

Inflation Reduction Act: Overview of Energy-Related Tax Provisions – An Energy Transition “Game Changer”

August 18, 2022

On August 16, 2022, President Biden signed into law the Inflation Reduction Act of 2022 (the Act). The Act has significant implications for the renewable energy industry. Most notable are the following:

1. restoring the current renewable energy Section 45¹ (the production tax credit (PTC)) and Section 48 (the investment tax credit (ITC)) to their full pre-“phaseout” rates, including for projects that began construction before 2022 and were or will be placed in service in 2022 (or later)
2. replacing the existing renewable energy credit regime with a two-tiered system that would provide a “base” credit equal to 20% of the maximum credit and a “bonus” credit equal to an additional 80% of the maximum credit that would be available only if certain prevailing wage and apprenticeship requirements are satisfied in connection with the relevant project
3. providing incremental tax credits for certain renewable projects that are placed in service after 2022 and meet certain “domestic content” requirements and/or are located in specified areas or communities
4. providing alternative ways to monetize renewable tax credits by allowing certain entities to either (i) receive a cash payment from the government in lieu of tax credits by utilizing a “direct-pay” election or (ii) sell tax credits to third parties
5. extending the “beginning of construction” deadline for carbon capture facilities to qualify for credits under Section 45Q through the end of 2032 and providing significantly enhanced credit amounts under Section 45Q
6. starting in 2025, creating a “technology neutral” tax credit system for zero-greenhouse emission projects, that would allow taxpayers to claim a clean-energy investment tax credit or clean-energy production tax credit similar to the existing ITC and PTC
7. providing new credits for stand-alone storage facilities and other new technologies like clean hydrogen and nuclear energy as well as for sustainable aviation fuel
8. adding an advanced manufacturing tax credit for manufacturers of solar and wind components in the United States

Many of these provisions were introduced in the Build Back Better Act that stalled in Congress at the end of last year and are now being enacted, with some changes, as part of the Act.

Structural Changes to the Renewable Tax Credit System

The Act makes certain fundamental changes to the structure of the tax credit regime that has historically applied to renewable energy.

Two-Tier Credit System

Summary of Changes. The Act replaces the existing credit regime with a two-tier system that requires taxpayers to satisfy certain prevailing wage and apprenticeship requirements in order to qualify for the “bonus” credit amount (i.e., for a total of 100% of the maximum available tax credits (2.6 cent/kWh of PTCs for 2022 or 30% ITC). If such requirements (or any of the exceptions discussed below) are not met, the project would be eligible only for the “base” credit amount, which equals 20% of the maximum amounts (i.e., 20% of the then-maximum amount of PTC or 6% of ITC).

The Internal Revenue Service (IRS) is directed to issue regulations or other guidance as it deems necessary to carry out the purposes of these requirements, including recordkeeping and information reporting requirements.

The Act provides that the prevailing wage and apprenticeship requirements will be deemed satisfied with respect to projects that begin construction prior to the date that is 60 days after the IRS publishes the relevant guidance. In addition, for the PTC and ITC, these requirements will be deemed satisfied in the case of facilities with a maximum net output of less than 1 megawatt.

Prevailing Wage Requirement. First, the taxpayer must ensure that any laborers and mechanics employed by the taxpayer or any contractor or subcontractor are paid prevailing wages in the locality in which the project is located (as determined by the Secretary of Labor) during the construction of such project and with respect to subsequent alterations or repairs of the project following its placement in service. This post-placed-in-service period generally includes, in the case of ITC-eligible projects, the five-year period beginning on the date the project is originally placed in service and, in the case of PTC- and Section 45Q-eligible projects, the entire applicable credit period.

In the event the taxpayer fails to satisfy this requirement during a particular year, the taxpayer may cure the failure by (i) paying each worker the difference between actual wages paid and the prevailing wage plus interest (increased to three times this amount in the case of intentional disregard) and (ii) paying a \$5,000 penalty (\$10,000 in the case of intentional disregard) for each worker paid below the prevailing wage during the taxable year. To qualify for this relief, pursuant to rules that the IRS will issue, payments of the required amounts generally must be made within 180 days after the date on which the IRS determines that the wage requirement has not been satisfied.

Apprenticeship Requirement. Second, to claim the “bonus” rate, taxpayers also must ensure that, with respect to the construction of a qualified facility, no fewer than the “applicable percentage” of total labor hours are performed by qualified apprentices. The applicable percentage is 10% for projects beginning construction before 2023, 12.5% for projects beginning construction during 2023 and 15% for projects beginning construction thereafter. Each contractor and subcontractor who employs four or more individuals to perform construction on an applicable project must employ at least one qualified

apprentice.

If a taxpayer fails to satisfy this requirement, it can nonetheless qualify for the “bonus” rate if it pays a penalty to the IRS equal to \$50 (\$500 in the case of intentional disregard of the requirement) multiplied by the total labor hours for which the apprenticeship requirement was not satisfied. In addition the Act includes certain “good faith effort” exceptions providing that a taxpayer will not be treated as failing this requirement if the taxpayer has requested qualified apprentices from a registered apprenticeship program and either (i) the request is denied for reasons other than a refusal to comply with the program’s standards and requirements or (ii) the program fails to respond within five business days after the date the request is received by the program.

Sidley Insight. These new requirements are intended to create and ensure the availability of higher-paying jobs in the renewable energy industry. However, compliance with these requirements could affect the economics of these projects by increasing their construction and operational costs. In addition, to the extent taxpayers attempt to comply with these requirements, contracts with various industry participants (e.g., tax equity investors and engineering, procurement and construction (EPC) and operations and maintenance (O&M) contractors) will need to address these requirements and the implications if they are not satisfied, including indemnification provisions (and mechanisms to address concerns relating to the credit-worthiness of the indemnifying parties). As such, these requirements will require careful planning and negotiations. In particular, negotiations with EPC and O&M contractors relating to risk allocation and compliance issues will require special attention.

Where feasible, taxpayers should consider taking steps in the coming months necessary to begin construction of their projects prior to the effective date of these requirements (generally 60 days following the date on which the IRS publishes guidance relating to these requirements) in order to be excluded from the application.

Incremental Credit Amounts for “Domestic Content,” “Energy Communities,” and “Low-Income Communities”

Summary of Changes. Projects qualifying for certain credits under Section 45 (PTC) and Section 48 (ITC) and the credits described below under new Section 45Y (clean electricity production tax credit) and new Section 48E (clean electricity investment credit) could qualify for a 10% increase to the “base” and “bonus” credits if they satisfy a new “domestic content” requirement.² To qualify for this additional credit, taxpayers must ensure that the steel, iron, or other manufactured products that comprise the project are produced in the United States. Generally, a manufactured product will be considered manufactured in the United States if a specified percentage of the total cost of the components is attributable to components that are mined, produced, or manufactured in the United States. The specified percentage is 40% (20% in the case of offshore wind) in the case of projects for which credits are claimed under Section 45 and Section 48. In the case of projects for which credits are claimed under new Sections 45Y or Section 48E (each of which is discussed below), the specified percentage is determined by reference to the date on which construction of a project begins and increases annually from 40% (20% in the case of offshore wind) to 55% in 2027 (2028 in the case of offshore wind).

Similarly, projects located in an “energy community” will qualify for a 10% increase to the “base” and “bonus” credits. Energy communities are defined to include (i) brownfield sites, (ii) communities that (A) at any time after 2009 had employment or tax revenues in excess of certain thresholds that are

attributable to the extraction, processing, transport or storage of coal, oil or natural gas industries and (B) had an unemployment rate at or above the national unemployment rate for the prior year and (iii) communities located in census tracts in which (or census tracts adjoining census tracts in which) a coal mine has been closed after 1999 or a coal-fired electric generating unit has been retired.

Finally, incremental credits are provided for wind and solar projects of 5 megawatts or less that (i) receive an allocation of available capacity limitation (1.8 gigawatts during each of 2023 and 2024), (ii) qualify for the ITC under Section 48 and (iii) are (A) located in low-income communities or on American Indian land (10%) or (B) are part of a qualified low-income residential building (20%).

Sidley Insight. The extent to which the incremental credit for projects satisfying the domestic content requirement will affect the behavior of market participants is difficult to predict and will ultimately require a comparison of the incremental credits provided to the increase in costs necessary to qualify (net of any anticipated depreciation benefit associated with such increased costs).

It is worth noting that the manner in which these incremental credits are applied to the PTC and ITC could materially change the calculus used in determining whether to claim PTCs or ITCs in cases where taxpayers have an option. For example, in the case of the incremental domestic content credit, as noted above, in the case of the ITC, the maximum ITC is increased by 10 percentage points from 30% to 40% (a 33% increase), while in the case of the PTC, the maximum PTC is only increased by 10%. Thus, in cases where taxpayers expect to satisfy the domestic content requirement, the relative benefit of choosing the ITC could be significantly greater than if the domestic content requirement is not satisfied.

Also worth noting is that a taxpayer can qualify for more than one of these incremental credits. For example, if an ITC project (i) qualifies for the full “base” and “bonus” credit amounts, (ii) is located in an energy community, and (iii) satisfies the domestic content requirement, the project could qualify for an ITC equal to 50% of the eligible basis.

Further, even if the prevailing wage and apprenticeship requirements described above are not met, a project could still benefit from incremental credit amounts if it meets the relevant requirements, albeit to a lesser extent (i.e., a 2% increase in lieu of the full 10% increase).

Finally, we believe that additional guidance is needed regarding the application of some of these requirements, including, for example, guidance regarding what is included in the calculation of the specified percentage of manufactured products attributable to products mined, produced, or manufactured in the United States for purposes of the domestic content requirement and what exceptions to these rules would apply.

New Ways to Monetize Tax Credits

Direct Pay Option - Summary of Changes. For tax years beginning after December 31, 2022 and before January 1, 2033, the Act includes a new direct pay option whereby certain applicable entities can make an election that would treat such applicable entity as having made a tax payment equal to the value of the applicable tax credits they would otherwise be eligible to claim and would allow such entity to claim a refund for the excess taxes they paid or are deemed to have paid. Effectively, this option makes the applicable tax credits “refundable” tax credits.

Applicable Entities. For the purposes of this election, the term “applicable entities” includes only

tax-exempt organizations, a State or political subdivision thereof, the Tennessee Valley Authority, Indian tribal governments (as defined in Section 30D(g)(9)), any Alaska Native Corporation (as defined in Section 3 of the Alaska Native Claims Settlement Act), or any corporation operating on a cooperative basis which is engaged in furnishing electric energy to persons in rural areas.

The direct pay option is available to taxable entities through December 31, 2032 (i.e., all taxpayers are considered “applicable entities”) with respect to the new clean hydrogen production credit; the carbon capture credit under Section 45Q; and the new advanced manufacturing credit (all as described more fully below). In these cases, however, the direct pay option would be available only for the first five years after the project is placed in service.

Domestic Content Requirement and Phaseout. Projects beginning construction after 2024 must either (1) satisfy the domestic content requirement described above or (2) have a maximum net output of less than 1 megawatt, to be eligible for a direct payment equal to 100% of the applicable tax credit. Projects not satisfying either of these requirements for which a direct pay election is made would be subject to a 10% reduction in the otherwise available credit amount (and therefore would be eligible for only a 90% direct payment) if they commence construction in 2024, a 15% reduction if they commence construction in 2025, and a 100% reduction (hence, no direct payment) if they commence construction in 2026 or thereafter.

If the overall cost of meeting the domestic content requirement increases the overall cost of construction by 25% or if relevant materials are not produced within the United States in sufficient and reasonably available quantities or quality, the Act mandates that Treasury provide exceptions to the domestic content requirement with respect to the direct payment election. In any case that Treasury provides such exceptions, and a project qualifies for those exceptions, it will be eligible for the full direct payment.

Eligible Credits. Applicable entities may elect to receive direct payments for the following credits (among others), each of which is discussed more fully below: the ITC, the PTC (for projects placed in service after December 31, 2022), the carbon capture credit under Section 45Q (for carbon capture equipment placed in service after December 31, 2022), the zero-emissions nuclear power production credit under Section 45U, the clean hydrogen production credit under Section 45V, the advanced manufacturing production credit under Section 45X, the clean electricity production credit under Section 45Y, the qualifying advanced energy project credit under Section 48C and the clean energy investment credit under Section 48E.

Third Party Sales - Summary of Changes. The Act provides that for taxable years beginning after December 31, 2022, eligible taxpayers may transfer all or a portion of their eligible credits to a taxpayer that is not related to the transferor taxpayer (within the meaning of Section 267(b) or 707(b)(1)). Consideration for such transfer must be paid in cash, is not includible in the income of the transferor taxpayer, and is not deductible to the transferee taxpayer. The transfer election can be made annually and is due no later than the due date of the tax return for the relevant taxable year (including extensions). Credits may not be transferred more than once. In the case of any such election, the transferee taxpayer shall be treated as the taxpayer for all purposes under the Code with respect to such credit. In the case of a project held by a partnership, only the partnership itself (and not its partners) can elect to transfer the eligible credits.

Eligible Credits. The credits that are eligible for the direct pay election are also transferable under this

provision, without regard to when the relevant projects are placed in service.

Eligible Taxpayers. Third-party sales are available to all taxpayers that are not tax exempt organizations, a State or political subdivision thereof, the Tennessee Valley Authority, Indian tribal governments (as defined in Section 30D(g)(9)), any Alaska Native Corporation (as defined in Section 3 of the Alaska Native Claims Settlement Act), or any corporation operating on a cooperative basis which is engaged in furnishing electric energy to persons in rural areas.

Sidley Insight. The direct pay and especially the third-party sale provisions provide an alternative for renewable energy developers to monetize their tax credits without needing to access the tax equity markets. In recent years, certain developers faced challenges in securing tax equity investments in their projects, which put their projects financing and construction in jeopardy. These new monetization alternatives could provide much-needed certainty for those developers in developing and constructing their projects and could materially change the manner in which renewable energy projects are financed.

Furthermore, these monetization alternatives, and especially the third party sale option, could expand the pool of potential investors in renewable energy projects, as it will not require such investors (or buyers of credits) to take any development or construction risks and any operational risks could be mitigated as well. In addition, these changes could allow investors, such as private equity and investment funds, which traditionally were limited to investing in renewable projects as partial sponsors, to increase their participation in renewable projects by allowing them to monetize their tax credits through third party sales.

The availability of the direct pay election to tax-exempt entities would further allow pension funds, universities, municipalities, and investment and private equity funds with such tax-exempt investors to make investments directly in energy projects, under certain conditions and arrangements.

However, because these provisions do not provide developers with the means to monetize losses generated by the accelerated depreciation of renewable energy projects, it is unclear whether these provisions will have a significant effect on the financing of large-scale renewable projects. In this regard, it should be noted that when a prior program similar to the direct pay program (the “Section 1603” grant program) was adopted as part of the American Recovery and Reinvestment Act of 2009, tax equity investors continued to play an important role in financing renewable energy projects receiving those grants. We expect a similar outcome following the enactment of the IRA.

In addition, whether taxpayers take advantage of the third-party sale provisions is likely to depend on how the market prices, and addresses risks associated with, these credits. Although the Act is not as clear as it could be on this issue, because credit transferees are treated as the taxpayer with respect to the transferred credits for all purposes of the Code, it seems that any recapture or qualification risk is likely to be borne by the transferee despite its having no control over those risks. Accordingly, our expectation is that third-party buyers are likely to require robust and credit-worthy indemnification provisions or otherwise require the developers to obtain certain insurance policies to protect against any tax credits’ reduction, disallowance or recapture risks.

Finally, determining whether to elect either the direct pay or transfer options will require careful planning and modeling of the timing and amount of the cash to be received following such election as compared to the timing and amount of the potential tax equity investment. Electing to use the direct pay or transfer

option would require developers to find alternative financing solutions for the gap between the time the project is placed in service and the time the relevant cash proceeds are received. More specifically, with respect to the Section 45Q tax credits and the clean hydrogen production tax credits (discussed below), developers will also need to take into account the fact that, unlike tax equity investments, these monetization alternatives would entitle the developers to receive the value of such credits annually over the credit period rather than receiving a significant lump sum amount from the tax equity investors upon the completion of the project.

Credit Carryback Period

The Act provides that the prior one-year carryback period for energy credits (including the new tax credits described below) is extended to three years.

Changes to Existing Tax Credits

Section 45 PTC

Background. Eligible taxpayers are entitled to credits for the 10-year period beginning on the date the project is placed in service equal to a specified amount (currently 2.6 cents in the case of wind facilities and 1.3 cents in the case of other technologies) per kilowatt-hour of electricity generated by the project and sold to an unrelated person.

Prior to the Act's enactment, (i) the PTC was unavailable for projects beginning construction after December 31, 2021, (ii) wind projects that began construction after 2016 and before the end of 2021 were subject to a phased-down credit amount tied to the date on which construction began, and (iii) taxpayers eligible to claim PTCs could, in most cases (but not for solar projects), elect to claim an ITC in lieu of PTCs in the case of projects beginning construction before the end of 2021.

Summary of Changes. In addition to the structural changes described above, the Act makes a number of significant changes to the PTC regime.

First, it extends the beginning of construction deadline to December 31, 2024. (For projects that begin construction after 2024, the PTC is effectively replaced by the new clean energy production tax credit under Section 45Y, discussed more fully below.)

Second, it provides that wind projects that began construction before the end of 2021 and are placed in service in 2022 (or later) will be eligible for the full inflation-adjusted PTC (i.e., the phase-down percentages will not apply).

Third, it reinstates and extends a rule that expired several years ago, allowing owners of solar projects the construction of which begins before 2025 to elect to receive the PTC in lieu of the ITC. In addition, the Act extends taxpayers' ability to claim the ITC in lieu of PTCs in the case of projects that begin construction before 2025. (As discussed more fully below, for projects that begin construction after 2024, similar flexibility will be provided with respect to the clean energy production tax credit under Section 45Y and the clean energy investment credit under Section 48E.)

Sidley Insight. The retroactive extension of the full PTC to projects that are placed in service after 2021 will allow projects that previously began construction but were subject to a reduced PTC under the phase-out schedule to benefit from higher credits, including in cases where projects were placed in

service during 2022 prior to the Act's enactment. In the latter case, models and investment documents previously prepared in connection with tax equity financings should be revisited in light of this increased benefit. In addition, with the reintroduction of the PTC election for solar (and the extension of the ITC election for PTC facilities), for projects not yet placed in service, developers and tax equity investors will need to evaluate both options and determine whether the ITC or PTCs have more value. Our experience shows that certain solar projects would significantly benefit from the ability to elect the PTC in lieu of the ITC.

Finally, as discussed above, to benefit from the full reinstated rate of the PTC the project and taxpayer need to meet the prevailing wage and apprenticeship requirements, unless one of the exceptions would apply. In this regard, developers may want to consider opportunities to appropriately begin construction on projects in the coming months to avoid the application of the labor-related requirements.

Section 48 ITC

Background. The ITC is claimed as a percentage of a project's eligible cost basis, up to 30%. Prior to the Act, for certain projects beginning construction after 2019, the 30% ITC percentage otherwise available was reduced to 26% (in the case of projects beginning construction before 2023) and was scheduled to be reduced to 22% (in the case of projects beginning construction during 2023). In the case of certain other technologies, the credit was scheduled to be eliminated in the case of projects beginning construction after 2023 or placed in service after 2025. In the case of solar projects, the credit percentage was scheduled to be further reduced to 10% in the case of projects beginning construction after 2023 or placed in service after 2025. Finally, as noted above, taxpayers eligible to claim PTCs could, in most cases, elect to claim an ITC in lieu of PTCs in the case of projects beginning construction before the end of 2021.

Summary of Changes. In addition to the structural changes described above, the Act makes several changes to the ITC.

First, projects otherwise eligible for the ITC that begin construction prior to 2025 (or 2035 in the case of geothermal property) and are placed in service after 2021 are eligible for the full 30% ITC and will no longer be subject to the phase-down described above. (For projects that begin construction after 2024, the ITC is effectively replaced by the new clean energy investment credit under Section 48E, discussed more fully below.)

Projects placed in service in 2021 or earlier remain subject to the rules in effect prior to the Act. Thus, in the case of projects that began construction after 2019 that were placed in service before 2022, the ITC percentage will remain 26%.

In addition, the Act (i) adds a number of technologies to the list of "energy property" eligible for the ITC, including stand-alone energy storage technology, qualified biogas property and microgrid controllers and (ii) allows certain costs incurred for interconnection property that is part of an ITC-eligible project to be included in the project's credit-eligible basis.

Sidley Insight. As with the PTC, the retroactive extension of the full ITC to projects that are placed in service after 2021 will allow projects that previously began construction but were subject to a reduced ITC under the phase-out schedule to benefit from higher credits, including projects that were already placed in service during 2022 prior to the enactment of the Act.

The extension of the ITC to stand-alone energy storage is expected to encourage significant additional investment in that technology. (Under prior law, costs attributable to energy storage technology were ITC-eligible only if the energy storage was part of an otherwise-eligible facility and certain other requirements were met.) IRS guidance on this new ITC would be welcome and could provide additional certainty to developers and investors in certain cases (e.g., regarding the ability to claim ITC for an energy storage facility connected to a solar project for which an election is made to claim PTCs in lieu of the ITC).

Further, although the Act does not include a specific ITC for transmission assets, a credit that was included in prior proposals, adding the cost of interconnection property to the credit-eligible basis is an important change, although its import is somewhat limited due to its 5 megawatt output maximum limitation.

Finally, as in the case of the PTCs, to benefit from the full reinstated rate of the ITC the project and taxpayer need to meet the prevailing wage and apprenticeship requirements, unless one of the exceptions would apply. In that regard, developers may want to consider opportunities to appropriately begin construction on projects in the coming months to avoid application of the labor-related requirements.

Section 45Q Credit for Carbon Oxide Sequestration

Background. Taxpayers who (i) own carbon capture equipment used to capture qualified carbon oxide from an industrial facility or from the atmosphere and (ii) physically or contractually sequester or use it for certain purposes as provided by Section 45Q are entitled to a credit for each metric ton of qualified carbon oxide captured and sequestered or used during the 12-year period starting on the date the equipment is first placed in service.

To qualify for the credit, certain threshold amounts of carbon oxide specified in the statute must be captured in a taxable year, with those threshold amounts dependent on the type of facility at which the carbon capture equipment is installed.

The amount of the credit (i) differs depending on whether the captured carbon oxide is disposed of in secure geological storage or used for another purpose, including as a tertiary injectant in an enhanced oil recovery (EOR) project and (ii) is increased using linear interpolation up to a specified amount (\$50 per metric ton in the case of sequestered carbon oxide and \$35 in the case of carbon oxide used for other purposes) for years beginning before 2027. For subsequent years, this maximum amount is inflation-adjusted.

To qualify for the credit, construction of the qualified facility at which the carbon capture equipment is used generally must begin before 2026 and construction of the carbon capture equipment must also begin by such date (or must otherwise have been contemplated in the original planning and design for the qualified facility).

Summary of Changes. In addition to the structural changes described above, the Act extends the beginning of construction deadline for carbon capture facilities to December 31, 2032.

In the case of facilities placed in service after 2022, the credit amount for those calendar years beginning before 2027 will be fixed at \$85 per metric ton (\$17 “base”/\$85 maximum) if the captured

carbon is sequestered and at \$60 per metric ton (\$12 “base”/\$60 maximum) if it is used as a tertiary injectant in an EOR project or for an otherwise permitted purpose. For subsequent years, this maximum amount is inflation-adjusted.

In the case of “direct air capture facilities,” the Act increases the applicable credit amount to \$180 per metric ton (\$36 “base”/\$180 maximum) of carbon oxide captured and sequestered and to \$130 per metric ton (\$26 “base”/\$130 maximum) of carbon oxide captured and used as a tertiary injectant in an EOR project or for an otherwise permitted purpose.

The Act significantly reduces the threshold amounts of carbon oxide required to be captured in order to qualify for the credit. In the case of an “electricity generating facility,” however, the Act imposes an additional requirement that the design specifications for the carbon capture equipment contemplate a capture rate of not less than 75% of the “baseline carbon oxide production” of the facility. Note, however, that these modified threshold amounts apply only to facilities or equipment the construction of which begins after the Act’s enactment date.

Sidley Insight. As discussed above, the Section 45Q credits are eligible for 100% direct pay for the first five years. It remains to be seen how the increase of the credit amount together with the direct pay and transfer options will affect the financing structures of these projects and the involvement of the tax equity investors. We may see different structures for projects that are sequestering the captured carbon (and hence will have operating and tax losses, which also could be monetized) and for projects that are putting the carbon captured to a commercial use generating revenue (and hence lower or no losses to monetize). In addition, tax equity structures could also be implemented after the expiration of the direct pay period.

As in the case of the PTCs and ITCs, to benefit from the full Section 45Q tax credit amount, the project and taxpayer need to meet the prevailing wage and apprenticeship requirements, unless one of the exceptions would apply. In this regard, developers may want to consider opportunities to appropriately begin construction on projects in the coming months to avoid application of the labor-related requirements.

New Credits

“Technology Neutral” Credits

Summary of Changes. For property placed in service after 2024, the Act effectively replaces the PTC and ITC with corresponding “technology neutral” credits: the Section 45Y Clean Electricity Production Credit (CEPTC) and the Section 48E Clean Electricity Investment Credit (CEITC), each of which is described below.

The CEPTC effectively replaces the PTC. It provides a two-tier, inflation-adjusted tax credit equal to the corresponding PTC amounts (0.3 cents/kWh “base”/1.5 cents/kWh maximum, as adjusted for inflation (which for taxable year 2022 is equal to 2.6 cent/kWh)) for electricity produced at qualified facilities that are placed in service after December 31, 2024 and sold to unrelated taxpayers. For purposes of this credit, an unrelated person means anyone not considered with the taxpayer to be a “single employer” within the meaning of regulations under Section 52(b).

Similarly, the CEITC effectively replaces the ITC. It provides a two-tier investment tax credit equal to the

eligible costs of qualified facilities and energy storage technology placed in service after December 31, 2024 at rates corresponding to the 30% ITC (6% “base”/30% maximum).

Additionally, these credits are also available for the expansion of facilities to the extent that such expansion increases the amount of electricity produced at the facility by reason of a new unit or an addition of capacity, in each case that are placed in service after December 31, 2024.

For a facility to constitute a qualified facility under either of these provisions, it must be used for the generation of electricity, and the anticipated greenhouse gas emissions rate must not be greater than zero.

Credits can be claimed under either, but only one, of these provisions. In addition, no credits can be claimed under either provision to the extent that credits are claimed with respect to the facility under Section 45 (PTC), Section 45J (historic advanced nuclear power facility production tax credit), Section 45Q (carbon capture credit), Section 45U (new zero-emission nuclear power production credit, discussed below), Section 48 (ITC) or Section 48A (qualifying advanced coal project credit).

Each of the CEPTC and CEITC is subject to phase down to 75% of the relevant credit amount for projects that begin construction in the second year following the later of (i) 2032 or (ii) the calendar year in which Treasury determines that the annual greenhouse gas emissions from the production of electricity in the United States are equal to or less than 25% of those emissions for calendar year 2022. A further reduction to 50% of the credit amount will occur in the following year and no credits will be allowed for projects that begin construction thereafter.

Similar to the PTC and ITC, the CEPTC and the CEITC are subject to the prevailing wage and apprenticeship requirements and could benefit from incremental credit amounts if one or more of the domestic content, the energy community, or the low-income community rules are met, subject to certain differences from the rules discussed above (mainly in the applicable percentages of these rules to the CEPTC and CEITC).

Sidley Insight. We note that the Section 48 ITC and Section 45 PTC, as extended, apply to facilities the construction of which begins before the end of 2024, while the technology-neutral CEPTC and CEITC apply to facilities placed in service after 2024. Accordingly, projects that begin construction before the end of 2024 but are placed in service after 2024 may qualify for the credits under Section 48 or Section 45 and the new CEPTC or CEITC. While only one such credit can be claimed, in the case of any such project, it may be beneficial to claim the credits under Section 48 or Section 45 to avoid application of the greenhouse gas emission requirement applicable to the technology neutral credits.

Section 45V Clean Hydrogen Production Tax Credit and Section 48 Clean Hydrogen Production Facility ITC

The Act adds Section 45V, which provides a new two-tier, inflation-adjusted, 10-year PTC for clean hydrogen produced after 2022 at a qualified facility, the construction of which begins before 2033.

The annual credit amount will equal (i) the number of kilograms of qualified clean hydrogen produced by the taxpayer, (ii) multiplied by the available credit amount (60 cent “base”/\$3 maximum), (iii) multiplied by the applicable rate (i.e., 20%, 25%, 33.4%, or 100% depending on the project’s lifecycle greenhouse gas emission rate).

Qualified clean hydrogen is hydrogen produced through a process that results in a lifecycle greenhouse gas emission rate of 4 kilogram of CO₂e or less. An independent unrelated party will need to verify the amount of hydrogen produced and that it was produced in the ordinary course of a trade or business of the taxpayer for its sale or use.

No credit may be taken for qualified clean hydrogen produced at a facility that includes carbon capture equipment for which a credit is allowed to any taxpayer under Section 45Q for the taxable year or any prior taxable year. However, a taxpayer who uses electricity produced at a PTC- or ITC-eligible facility to produce clean hydrogen may claim both the PTC/ITC and the Section 45V production tax credit (with the PTC's requirement that electricity be sold to an unrelated person deemed satisfied).

Taxpayers may also claim a two-tier ITC (\$6 "base"/\$30 maximum, in each case multiplied by the applicable rate) in lieu of the Section 45V PTC, with the base and maximum amounts multiplied by the applicable rates specified above.

Section 45U Zero Emissions Nuclear Facility Credit

The Act adds Section 45U, which provides a two-tier credit (0.3 cents "base"/1.5 cent maximum, adjusted for inflation) per kWh of electricity produced at a qualified nuclear facility and sold to an unrelated party after 2023 and before 2033.

The credit is not available for nuclear facilities for which credits have been received under Section 45J.

The credit is also reduced by the lesser of the credit amount and 16% of the excess of (i) gross receipts from electricity produced by such facility and sold to an unrelated person over (i) 2.5 cents (adjusted for inflation) multiplied by the amount of electricity sold.

Sidley Insight. Note that this credit is available (and only available) to nuclear facilities that were previously placed in service. Accordingly, the policy behind this credit appears to differ from the fundamental policy behind the other incentives included in the Act; rather than encouraging new investment in nuclear facilities, it provides a subsidy for existing nuclear facilities.

Section 45X Advanced Manufacturing Credit

The Act adds Section 45X, which provides a PTC for manufacturers of eligible components that are produced and sold by a taxpayer to an unrelated party after 2022 in the taxpayer's trade or business, the amount of which varies depending on the eligible component.

Eligible components include specific components used in wind, solar and battery projects, including blades, nacelles, wind turbine towers, PV cells, PV wafers, certain inverters, solar grade polysilicon, polymeric backsheets, solar modules, torque tubes, structural fasteners, electrode active materials, battery cells, battery modules, and certain critical minerals. The Section 45X credit begins phasing out in 2030 and is not available for components sold after 2032.

A taxpayer may treat a sale of a component to a related party as an eligible sale to an unrelated party to the extent that either (i) such related party sells such component to an unrelated party or (ii) the taxpayer makes an election to that extent. If such an election is made, Treasury may require the taxpayer to provide certain information or registration to ensure that there is no fraud, duplication of credits or any other improper treatment or excessive credit amount.

Section 40B Sustainable Aviation Fuel Credit

The Act adds Section 40B, which provides a credit for each gallon of sustainable aviation fuel (SAF) sold or used by a taxpayer before December 31, 2024. The amount of the credit is \$1.25, plus an applicable supplementary amount up to \$0.50. The applicable supplementary amount is an amount equal to \$0.01 for each percentage point by which the lifecycle greenhouse gas emissions reduction percentage (as compared to petroleum based jet fuel) for such sustainable aviation fuel exceeds 50%.

To qualify for the credit, a fuel mixture must be (i) produced in the United States, (ii) used or sold for use in an aircraft, (iii) used or sold in the ordinary course of business, and (iv) transferred to an aircraft fuel tank within the United States. Additionally, the SAF must satisfy certain other requirements and meet certain technical specifications, including that it not be derived in any part from certain materials (such as petroleum) and produces at least 50% less greenhouse gas emissions than petroleum-based jet fuel.

The amount of the SAF credit is included in gross income of the taxpayer.

This new tax credit is intended to spur domestic SAF production and is expected to assist in closing the significant price gap between a gallon of Jet A and more expensive sustainable fuels.

¹Unless otherwise specified, all references to "Section" are to the Internal Revenue Code of 1986, as amended (the Code).

²In the case of a wind facility that qualifies for an aggregate "base" and "bonus" PTC of 2.6 cents per kw/h (in 2022), the PTC rate would increase to 2.86 cents per kw/h. In the case of a solar facility that qualifies for an aggregate "base" and "bonus" ITC rate of 30%, the ITC rate would be increased to 40%.

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