer investment in clean energy initiatives like wind, solar, and carbon capture and sequestration (CCS)² projects.³ Recent legislation and increases in public awareness of environmental issues and scrutiny of businesses' environmental impacts have also played a motivational role.⁴ As a result, many investors are betting that clean energy plays a major part in the energy mix of the future and are making substantial investments in wind, solar, and CCS projects.⁵

This article examines the section 48 energy investment tax credit, the section 45 renewable electricity production tax credit (PTC), and the section 45Q tax credit for CCS. First, it provides an overview of each tax credit, analyzes its current state, and describes how it is enhanced by the enactment of the Inflation Reduction Act of 2022 (IRA, H.R. 5376). Second, it summarizes common tax equity financing structures. Third, it identifies

¹The United States has a goal of reducing emissions by 50 percent to 52 percent below 2005 levels by 2030 and putting technology and infrastructure in place to achieve net-zero emissions no later than 2050. U.S. State Department and Executive Office of the President, "The Long-Term Strategy of the United States, Pathways to Net-Zero Greenhouse Gas Emissions by 2050" (Nov. 2021).

²Although various terms are used to describe CCS projects, including carbon capture and sequestration; carbon capture and storage; carbon capture, sequestration, and storage; or carbon capture, utilization, and storage, references to CCS throughout this article are intended to encompass the capture, sequestration, and storage of carbon oxide as contemplated by section 45Q.

³Sections 45, 45Q, and 48. Clean energy transactions may also be entitled to other tax benefits. *See, e.g.*, section 168(k).

⁴Inflation Reduction Act of 2022 (IRA, H.R. 5376); Michael O'Leary and Warren Valdmanis, "An ESG Reckoning Is Coming," *Harv. Bus. Rev.* (Mar. 4, 2021); Andrew Revkin, "Most Americans Now Worry About Climate Change — And Want to Fix It," *National Geographic*, Jan. 23, 2019.

⁵Data provided by analysts at PitchBook Data Inc. show that private equity invested more than \$23 billion and \$15 billion in the renewable energy sector and more than \$23 billion and \$50 billion in the clean technology sector in 2020 and 2021, respectively. Further, venture capital investments in the carbon technology space, including CCS and related technologies, reached approximately \$335 million and \$670 million in 2020 and 2021, respectively.

various tax risks associated with structuring clean energy projects, qualifying for clean energy tax credits, and achieving the full anticipated benefit of those tax credits. Finally, it explains how stakeholders in clean energy projects can use tax credit insurance to mitigate these risks and provide financial certainty to their investments.⁶

II. Clean Energy Tax Credits

The primary purpose of the federal income tax system is to raise revenue. However, tax-based incentives or tax expenditures — wholly unrelated to revenue-raising — are commonly used to implement the government's social, economic, and political goals.⁷

Tax incentives are the government's primary tool for promoting energy-based goals.⁸ Instead of providing public investment incentives such as direct governmental grants, or increasing participation through compulsory regulations or taxes on pollution and emissions, the U.S. government has historically used tax incentives to encourage private energy-related investment and development.⁹

Congress first began using tax incentives to encourage the shift away from oil and gas and to further energy conservation in the late 1970s.¹⁰ Today, the code provides various tax incentives, including tax credits, intended to encourage investment in renewable energy and environmental initiatives, including wind, solar, and CCS.¹¹ Fostering development of clean energy projects will continue as a significant policy objective of the United States for the foreseeable

future. The federal government recently reconfirmed its aggressive commitment to reduce carbon emissions and limit global warming and enacted legislation to spur the growth of clean energy investment and adoption.¹²

Tax credits are one type of governmental tax expenditure intended to encourage public policy objectives, such as the efficient use of energy and the production of energy from renewable sources.¹³ Tax credits reduce a taxpayer's income tax liability to the federal government dollar for dollar. For example, if a corporate taxpayer subject to a 21 percent corporate tax rate has adjusted gross income of \$100 million in 2021, it would owe \$21 million in tax for that year. But if that taxpayer is eligible for a \$2 million federal income tax credit for 2021, its tax liability is reduced dollar for dollar to \$19 million.

The United States' principal clean energy tax credit incentives are the ITC and PTC. The ITC and PTC have measurably contributed to investment and growth in the renewable solar and wind energy industries.¹⁴ The ITC is a one-time tax credit equal to a percentage of the amounts invested in eligible renewable energy property, and the PTC is a per-kilowatt-hour tax credit for electricity generated from qualified renewable energy resources over 10 years.

The Bipartisan Budget Act of 2018's revamp of the section 45Q tax credit has led to a renewed interest in that credit.¹⁵ The section 45Q tax credit is an amount per metric ton of qualified carbon oxide captured and sequestered over 12 years.

In long-awaited legislation for the clean energy industry, the Senate released the IRA on July 27, which is based on the 2021 Build Back Better Act passed by the House of

⁶ Tax insurance goes by various names, including tax liability insurance, tax opinion insurance, tax risk insurance, tax risk transactional insurance, and tax indemnity insurance. For a detailed analysis of tax insurance, including its many uses and why it is the preferred solution to mitigate contingent risk for some tax positions, see Matthew Movafaghi and Jordan Tamchin, "A Tax Practitioner's Guide to Tax Insurance," *Tax Notes Federal*, July 12, 2021, p. 201 (hereinafter, "A Tax Practitioner's Guide").

⁷ Mona Hymel, "The United States' Experience With Energy-Based Tax Incentives: The Evidence Supporting Tax Incentives for Renewable Energy," 38 *Loy. U. Chi. L.J.* 43, 47-48 (2006); Joint Committee on Taxation, "Estimates of Federal Tax Expenditures for Fiscal Years 2020-2024" JCX-23-20, at 2 (Nov. 5, 2020).

⁸ *Id.*

⁹ See Congressional Research Service, "The Renewable Electricity Production Tax Credit: In Brief," R43453 (Apr. 29, 2020).

¹⁰ See Energy Tax Act of 1978.

¹¹ Sections 45, 45Q, and 48.

¹² IRA; Brian Naylor, "Biden Announces a Plan in Glasgow to Help Poorer Countries With Climate Change," NPR, Nov. 1, 2021.

¹³ JCT, JCX-23-20, *supra* note 7, at 2 (citing Congressional Budget and Impoundment Control Act of 1974 (P.L. 93-344), section 3(3)). See also Senate Finance Committee, "Technical Explanation of the Amendment to Title XIX of H.R. 776 (Comprehensive National Energy Act)," at 12-13 (1992).

¹⁴ See Solar Energy Industries Association, "Solar Investment Tax Credit (ITC)" (Jan. 2021) (Although solar energy still represents only 2.5 percent of U.S.-produced energy, it is estimated that "since the ITC was enacted in 2006, the U.S. solar industry has grown by more than 10,000 percent — creating hundreds of thousands of jobs and investing billions of dollars in the U.S. economy in the process."); CRS, "The Renewable Electricity Production Tax Credit: In Brief," R43453 (Apr. 29, 2020).

¹⁵ Bipartisan Budget Act of 2018.

Representatives, with some adjustments.¹⁶ The IRA was passed by the Senate on August 7, passed by the House of Representatives on August 12, and was signed into law by the president on August 16. As enacted, the IRA expands and raises the amounts of the ITC, PTC, and section 45Q tax credits.

A. ITC

The ITC was first enacted in 1978 as a temporary tax credit for business energy property and equipment using energy resources other than oil or natural gas, including wind and solar power.¹⁷ The ITC is a one-time tax credit, and the credit amount depends on the amount invested or the owner's ITC eligible basis in specific qualified energy property. Thus, in general, the owner of a wind or solar project may claim the ITC on its cost in the energy property in the year in which the project is placed in service.¹⁸

Historically, the ITC amount was based on when a taxpayer begins construction of the eligible energy property.¹⁹ Under IRS guidance, a project "begins construction" when the taxpayer commences "physical work of a significant nature" on the facility or incurs at least 5 percent of the total cost of the facility.²⁰ As part of the begin-construction requirement, qualified projects must also meet a continuity requirement, which generally means that the taxpayer must maintain a continuous program of construction or make continuous efforts toward completion of the qualified facility or equipment.²¹

Under the IRA, projects that begin construction before 2025 are eligible for the ITC.²² For projects placed in service after December 31,

2021, the IRA would provide an ITC of up to 30 percent of the qualified energy property's eligible basis.²³ In general, energy property is "placed in service" when it is placed in a condition or state of readiness and is available for its specifically designed function.²⁴

Only projects satisfying specific wage and apprenticeship requirements can claim the full 30 percent ITC.²⁵ The ITC on projects not meeting those requirements is limited to 20 percent of the full ITC amount, which is equal to a 6 percent ITC base rate.²⁶

The IRA provides additional stackable "bonus" ITCs for projects meeting specific requirements.²⁷ For example, projects that are constructed with U.S.-manufactured products are eligible for a 10 percent domestic content bonus ITC. Moreover, projects located in energy communities are eligible for a bonus ITC of up to 10 percent. Lastly, an ITC increased up to 20 percent is available for projects located in low-income communities. Thus, a bonus qualifying solar project may be eligible for an ITC of 50 percent or more.

All or a portion of the ITC can be reversed and included in income, or recaptured, if the energy property is sold or otherwise disposed of or is no longer used in a qualifying manner within five years of the placed-in-service date.²⁸

¹⁶ IRA; Build Back Better Act.

¹⁷ H.R. 5263.

¹⁸ Section 48(a)(1), (a)(3)(A), and (a)(5).

¹⁹ Section 48(a)(2)(A).

²⁰ Notice 2013-29, 2013-1 IRB 1085; Notice 2013-60, 2013-44 IRB 431; Notice 2014-46, 2014-35 IRB 520; Notice 2015-25, 2015-13 IRB 814; Notice 2016-31, 2016-23 IRB 1025; Notice 2017-04, 2017-3 IRB 541; Notice 2018-59, 2018-59 IRB 196; Notice 2019-43, 2019-31 IRB 487; Notice 2020-41, 2020-25 IRB 954; Notice 2021-5, 2021-3 IRB 479; Notice 2021-41, 2021-29 IRB 17.

²¹ *Id.*

²² IRA, section 13102.

²³ Although the ITC percentage has varied over time, it was generally equal to 30 percent of the taxpayer's energy property tax basis if the project began construction before 2020. The ITC amount for qualified solar energy property was phased down to 26 percent if construction began during 2020, 2021, or 2022 and to 22 percent if construction began during 2023. Despite the begin-construction date, if the energy property would have been placed in service after 2025, the credit would have been limited to only 10 percent. Section 48(a)(1), (a)(2)(A)(i), and (a)(6)(A).

²⁴ Reg. sections 1.46-3(d), 1.167(a)-11(e)(1); Rev. Rul. 84-85, 1984-1 C.B. 10.

²⁵ IRA, section 13101. The wage and apprenticeship requirements generally require that taxpayers pay prevailing wages at the local rate for the construction and maintenance of facilities and ensure that no less than the applicable percentage of total labor hours is performed by qualified apprentices. Projects that begin construction no more than 59 days after Treasury publishes guidance on these new requirements will be exempt from the wage and apprenticeship requirements and automatically qualify for the 30 percent ITC. *Id.*

²⁶ The "base rate" is effectively a significant penalty for not satisfying the wage and apprenticeship requirements.

²⁷ IRA, sections 13102, 13103.

²⁸ Section 50(a)(1); reg. section 1.47-2.

B. PTC

The PTC was enacted in 1992 to promote the “development and utilization of certain renewable energy sources.”²⁹ Thus, the PTC is available to taxpayers owning and producing electricity from some qualified renewable energy resources, including wind facilities.³⁰

In general, the owner of a qualified wind facility may claim a PTC of up to 1.5 cents (multiplied by an annual inflation adjustment factor) per kilowatt-hour of electricity generated and sold to unrelated persons for the first 10 years after the facility is placed in service.³¹

Under prior law, the PTC for onshore wind facilities was no longer available to taxpayers who did not meet the begin-construction requirement for their qualified wind facilities before 2022.³² The IRA reinstates the PTC for projects that begin construction before 2025 and eliminates the prior PTC phasedown.³³ The PTC begin-construction requirement generally follows the same standards used for the ITC.³⁴

Thus, eligible PTC projects placed in service in 2022 or after are eligible for up to the full PTC rate (as adjusted for inflation) over a 10-year period. Similar to the ITC, a wind facility is “placed in service” when the facility is placed in a condition or state of readiness and is available to produce electricity.³⁵

The PTC, like the ITC, is limited to 20 percent of the full PTC credit amount if the wage and

apprenticeship requirements are not satisfied.³⁶ Thus, the wind PTC would have a base rate of 0.3 cents per kilowatt-hour and a full rate of 1.5 cents per kilowatt-hour (which is 2.6 cents per kilowatt-hour as adjusted for inflation for 2022).³⁷

The IRA also provides stackable “bonus” PTC amounts.³⁸ For example, projects that are constructed with U.S.-manufactured products are eligible for a 10 percent domestic content bonus PTC, and projects located in energy communities are eligible for an up to 10 percent bonus PTC.

The IRA allows solar projects to claim the PTC in lieu of the ITC if construction of that project begins before 2025.³⁹ Because the PTC is based on the amount of electricity produced and sold from a qualified facility, receipt of the tax credit has no effect on the equipment’s basis for other tax purposes.

C. Section 45Q – CCS

Section 45Q provides a per-metric-ton tax credit for qualified captured and sequestered carbon oxide each year.⁴⁰ The tax credit is intended to encourage private investment in CCS technologies that reduce greenhouse gas emissions from power plants, refineries, and other industrial sources “as part of a comprehensive national strategy for reducing U.S. contributions to global climate change.”⁴¹

1. History and guidance.

The section 45Q tax credit was initially added to the code in 2008.⁴² Although called for by Congress, no Treasury regulations were ever issued under the 2008 version of section 45Q, and the available IRS guidance left many important

²⁹ CRS, “Energy Tax Provisions Expiring in 2020, 2021, 2022, and 2023 (‘Tax Extenders’),” R46451 (July 14, 2020) (quoting the Comprehensive National Energy Policy Act, 41-42).

³⁰ Energy Policy Act of 1992 (H.R. 776).

³¹ Section 45(a), (b).

³² Before the IRA, the PTC was available for a qualified onshore wind facility only if the facility was originally placed in service after December 31, 1993, and if construction of the facility began before 2022. Thus, the PTC was unavailable for wind projects that begin construction after December 31, 2021. The PTC credit amount for wind facilities was phased down from 100 percent of the PTC amount for facilities that begin construction after 2016. Thus, facilities starting construction in 2019 qualified for only 40 percent of the full credit amount. Starting in 2020, the PTC was increased to 60 percent for qualified onshore wind facilities that began construction before the end of 2021.

³³ IRA, section 13101.

³⁴ See *supra* note 20.

³⁵ See *supra* note 24.

³⁶ See *supra* note 25. The wage and apprentice requirements must also be satisfied for any alteration or repair of the project that occurs during the entire 10-year PTC period.

³⁷ Notice 2022-20, 2022-21 IRB 1095; 87 F.R. 22286 (Apr. 14, 2022), as corrected by 87 F.R. 27204 (May 6, 2022).

³⁸ IRA, sections 13101, 13103.

³⁹ *Id.* at section 13102; section 48(a)(5)(A); see also Notice 2009-52, 2009-25 IRB 1094.

⁴⁰ Section 45Q.

⁴¹ JCT, “Technical Explanation of H.R. 7060, The ‘Renewable Energy and Job Creation Tax Act of 2008,’” JCX-75-08, at 25 (Sept. 25, 2008).

⁴² Energy Improvement and Extension Act of 2008.

questions unanswered.⁴³ In fact, the limitations inherent in the 2008 section 45Q and the general lack of IRS guidance essentially stalled interest, investment, and development in the CCS space for more than 10 years.

Recognizing this unintended result, Congress substantially and beneficially overhauled section 45Q in 2018 to encourage the development of CCS projects.⁴⁴ As a result of the overhaul and subsequent guidance, many of the barriers and uncertainties that previously halted CCS investment and development have been removed.

Final Treasury regulations and other recent IRS guidance address many of the outstanding concerns of potential investors and have spurred a renewed interest in section 45Q tax credits.⁴⁵ This renewed interest is expected to unlock the tax equity market available for wind and solar projects.

The IRA, like other recent legislative proposals, increases and expands the section 45Q tax credit, which is intended to spur technological innovation and assist the United States in implementing its environmental policies and reaching climate change goals.⁴⁶ Thus, proposals to improve the section 45Q tax credit have generally received bipartisan support.⁴⁷ As the federal carbon reduction benchmarks rapidly approach, many politicians hope and expect that increasing the section 45Q tax credit amount will economically encourage investors to aggressively pursue CCS projects.

2. Section 45Q basics.

The section 45Q tax credit is available for a 12-year period starting on the equipment's placed-in-service date at a qualified CCS facility.⁴⁸ To claim the credit, a CCS facility must capture a minimum amount of carbon oxide each year.⁴⁹ By drastically lowering these threshold capture requirements, the IRA opened up the credit to a larger pool of CCS projects and taxpayers.

The available credit amount per metric ton of captured carbon oxide depends on both when the CCS project is placed in service and what is done with the captured carbon oxide. When the wage and apprenticeship requirements are met, the IRA substantially increased the section 45Q tax credit to \$85 per metric ton for carbon oxide captured and sequestered and to \$60 per metric ton for carbon oxide captured and used in a permissible way.⁵⁰ Higher credit amounts are available for the capture and sequestration of carbon oxide without a separate commercial use under the theory that no additional revenue will be earned by the taxpayer on the mere capture and storage of the carbon oxide.⁵¹

The IRA extends the section 45Q begin-construction time period from the end of 2026 to the end of 2032.⁵² The section 45Q begin-construction requirement means that either construction of the carbon capture equipment must begin or the original planning and design of a facility must include the installation of carbon capture equipment.⁵³

⁴³ Notice 2009-83, 2009-44 IRB 588 (including interim guidance until enactment of section 45Q regulations on eligibility for the credit, amount of the credit, adequate security measures for secure geological storage, and reporting requirements), modified by Notice 2011-25, 2011-14 IRB 604, and obsoleted in part by T.D. 9944.

⁴⁴ BBA of 2018. Section 45Q was most recently amended in 2020, when the begin-construction deadline was extended for two years. Taxpayer Certainty and Disaster Tax Relief Act of 2020, Consolidated Appropriations Act, 2021.

⁴⁵ See T.D. 9944; Notice 2020-12, 2020-11 IRB 495 (begin-construction requirement); Rev. Proc. 2020-12, 2020-11 IRB 511 (partnership safe harbor); prop. reg. section 1.45Q, REG-112339-19.

⁴⁶ Both Democratic and Republican members have introduced those increases to the section 45Q tax credit. See, e.g., IRA; Coordinated Action to Capture Harmful Emissions Act (H.R. 3538); Carbon Capture, Utilization, and Storage Tax Credit Amendments Act of 2020 (S. 4966); Clean Energy for America Act (S. 1298); H.R. 2633 (2021).

⁴⁷ *Id.*

⁴⁸ Section 45Q(a)(3)-(4). The 12-year period is applicable only to carbon capture equipment placed in service at a qualified facility after February 8, 2018. *Id.*

⁴⁹ IRA, section 13104.

⁵⁰ *Id.* Under prior law, the section 45Q tax credit started at \$22.66 per metric ton in 2017 and increased each year until it reached \$50 per metric ton in 2026 for carbon oxide captured and sequestered. For carbon oxide captured and used in a permissible way, the section 45Q tax credit started at \$12.83 per metric ton in 2017 and increased each year until it reached \$35 per metric ton in 2026. Section 45Q(b)(1)(A).

⁵¹ The most common use for captured carbon oxide is as a tertiary injectant in enhanced oil and gas recovery operations. Other permissible uses include growing algae or bacteria, chemical conversion, or any other purpose for which a commercial market exists, as determined by IRS guidance. Section 45Q(a)(2), (f)(5)(A). The IRA also provides a drastically increased section 45Q tax credit for direct air capture facilities, approximately \$180 per metric ton.

⁵² IRA, section 13104; section 45Q(d)(1); reg. section 1.45Q-2(g).

⁵³ Notice 2020-12.

Like the ITC, the section 45Q tax credit can be recaptured by the IRS.⁵⁴ With CCS, a recapture event occurs when previously captured carbon oxide leaks out of secure geological storage or is no longer used as a tertiary injectant during a three-year recapture period.⁵⁵ The three-year recapture period (notably shorter than the five-year lookback for ITC) begins on the date of first injection for any carbon oxide that escapes the secure geological storage or is no longer used in a manner consistent with section 45Q.⁵⁶ However, no recapture occurs in any given year if the leaked amount of qualified carbon oxide does not exceed the amount of qualified carbon oxide securely stored that tax year.⁵⁷

Section 45Q recapture is accounted for on a last-in, first-out basis in the tax year in which the leak is identified and reported.⁵⁸ Using the LIFO method means that any leaked carbon oxide exceeding the secured amount in a year is considered attributable first to the prior tax year, then to the tax year before that, and then to the third preceding year.⁵⁹

For qualified facilities placed in service after section 45Q was revamped in 2018, the entity that owns the carbon capture equipment and physically or contractually ensures the capture and disposal or use of the carbon oxide is entitled to the tax credit.⁶⁰

D. Direct Pay

The ITC, PTC, and section 45Q tax credits have historically been nonrefundable, meaning the tax credits can be used by the eligible taxpayer only if that taxpayer has sufficient taxable income. But to alleviate perceived potential bottlenecks in the tax equity market, the IRA includes a limited direct-pay option that allows some taxpayers to treat earned tax credits as a payment of taxes, including as estimated tax payments and tax

overpayments, when no current tax liability exists.⁶¹

The IRA's direct-pay regimen is much narrower than the Build Back Better Act's proposal. For the ITC and PTC, direct pay is generally available only to electric cooperatives, governmental agencies, and other tax-exempt entities.⁶² The same taxpayer limitations apply to section 45Q tax credits, except that during the first five years after the CCS property is placed in service, and only until 2032, the section 45Q tax credit is fully refundable to any taxpayer.⁶³

E. Transferability

Historically, the ITC and PTC were not transferable to third parties, and the section 45Q tax credits had limited transferability to taxpayers disposing of or using the carbon oxide.⁶⁴ Thus, tax credits were valuable only to a taxpayer with sufficient taxable income, or tax appetite, to offset the credits generated by a clean energy project.⁶⁵

For taxpayers unable to take advantage of the direct-pay provisions, the IRA broadens the transferability of energy credits by permitting a one-time sale of ITC, PTC, and section 45Q tax credits earned in a tax year among some unrelated taxpayers for cash.⁶⁶ This increased transferability is expected to expand the base of potential investors and simplify common tax equity structures.

F. Carryback and Carryforward

The IRA increases flexibility for taxpayers by allowing them to carry back their energy tax credits for up to three years and to carry them forward for up to 22 years.⁶⁷

⁵⁴ Section 45Q(f)(4); reg. section 1.45Q-5.

⁵⁵ Reg. section 1.45Q-5.

⁵⁶ Section 45Q(f)(4); reg. section 1.45Q-5(f).

⁵⁷ Reg. section 1.45Q-5(d).

⁵⁸ Reg. section 1.45Q-5(g).

⁵⁹ Reg. section 1.45Q-5(g)(2).

⁶⁰ Section 45Q(f)(3)(A)(ii).

⁶¹ IRA, section 6417.

⁶² *Id.*

⁶³ *Id.*

⁶⁴ See section 45Q(f)(3)(B). In the inverted lease structure, the facility owner can also elect to pass the tax credits through to the lessee who claims the credits based on the project's fair market value.

⁶⁵ See Michael Cannon, "The Clean Energy Revolution: Renewable Energy Tax Incentives and Issues," *Tax Notes Federal*, Apr. 12, 2021, p. 209, 210.

⁶⁶ IRA, section 6418.

⁶⁷ *Id.* at section 6418. Under prior law, the unused portion of the ITC and PTC for that year could be carried back one year and carried forward for 20 years. Section 39(a)(1).

G. Outlook

The IRA is landmark legislation for the clean energy industry and is expected to dramatically reshape and bolster tax credit incentives. While the IRA is intended to expand the clean energy project investor base and simplify historic project structures, at this time, many of the provisions are limited in scope and do not account for other tax benefits that sponsors seek to monetize, like depreciation. Thus, even though the IRA has been enacted, sponsors should still find tax equity financing relevant and useful.

III. Clean Energy Project Structures

Because the federal government encourages its clean energy policies via private sector investment and development, the structuring of clean energy transactions is generally driven by financing considerations.⁶⁸ While the IRA's full effect on the industry remains to be seen, very few project sponsors or developers can construct (using commercial debt or their own funds) and own a clean energy project while effectively using the anticipated tax credits generated by a wind, solar, or CCS project. Thus, clean energy projects have been more commonly developed for later sale to a strategic investor or jointly developed by a sponsor and a tax equity investor who can effectively monetize the tax benefits generated by the project.

Tax equity is the passive ownership interest in a project through which an investor receives a return of both cash flow and tax benefits, generally including tax deductions and tax credits. Most tax equity investors are large banks and insurance companies. A tax equity financing transaction allows "a sponsor [to] use its core capabilities of developing, managing, and operating renewable energy projects without sacrificing the economic benefits of the tax incentives available regarding those projects."⁶⁹

There are two primary parties in tax equity financing transactions: a sponsor and a tax equity investor. The sponsor of the clean energy project is responsible for developing, building, and

operating the project, and getting the project funded. The tax equity investor invests in the underlying project in exchange for the expected tax credits, other tax benefits, and cash flows from the project. To encourage the tax equity investor's participation, the sponsor generally agrees to indemnify the tax equity investor for any loss or reduction of the expected tax credits or other tax benefits as part of the finance transaction.

Wind and solar tax equity financing transactions are generally structured as a partnership flip, an inverted lease, or a sale-leaseback.

A. Partnership Flip

The partnership flip structure is a common tax equity financing structure used extensively in ITC and PTC projects.⁷⁰ Under this structure, a tax equity investor and sponsor form a project company taxed as a partnership for federal income tax purposes. The tax equity partner provides cash in exchange for the future allocation of tax credits and other benefits, including depreciation, interest deductions, and operating income. During the initial phase of the project, the tax equity investor is allocated most (usually 99 percent) of the tax benefits and income or losses. However, once the tax equity investor achieves a target internal rate of return, the partnership allocations flip so that the sponsor then receives most of the tax benefits and income or losses (usually 95 percent). At the time of the flip, the sponsor also generally receives the right to buy the tax equity investor's company interest at fair market value. As explained further below, the IRS has issued guidance for the partnership flip structure.⁷¹ Thus, the partnership flip structure is a preferred tax equity investment vehicle.

B. Inverted Lease

In the inverted lease structure, a project owner leases the project and assigns customer sales

⁶⁸ See Cannon, *supra* note 65, at 210-211.

⁶⁹ *Id.*

⁷⁰ Approximately 80 percent of solar tax equity deals are structured as partnership flips, and PTC tax equity projects must use a partnership flip structure. Keith Martin, "Solar Tax Equity Structures," *Project Finance NewsWire*, at 41, Dec. 14, 2021.

⁷¹ See Section IV.C. of this article.

agreements to another entity, often structured as a partnership for federal income tax purposes. Under a special tax rule for lease passthroughs, the lessee entity is entitled to all tax credits flowing from the project and passes them through to the tax equity investor who claims the credit based on the FMV of the project. The lessor receives rent, claims all depreciation, and receives the project back at no cost upon lease termination.

For inverted leases, structure risk is an important consideration because no specific clean energy tax credit guidance has been issued for that structure; however, the renewable energy industry generally follows the IRS's historic tax credit safe harbor for inverted lease structures.⁷²

C. Sale-Leaseback

The sale-leaseback is the most straightforward structure and allows for the transfer of all tax benefits to the tax equity investor. In a sale-leaseback, the project is initially constructed by the sponsor and sold to the tax equity investor. The tax equity investor then leases the project back to the sponsor. Once the tax equity investor owns the project, it receives lease payments and tax benefits generated by the project.

The sponsor receives cash at closing, holds the right to operate the facility, and retains profit in excess of the lease payments. IRS guidance provides rules that must be followed in a sale-leaseback transaction to ensure that the transaction is respected as a lease for tax purposes.⁷³

D. CCS Structures

Legal practitioners expect that CCS projects will use the same financing structures as wind and solar projects and that, in the absence of specific section 45Q guidance, practitioners will continue to look to existing tax credit structuring guidance provided by the IRS for other tax

credits.⁷⁴ In Rev. Proc. 2020-12, the IRS recognized the use of the partnership flip structure for section 45Q tax credits by providing a safe harbor that would treat partnerships as properly allocating the section 45Q tax credit in accordance with the code's partnership rules.⁷⁵

IV. Mitigating Tax Equity Risk

There are many potential tax issues and pitfalls that may arise when planning for and implementing clean energy projects. Qualifying for any type of tax credit requires "careful planning by tax advisers and faithful implementation of that planning by transaction participants."⁷⁶

As discussed in more detail below, tax credit insurance is an effective means of protecting the tax equity investor against potential losses arising from a clean energy project investment. Tax equity investors generally have tax capacity (that is, are in a taxpaying position). Thus, one motivation for clean energy project investments is to obtain tax credits to offset tax obligations. For these investors, it is extremely important that they obtain the projected tax credits. Therefore, reducing investment risks is a primary focus of tax equity investors. An investor's tax credits can be lost or reduced if the project structure is not respected, the project fails one or more complex credit qualification requirements, or the credits are later recaptured. In fact, receipt of the anticipated tax credits is so fundamental to the economics of many clean energy projects that investors frequently require tax credit insurance as a condition precedent to their participation.

A. Tax Insurance Generally

Tax insurance protects against tax losses resulting from a tax authority's challenge to an insured tax position.⁷⁷ Tax insurance is a risk

⁷⁴ See, e.g., Rev. Proc. 2014-12 (providing guidance for establishing a "safe harbor" for section 47 historic rehabilitation tax credit investments in a single tier or a master tenant transaction structure); Rev. Proc. 2007-65, 2007-50 IRB 967 (establishing a safe harbor for the allocation of section 45 PTC in a tax equity partnership structure when specific ownership requirements are met).

⁷⁵ Rev. Proc. 2020-12.

⁷⁶ Cannon, *supra* note 65, at 210.

⁷⁷ Movafaghi and Tamchin, "A Tax Practitioner's Guide," *supra* note 6, at 203-205.

⁷² See Rev. Proc. 2014-12, 2014-3 IRB 415.

⁷³ See Rev. Proc. 2001-28, 2001-1 C.B. 1156.

management tool that transfers a taxpayer's economic risk of tax loss to the insurance market.⁷⁸ Thus, it provides tax certainty when executing a transaction or investment and provides a level of comfort similar to a private letter ruling from a tax authority.

If a tax position is supported by a "will, should, or more likely than not" level of comfort, tax insurance is generally an option.⁷⁹ Tax insurance is designed to make the insured whole in the event of a challenge to a covered tax position. Therefore, tax insurance generally covers the following potential tax losses, up to the purchased insurance limits: (1) additional taxes, interest, and penalties; (2) contest costs, which are the costs to defend against a tax authority challenge; and (3) "gross-up," which are any taxes due on the amount of insurance proceeds received.

B. Tax Credit Insurance

Tax credit insurance is a type of tax insurance that protects against the elimination or reduction of anticipated tax credits.⁸⁰ Insurance is particularly useful for tax credits because the IRS will not provide taxpayer certainty through rulings or determination letters for many key tax credit risks.⁸¹ Also, the IRS has specifically

identified tax credit insurance as the preferred means to protect against some tax credit risks.⁸²

In the renewable energy context, the primary use for tax credit insurance is protecting a tax equity investor against tax loss arising from an energy project investment. As explained earlier, the tax equity investor in a renewable energy project expects to receive tax credits and other tax benefits from its investment in a tax credit-generating project. Thus, to entice project investment, the sponsor typically indemnifies the tax equity investor for any loss of the anticipated tax credit or other tax benefits. However, and despite the contractual indemnity, many tax equity investors desire additional protection against key tax credit investment risks.

1. History.

Renewable energy tax credit insurance was initially used to support the sponsor's creditworthiness and obtain signoff from the tax equity investor's credit committee. Under these "double-trigger" policies, the tax equity investor was the insured. A loss was triggered only if (1) the tax authority successfully challenged the covered tax position *and* (2) the sponsor's indemnity obligation failed to make the tax equity investor whole. Essentially, the insurance acted as a credit enhancement to the sponsor's balance sheet and reacted only if the sponsor's indemnity failed.

As the tax credit insurance market matured, the sponsor became the insured and the policy terms became more insured-favorable. In this "single-trigger" policy, the insurance would respond first-dollar (subject to any retention)⁸³ upon a tax authority's challenge to a covered tax position. These policies not only safeguard the tax equity investor but also protect the sponsor's

⁷⁸ *Id.* As is discussed further in "A Tax Practitioner's Guide," *supra* note 6, tax insurance is commonly used as an alternative to private letter rulings and full-blown tax opinions. See also David S. De Berry, "The Hartford Comment Letter" (Dec. 2, 2002).

⁷⁹ "A Tax Practitioner's Guide," *supra* note 6, at 202-203. There are generally three main categories of tax insurance: (1) tax credit insurance, (2) mergers and acquisitions transaction tax insurance, and (3) ordinary course of business and tax planning tax insurance. For additional information on the use of tax insurance in M&A transactions and the ordinary course of a business and its tax planning, see Movafaghi and Tamchin, "A Tax Practitioner's Guide," *supra* note 6, at 201-210.

⁸⁰ Although this article focuses only on clean energy tax credits, tax credit insurance is also used with other types of tax credits, including, for example, low-income housing credits, rehabilitation credits, and some state and local tax credits.

⁸¹ It generally "is the policy of the [IRS] to answer inquiries of individuals and organizations regarding . . . the tax effects of their acts or transactions"; however, there are "certain areas in which . . . the [IRS] will not issue rulings or determination letters." Rev. Proc. 2020-3, 2020-1 IRB 131, section 2.01. The IRS has identified various risks related to energy tax credit eligibility as those "areas in which rulings or determination letters will not be issued." *Id.* Sections 3.01(2) (allocation of section 45 credit, validity of partnership, valid partner), (3) (requirements of section 45), (4)-(5), (8) (sections 45, 45Q, and 48 begin-construction requirement), and (6) (validity of partnership and valid partner for section 45Q).

⁸² See T.D. 9944 ("a taxpayer may obtain third-party recapture insurance to protect against recapture"); Rev. Proc. 2020-12 (a tax equity investor may obtain "insurance, including recapture insurance, from persons not related to the developer, any other investor, an emitter, or an offtaker"); Rev. Proc. 2014-12 (a tax equity investor may obtain "insurance from persons not involved with the rehabilitation or the partnership"). See also Boris I. Bittker and Lawrence Lokken, *Federal Taxation of Income, Estates, and Gifts*, para. 110.6.8 (2021) (citing Movafaghi and Tamchin, "A Tax Practitioner's Guide," *supra* note 6).

⁸³ In a tax insurance policy, the retention is a fixed-dollar-amount deductible that must be paid by the insured before the tax insurance policy responding to cover any loss. Tax insurance retentions are generally limited to the insured's tax contest costs to defend its tax position.

balance sheet by providing liquidity for the sponsor's indemnity obligation to the tax equity investor. This version of tax credit insurance also protects a back-leverage lender from any "cash sweep" under the tax equity partnership's operating agreement.⁸⁴ Thus, if there is a loss or reduction of the anticipated tax credit, the tax credit insurance would respond and indemnify against tax equity investor loss rather than sweeping cash away from the sponsor (and any back-leveraged lender) to the tax equity investor.

2. Next iteration of tax credit insurance.

Tax credit insurance is routinely used to protect a tax equity investor against tax loss arising from historic rehabilitation, low-income housing, or wind or solar energy project investments. However, because of the increased interest in CCS projects resulting from bipartisan legislative support, the expansion of section 45Q, and the issuance of much-anticipated Treasury and IRS guidance on the application of section 45Q, section 45Q tax credits are expected to be the foundation for the next iteration of tax credit insurance.

Although investors have only recently shifted their interest toward CCS projects and the section 45Q tax credit, tax credit investors and their advisers' prior experience with tax credit insurance for ITC and PTC provides helpful guidance on how tax credit insurance can and is expected to protect against section 45Q tax credit risks. Also, those parties will find it helpful that IRS guidance expressly recognizes and approves of the use of tax credit insurance in section 45Q tax equity transactions.⁸⁵

3. Benefits of tax credit insurance.

Tax credit insurance can be beneficial to each stakeholder in a tax equity transaction. As mentioned, the primary reason the tax equity party invests in a renewable project is to obtain tax credits and other tax benefits. Thus, first and foremost, tax credit insurance secures the tax

benefits to be realized from the tax equity investor's investment.

Tax credit insurance can also act as a credit enhancement to the sponsor indemnity. Sponsors commonly do not have the balance sheet to support the payment of a large indemnity claim. Thus, tax equity investors may require sponsors to obtain tax credit insurance as a backstop to their indemnity obligation.⁸⁶

Likewise, tax credit insurance offers the sponsor liquidity. For some tax credit projects, the potential tax indemnity obligation is substantial and would cause significant financial hardship for the sponsor if an adverse tax ruling were levied.

Finally, tax credit insurance can be used to facilitate future financing and investment decision-making. For example, sponsors may reduce large contingent tax indemnity balance sheet obligations by insuring projects already placed in service. In this situation, tax credit insurance enhances the sponsor's balance sheet, which helps the sponsor attract financing for new projects.

C. Insurable Tax Credit Risks

In general, there are three categories of insurable tax credit risks.

1. Structure risk — will the investment structure be respected?
2. Qualification risk — will the tax credits claimed be allowed in full?
3. Recapture risk — will the tax credits be recaptured even if properly allowed?

1. Structure risk.

Tax credit insurance for structure risk addresses whether the IRS will respect the clean energy investment structure put in place by the parties. Tax credit insurance has been identified by IRS guidance as the preferred means to protect tax equity investors against structure risk.⁸⁷ However, tax credit insurance for structure-related risks must be obtained by the tax equity investor; it cannot be provided by the sponsor or

⁸⁴ See Omar Nazif, Eli M. Katz, and Kelly Cataldo, "Key Considerations for Back-Leverage Financings of Renewable Energy Projects," Latham & Watkins LLP, at 1-4, Jan. 8, 2020. A back-leverage lender provides debt financing to the sponsor entity, who owns a controlling interest in the tax equity partnership. *Id.* at 1.

⁸⁵ *Supra* note 82.

⁸⁶ Recently, the authors have seen an uptick of tax equity investors requiring sponsors to obtain tax credit insurance when sponsors are new to the market and lack a strong balance sheet or to avoid relying on a sponsor's non-U.S. parent guarantee.

⁸⁷ Rev. Proc. 2014-12.

developer because this would be considered an impermissible guarantee.⁸⁸

As discussed, there are three common structures used for tax equity transactions: partnership flips; inverted leases; and sale-leasebacks. Various tax issues may arise depending on the selected structure. The most commonly insured tax risks include (1) partnership and partner status, (2) allocation of the tax credits, and (3) ownership of the project.

IRS guidance addresses the allocation of tax credits among partners in a tax equity partnership transaction. Rev. Proc. 2007-65 establishes a safe harbor for the allocation of PTCs among partners in a wind farm project when specific ownership requirements are met.⁸⁹ Similarly, Rev. Proc. 2014-12 provides a safe harbor for the allocation of section 47 historic rehabilitation tax credit investments among partners.⁹⁰ Finally, Rev. Proc. 2020-12 provides a safe harbor for allocating section 45Q tax credits.⁹¹ Although the IRS has not issued separate guidance for ITCs, practitioners planning an ITC project historically follow the available guidance for PTCs and historic rehabilitation project structuring.⁹² Importantly, when economics or other conditions prevent a project from meeting the IRS's safe harbor structuring guidance, the tax equity investor bears the risk of any IRS challenge to the project's structure.

2. Qualification risk.

Tax credit insurance for qualification risk addresses whether the tax credits claimed will be allowed in full. Qualification risk is the most insured tax credit risk. Common qualification risks include (1) FMV or qualifying basis;⁹³ (2) the begin-construction requirement; (3) the 80/20 re-

powering rule; (4) the placed-in-service requirement; and (5) equipment qualification.

For example, although there is extensive IRS guidance on the begin-construction requirement, determining when a taxpayer begins construction has proved to be a nuanced task and, thus, an ideal risk area for tax credit insurance to provide certainty. As discussed, the begin-construction risk is applicable to the ITC, PTC, and section 45Q tax credits.⁹⁴

IRS guidance provides that the begin-construction requirement is satisfied when the taxpayer commenced "physical work of a significant nature" on the facility or incurred at least 5 percent of the total cost of the facility.⁹⁵ Also, under both the physical work test and 5 percent safe harbor, taxpayers must meet a continuity requirement that generally requires a taxpayer to maintain a continuous program of construction or to make continuous efforts toward completion of the qualified facility or equipment.⁹⁶

Because the begin-construction determination for clean energy projects is factual and subject to extensive IRS guidance, tax credit insurance is an effective risk management tool to transfer any uncertainty from the project parties to the insurance market.

3. Recapture risk.

Tax credit insurance for recapture risk addresses whether the tax credits will later be recaptured, even if they were initially properly claimed. IRS guidance specifically endorses tax credit insurance for recapture risk.⁹⁷

As noted, ITCs are subject to a five-year recapture period, and section 45Q tax credits are subject to a three-year recapture period. The following causes of recapture have generally been of concern to ITC tax equity parties: (1) disposal or disconnection of energy property; (2) foreclosure

⁸⁸ See Rev. Proc. 2020-12.

⁸⁹ Rev. Proc. 2007-65.

⁹⁰ Rev. Proc. 2014-12.

⁹¹ Rev. Proc. 2020-12.

⁹² CRS, "Tax Equity Financing: An Introduction and Policy Considerations," R45693, at 8 (Apr. 17, 2019); Scott W. Cockerham, "Putting U.S. Solar Financing Structures in Perspective," *Tax Notes*, July 23, 2018, p. 499-503.

⁹³ For a more detailed discussion of the "basis risk" in a tax equity transaction, see Jordan Tamchin, "Transactional Tax Risks In Renewable Energy Investment," *Law 360*, June 15, 2020.

⁹⁴ Although they are not identical, the physical work test, 5 percent safe harbor, and continuity requirements for section 45Q are similar to those for determining the beginning of construction for ITC and PTC projects.

⁹⁵ *Supra* note 20.

⁹⁶ *Id.*

⁹⁷ *Supra* note 82.

on a security interest in the energy property (that is, project-level debt);⁹⁸ (3) a natural peril that destroys the energy property; (4) a title, engineering, or environmental defect; or (5) bankruptcy.⁹⁹

Additional causes of recapture risk are evoked with CCS projects. Under section 45Q, a recapture event occurs when captured carbon oxide ceases to be captured, disposed of, or used during a three-year recapture period. While past data show that the risk of stored carbon dioxide leakage appears to be low,¹⁰⁰ tax equity investors are particularly concerned about recapture risk given the potentially devastating effect on the section 45Q tax credits and because third parties are commonly responsible for the sequestration.

4. Hybrid insurance policy.

Any of the insurable risks discussed above may be packaged with a transactional liability representations and warranties insurance (RWI) policy. The hybrid policy — like a standard RWI policy — effectively insures any breach of the representations and warranties, including any tax representations, made by a project sponsor in the transaction agreements, and may also provide insurance for the tax risks discussed above. A hybrid policy may be most helpful if the sponsor is in poor financial condition or lacks a strong guaranty.

D. Tax Insurance Market, Pricing, and Terms

1. Market.

The market for tax insurance has matured in recent years. In general, tax insurance provides coverage for U.S. and non-U.S. taxes and can cover all types of income and non-income taxes.

⁹⁸ Recapture risk insurance is particularly desirable when there is project-level debt that is not subject to a subordination, non-disturbance, and attornment agreement or forbearance agreement.

⁹⁹ While it is yet to be seen, tax credit insurance likely will provide solutions to uncertainties and risks arising from the IRA. For example, tax credit insurance may play a role in allaying the recapture risk for failing to satisfy the prevailing wage requirement.

¹⁰⁰ See, e.g., Edward Rubin et al., *IPCC Special Report on Carbon Dioxide Capture and Storage* 34 (2005) (“Based on observations and analysis of current CO₂ storage sites, natural systems, engineering systems and models, the fraction retained in appropriately selected and managed reservoirs is very likely to exceed 99 percent over 100 years, and is likely to exceed 99 percent over 1,000 years. Similar fractions retained are likely for even longer periods of time, as the risk of leakage is expected to decrease over time as other mechanisms provide additional trapping.” (“Very likely” is a probability of 90 to 99 percent.)).

At the end of the second quarter of 2022, there are over 20 primary and excess insurance markets with capacity to place tax insurance policies with limits exceeding \$1.5 billion. As tax insurance submissions continue to increase each year, this significant market growth provides potential insureds their choice of insurers and encourages competitive terms and pricing.

2. Timing.

A tax credit insurance policy can be placed in the insurance market in as little as two to three weeks; however, larger tax programs involving excess insurance markets may require some additional time to build.¹⁰¹ Tax credit insurance can generally be purchased at any stage of the tax credit investment. It is most frequently placed at execution of the transaction documents. This timing provides certainty to the tax equity investor that tax credit insurance will be in place when project development is finalized and the project reaches its commercial operation date.

3. Limits.

For tax credit insurance, the limits purchased depend on the extent of the underlying tax risk. If there is a risk that the tax credits could be completely eliminated, the insured should consider purchasing enough limits for the full amount of the tax credits plus estimated interest, penalties, and gross-up. If, however, the tax credits would not be fully eliminated, but may be reduced or partially recaptured, then the insured may seek insurance limits based on an estimate of the potential reduction, taking into account risk tolerance and deal dynamics. For example, if the FMV or qualifying basis risk is insured, insurance limits may cover the ITC associated with the project’s soft costs only (that is, the ITC attributable to the difference between FMV and hard costs), plus interest, penalties, and gross-up.

4. Policy period.

Tax insurance policy periods are generally seven years; however, the policy period can be extended up to 10 years for PTCs and, presumably, may even be extended up to 15 years (12-year credit eligibility plus a three-year

¹⁰¹ With that said, tax insurance brokers and insurance markets are often able to respond sooner and provide deal-time solutions.

recapture) for section 45Q tax credits. Tax insurance policies are claims-made policies, which means that any claim must be made to the insurer within the policy period; however, the underlying tax issue does not need to be resolved within the policy period.

5. Price.

There is no upfront cost for a potential insured to consult a tax insurance broker and seek proposals from the insurance market. After reviewing the proposals and deciding to move forward with a selected insurance market, the potential insured would pay a nonrefundable underwriting fee, typically between \$40,000 and \$60,000, with an additional \$5,000 for each participating excess market.

The price of tax credit insurance has generally decreased in recent years because of increased competition among insurers for these risks. Premium amounts for tax credit insurance policies depend on several factors, including the total limit amounts purchased, the specific tax risk being insured, and the strength of the tax position. Generally, the premium for tax credit insurance is between 2 percent and 3 percent of the insurance limits purchased for ITC- and PTC-related risks.¹⁰²

For tax credit insurance policies, the premium is commonly paid in two installments: 10 to 20 percent at the binding of the policy and 80 to 90 percent when the project reaches its commercial operation date, and retentions are typically capped at \$150,000 to \$250,000 for the insured's contest costs only.¹⁰³

V. Clean Energy Case Studies

A. ITC and Qualified Basis Risk

1. Issue.

An investor sought to make a tax equity investment in a project company that owned a utility-scale renewable energy project. As a condition to that investment, the tax equity investor required the project sponsor to provide

an indemnity against any tax loss resulting from the failure of the tax basis of the energy property to be respected by the IRS, but the sponsor lacked the capital and appetite to stand behind a full indemnity.

2. Solution.

To facilitate the investment without the sponsor itself bearing financial responsibility for the indemnity, the sponsor purchased a tax insurance policy with limits of \$90 million, an amount equal to the ITCs attributable to the project's soft costs plus interest, penalties, and gross-up, for the benefit of the tax equity investor to backstop the indemnity.

B. PTC and Begin-Construction Risk

1. Issue.

A tax equity investor sought to invest in a wind farm expected to generate significant PTCs. Under prior law, to benefit from 100 percent of the full amount of the PTCs, construction of the wind farm had to begin in 2016. The determination of when a project begins construction requires a facts and circumstances analysis that inherently involves a level of risk with substantial stakes; the failure of the wind farm to begin construction in 2016 would have resulted in a material reduction in the anticipated PTCs. While the developer was willing to provide representations that the construction on the wind farm began in 2016, it came with a limited indemnification providing insufficient make-whole recourse for the tax equity investor.

2. Solution.

The sponsor purchased a tax insurance policy with limits of \$425 million to secure the tax equity investor's projected tax benefit from its investment in the wind farm. The tax insurance policy insured against any tax loss arising from a successful challenge by the IRS that the construction of the project began after 2016. The tax equity investor would not have invested in the project without this tax insurance policy.

C. Section 45Q and Recapture Risk

1. Note.

This case study is a hypothetical that the authors see as a potential application for tax credit

¹⁰²The authors of this article are not aware of any section 45Q tax credit recapture policies previously placed in the market, so the premium costs of those policies are yet to be seen.

¹⁰³*Supra* note 83. The retention amounts are yet to be determined for section 45Q tax credit recapture policies and may vary depending on which entity is the insured under those policies.

insurance. The authors are unaware of any section 45Q tax credit recapture insurance policies that have been placed to date in the insurance market.

2. Issue.

A tax equity investor sought to invest in a CCS project expected to generate significant section 45Q tax credits. The sponsor of the carbon capture equipment is also responsible for sequestering the captured carbon. Under section 45Q, a recapture event occurs when captured carbon oxide ceases to be captured, disposed of, or used during a three-year recapture period following sequestration. While past data show that the risk of stored carbon dioxide leakage appears to be low for CCS projects, the tax equity investor was particularly concerned about recapture risk given the potentially devastating effect on the section 45Q tax credits and because the sponsor lacked a strong balance sheet to support its indemnity obligation to the tax equity investor.

3. Solution.

The parties purchased a tax insurance policy with a term of 15 years protecting the tax equity investor against any loss or reduction of the anticipated 45Q tax credit arising from the CCS project because of recapture.¹⁰⁴

VI. Conclusion

The ITC, PTC, and section 45Q tax credits are the primary tax incentives relied on by the federal government to encourage taxpayer investment in clean energy initiatives like wind, solar, and CCS. As indicated by the recent enactment of the IRA, fostering the development of clean energy projects will continue as a significant policy objective of the United States.

The IRA is landmark legislation for the clean energy industry and is expected to dramatically reshape and bolster those tax credits. While the tax equity markets are expected to remain relevant and active in clean energy projects, the

IRA's full effect on the industry remains to be seen.

Tax equity transactions implemented to more effectively monetize tax credits contain several inherent tax risks, including those related to the tax structure, the rigorous tax credit qualification requirements, and the potential for tax credit recapture.

Tax credit insurance will continue to play a significant role in facilitating investment in wind, solar, and other clean energy projects by removing uncertainty from tax equity transactions. In the midst of a renewed and rapidly growing interest in CCS projects and the development of a tax equity market for section 45Q tax credits, prospective investors and their advisers can learn a lot from prior experience with wind and solar projects, including the effective use of tax credit insurance. Moreover, given the uncertainties arising from the IRA, tax credit insurance likely will provide solutions to transfer these risks away from underlying-deal parties and to the insurance market. In fact, some investments may not be implemented without tax insurance. Thus, tax insurance will allow stakeholders to execute tax equity transactions and investments in clean energy projects with a more secure knowledge of the financial consequences. ■

¹⁰⁴ A tax equity investor may maximize the permitted "pay as you go" contingent payments, which could limit its exposure to the recapture risk during the tax equity investor's investment (albeit, the tax equity investor may still be at risk during the three-year recapture period following its exit). However, if there is any reduction in the tax equity investor's contribution, that pay-go structure may transfer the recapture risk to the sponsor, who may be interested in purchasing a tax credit insurance policy for recapture risk.