The Green Energy Tax Incentives of the Inflation Reduction Act of 2022

Last Wednesday night, after weeks of negotiations, US Senators Joe Manchin and Chuck Schumer reached a deal on an energy and healthcare bill titled the Inflation Reduction Act of 2022 (the “Act”).¹ The Act includes extensive provisions relating to green energy tax incentives. Although these provisions incorporate the general tax credit framework from the previously released Build Back Better Act (the “BBBA”), there are a number of noteworthy deviations, some of which were largely unexpected.

Key green energy tax provisions are listed below, with a more detailed analysis following the bullet point outline.

- Extension of the solar investment tax credit (“ITC”) and renewable electricity production tax credit (“PTC”) for projects that begin construction before January 1, 2025.
- ITC and PTC reduction for projects that fail to satisfy prevailing wage and apprenticeship requirements, but deemed satisfaction of such requirements for projects that begin construction prior to the date that is 60 days after Treasury issues guidance related to these provisions.
- Bonus ITC and PTC for projects that satisfy certain domestic content requirements or that are located in “energy community” or low-income community areas.
- ITC expanded to standalone storage and limited interconnection property (but not transmission property more generally).
- Extension of the carbon capture credit for projects that begin construction before January 1, 2033, and expansion of the carbon capture credit and reduction of carbon capture requirements.
- Direct pay option for certain governmental and tax-exempt entities.
- Option for taxable entities to transfer the ITC and PTC to third parties for cash.
- 3-year carryback period for the PTC (but only for projects that are placed in service after December 31, 2022) and for the ITC.
- A 15% minimum tax on corporate taxpayers with adjusted financial statement income in excess of $1 billion, effective for taxable years starting after December 31, 2022, with the ability to apply the ITC and PTC to reduce up to 75% of the minimum tax in excess of $25,000.

Projects placed in service after December 31, 2024, entitled to a new, technology-neutral investment tax credit and production tax credit regime. The new technology-neutral credits will be subject to phaseouts for projects beginning construction after the later of 2032 and the date certain emissions targets are satisfied.

Extension of the tax credit for new electric vehicles for those placed in service after December 31, 2022, and elimination of the per-manufacturer limit. However, there will be an income limitation and a phased-in domestic content requirement for the electric vehicle battery. The new domestic content requirement is likely to substantially limit the usefulness of this credit.

A new tax credit for purchases of used electric vehicles, which will also be subject to an income limitation.

A new tax credit for commercial electric vehicles.

Extension and Modification of the PTC

The PTC would be extended to projects beginning construction before January 1, 2025.

The Act retains the substance of the revised PTC structure set forth in the BBBA. Specifically, the PTC would consist of a base credit in an amount equal to 20% of the available credit, an amount that would be multiplied by 5 if certain prevailing wage and apprenticeship requirements are satisfied. It should be noted that these prevailing wage and apprenticeship requirements would be treated as satisfied if a project begins construction prior to the date that is 60 days after Treasury issues guidance related to these provisions. In addition, a bonus 10% PTC is available if certain “domestic content requirements” are met or if the project is located in an “energy community” (e.g., brownfield sites). The PTC would also become available for solar projects.

While the extension of the PTC obviates the need to demonstrate beginning of construction in the near future for the purpose of qualifying for the base credit, demonstration of beginning of construction remains relevant for purposes of the deemed satisfaction of the prevailing wage and apprenticeship requirements for projects that begin construction prior to the date described above. Thus, we expect that developers will continue to safe harbor projects to avoid being subject to the prevailing wage and apprenticeship requirements. Although the existing IRS guidance with respect to beginning of construction does not contemplate demonstration of beginning of construction for this specific purpose, the guidance is broadly drafted to apply to beginning of construction generally, and we are not aware of any policy reason that a different standard should apply for purposes of the prevailing wage and apprenticeship requirements. Accordingly, we expect that the same beginning of construction standard under current IRS guidance will apply for purposes of the prevailing wage and apprenticeship requirements.

With respect to a project that has already begun construction, under existing IRS guidance, a taxpayer must make continuous progress toward completion once construction has begun. However, this continuity requirement is deemed satisfied if the project is placed in service by an outside date. For example, under current IRS guidance, a wind project that began construction in 2016 must be placed in service prior to January 1, 2023, in order to be deemed to satisfy the continuity requirement; otherwise, the project would need to demonstrate actual continuity throughout construction in order to be eligible for the 100% PTC. Under the Act, as long as the project clearly began construction prior to 2025 (e.g., it is placed in service prior to 2025), the project would be eligible for the 100% PTC even if it fails to be placed in service by January 1, 2023.
In general, the extension of the PTC would apply for projects or equipment placed in service after December 31, 2021. However, certain provisions, including the bonus for domestic content, would apply only for projects placed in service after December 31, 2022.

**Extension and Modification of the ITC**

The ITC would be extended to projects beginning construction before January 1, 2025.

The structure of the ITC would follow the general structure of the PTC described above, with a 6% base credit, a percentage that would be multiplied by 5 if certain prevailing wage and apprenticeship requirements are satisfied. Like the PTC, the ITC is subject to a 10% bonus credit if certain “domestic content” requirements are met or if the project is located in an “energy community.” For the ITC (but not the PTC), an additional 10% bonus credit is available for projects of less than 5 megawatts (AC) located in “low-income communities” (or 20% in the case of projects that are part of a qualified low-income housing project or qualified low-income economic benefit project).

As with the PTC, despite the extension of the ITC, demonstration of beginning of construction remains relevant for purposes of the deemed satisfaction of the prevailing wage and apprenticeship requirements.

The Act also expands the scope of ITC-eligible property to include, among other things, standalone storage and certain interconnection property. However, the inclusion of interconnection property is very narrow and limited to projects that are no greater than 5 megawatts and only to the extent the interconnection property is an upgrade to an existing transmission or distribution system and is necessary to accommodate the interconnection of such system to an applicable project. To be eligible for the ITC on standalone storage, construction must begin prior to January 1, 2025.

The inclusion of standalone storage is a welcomed and much-needed development for the solar industry. Under current law, a storage system must be coupled with qualifying “energy property” (e.g., a PV system) in order to be eligible for the ITC. As a result, there is some uncertainty as to the standard for determining whether a storage system is eligible for the ITC, particularly when the storage system is installed after the corresponding PV system has already been placed in service. With the expansion of the ITC to standalone storage, a developer would be able to add a battery system to an existing project and claim the ITC on such addition.

In general, the extension of the ITC would apply for projects or equipment placed in service after December 31, 2021. However, certain provisions, including the bonus for domestic content, would apply only for projects placed in service after December 31, 2022.

**Carbon Capture Credit**

The carbon capture credit would be extended to projects beginning construction before January 1, 2033, and the credit amounts would be increased, with an additional bonus for direct air capture facilities. In addition, the Act would lower the minimum carbon capture requirements. Specifically, an electric generating facility would generally qualify for the carbon capture credit if it captures at least 18,750 metric tons of qualified carbon oxide during the taxable year and has a capture design capacity of at least 75% of the baseline carbon oxide production. Direct air capture facilities would generally qualify if they capture at least 1,000 metric tons of qualified carbon oxide during the taxable year. Other facilities would generally qualify if they capture at least 12,500 metric tons of qualified carbon oxide during the taxable year.
Similar to the PTC and the ITC, the carbon capture credit would comprise a base credit in an amount equal to 20% of the available credit, an amount that would be multiplied by 5 if certain prevailing wage and apprenticeship requirements are satisfied. As with the ITC and PTC, these requirements are satisfied if a project begins construction prior to the date that is 60 days after Treasury issues guidance related to these provisions.

In general, these provisions would apply for projects or equipment placed in service after December 31, 2022.

Direct Pay

The Act would provide a “direct pay” option. However, unlike the “direct pay” option under the BBBA, this “direct pay” option would generally be limited to tax-exempt entities, with the notable exception that taxable entities may elect direct pay with respect to the carbon capture credit, clean hydrogen PTC and ITC, and the advanced manufacturing production credit but (other than with respect to the advanced manufacturing production credit) only for the first 5 years of the tax credit period. Thus, the “direct pay” option under the Act is largely intended to expand the tax equity market to include tax-exempt investors.

Under current law, tax-exempt entities are typically excluded from claiming the PTC and ITC as both a practical matter and a technical matter. As a practical matter, a non-refundable tax credit has no value to a tax-exempt entity. As a technical matter, there are specific rules that deny the ITC and accelerated depreciation to property that is owned, in whole or in part, by a tax-exempt entity. The proposed “direct pay” option would solve the practical issue by substituting a cash payment for a tax credit. It would also solve the technical issue in part by eliminating the restriction on tax-exempt entities with respect to the ITC. However, the Act does not appear to eliminate the restriction on tax-exempt entities with respect to accelerated depreciation. Thus, “direct pay” does not allow a project with a tax-exempt investor to fully monetize the tax benefits that would be allowed in a deal with a taxable investor.

Tax Credit Transfer Regime

The Act also introduces a new option that would allow taxable project owners to transfer all or part of their tax credits to third parties in exchange for cash on an annual basis. However, a previously transferred credit may not be further transferred by the transferee. In addition, a carryback or carryforward tax credit is not transferrable. Under this transfer regime, the payment is not included in the transferor’s income, and the payment is not deductible with respect to the transferee.

Although this new transfer regime provides more flexibility for sponsors, it is not a dollar-for-dollar replacement of a typical tax equity financing for a number of reasons. The inability of the transferee to take a deduction may put the transferee in a worse position than the typical tax equity investor, who is effectively permitted to deduct up to 50% of its investment. Moreover, in a typical ITC transaction, a sponsor’s cost basis is less than the fair market value of the project. In order to step up the basis of the project to its fair market value and maximize the value of the ITC, the sponsor will often sell the project at its fair market value to a tax equity partnership. The proposed transfer regime would fail to capture the step-up value of the project, which is typically a 20% increase over cost. In addition, the transfer regime would not monetize other tax benefits, such as depreciation deductions, effectively leaving money on the table for sponsors that typically are unable to use depreciation deductions. Although on its face a sale of tax credits seems simpler than a tax equity deal, we expect many of the key, highly negotiated provisions of
tax equity deals to be incorporated into tax credit sale agreements, including indemnities, conditions precedent to closing the deal, representations and warranties, and sponsor guaranties. This transfer election is generally available for credits arising in tax years that begin after December 31, 2022.

3-Year Carryback and 22-Year Carryforward

The Act would replace the current 1-year carryback and 20-year carryforward periods with a 3-year carryback and 22-year carryforward period for most of the tax credits described above, including the ITC, the PTC, and the carbon capture credit. This provision applies for taxable years beginning after December 31, 2022.

Minimum Tax

The Act would impose a 15% corporate alternative minimum tax on any corporation which has an average annual adjusted financial statement income for any consecutive 3-year period in excess of $1 billion. The annual adjusted financial statement income disregards any amounts received under the “direct pay” option but is not reduced by depreciation deductions. The ITC and PTC may be applied to reduce up to 75% of the minimum tax in excess of $25,000. This minimum tax would apply for taxable years beginning after December 31, 2022.

New Renewable Energy Tax Credits

The Act introduces a number of renewable energy tax credits, which are described briefly below.

CLEAN ELECTRICITY PTC

The Act would provide a technology-neutral PTC for the production of clean electricity from a qualified facility that is placed in service after December 31, 2024, and for which the greenhouse gas emissions rate is not greater than zero. Unlike the current PTC, the electricity may be consumed or stored by the taxpayer as long as the facility is equipped with a metering device that is owned and operated by an unrelated person.

Like the current PTC, the technology-neutral PTC is available for the 10-year period commencing on the date the facility is placed in service. The technology-neutral PTC may not be claimed with respect to a facility on which a PTC or ITC, carbon capture credit, or certain other tax credits are allowed.

The technology-neutral PTC would be subject to a phaseout for facilities beginning construction in the first calendar year after the later of (i) the calendar year in which the Secretary of the Treasury determines that the annual greenhouse gas emissions from the production of electricity in the US are equal to or less than 25% of the annual greenhouse gas emissions from the production of electricity in the US for calendar year 2022 and (ii) 2032.

CLEAN ELECTRICITY ITC

Similar to the technology-neutral PTC described above, a technology-neutral ITC would be available for an electric generating facility or energy storage property that is placed in service after December 31, 2024, and for which the greenhouse gas emissions rate is not greater than zero. The amount and structure of the technology-neutral ITC is similar to the ITC described above.
The technology-neutral ITC is subject to a similar phaseout schedule as the technology-neutral PTC and, like the technology-neutral PTC, may not be claimed with respect to a facility on which a PTC or ITC, carbon capture credit, or certain other tax credits are allowed.

**ZERO EMISSION NUCLEAR POWER PTC**
The Act would provide a PTC for the production of electricity from a nuclear facility that is placed in service before the date of enactment of the Act. The credit only applies to electricity produced and sold after December 31, 2023, and terminates for taxable years beginning after December 31, 2032.

**CLEAN HYDROGEN PTC AND ITC**
The Act would provide a 10-year PTC for the production of clean hydrogen at a qualified facility that begins construction prior to January 1, 2033, with the option to elect the ITC in lieu of the PTC.

To be eligible for the clean hydrogen PTC (or the ITC in lieu of the PTC), the lifecycle greenhouse gas emissions rate cannot exceed 4 kilograms of CO2e (carbon dioxide equivalent) per kilogram of hydrogen.

The structure of the clean hydrogen PTC and ITC would be similar to the structure described above regarding the PTC and ITC. A taxpayer cannot claim both the clean hydrogen PTC and the carbon capture credit but may claim both the PTC or ITC and the clean hydrogen PTC.

**ADVANCED MANUFACTURING PRODUCTION CREDIT**
The Act would provide a tax credit for the production of certain eligible components produced by the taxpayer in the US and sold to an unrelated person after December 31, 2022. The amount of the credit would vary significantly depending on the component produced. Eligible components include PV cells, PV wafers, solar grade polysilicon, polymeric backsheets, solar modules, wind energy components, torque tubes, structural fasteners, electrode active materials, battery cells, battery modules, and certain critical minerals.

The credit would begin to phase out with respect to components sold during the 2030 calendar year and would be eliminated for components sold after December 31, 2032.

**New and Used Electric Vehicle Tax Credits**

**NEW ELECTRIC VEHICLE CREDIT**
The Act would revise the tax credit for purchases of new electric vehicles placed in service after December 31, 2022. Under current law, the credit is up to $7,500, with $5,000 of that calculated based on the battery capacity of the electric vehicle, and there is a manufacturer-specific phaseout once a manufacturer has sold at least 200,000 electric vehicles in the US after 2009 (after which point, the credit is reduced by 50% in the second and third calendar quarters following the quarter in which the threshold is hit, 75% in the two following quarters, and 100% thereafter).

There are substantial new domestic content requirements for electric vehicle batteries to qualify for the credit which may significantly reduce the availability of the tax credit. Under the Act, the maximum credit amount would remain the same as under earlier law, but (A) half of the credit would depend on a percentage of the critical mineral components of the electric vehicle battery.
being extracted or processed in a country with which the US has a free trade agreement in effect2 or recycled in North America, and (B) the other half of the credit would depend on a percentage of the value of components contained in the battery being manufactured or assembled in North America. The minimum critical mineral component percentage is 40% for vehicles placed in service before 2024, 50% for vehicles placed in service in 2024, 60% for vehicles placed in service in 2025, 70% for vehicles placed in service in 2026, and 80% for vehicles placed in service after 2026. The minimum battery component manufacture or assembly percentage is 50% for vehicles placed in service before 2024, 60% for vehicles placed in service in 2024 or 2025, 70% for vehicles placed in service in 2026, 80% for vehicles placed in service in 2027, 90% for vehicles placed in service in 2028, and 100% for vehicles placed in service after 2028.

Beginning after December 31, 2023 (1 year after the date that the other new electric vehicle credit provisions take effect), the new electric vehicle credit will not be available for joint filers with a modified adjusted gross income over $300,000, heads of household with a modified adjusted gross income over $225,000, and single filers with a modified adjusted gross income over $150,000.

These credits will be transferable to the dealer selling the vehicle, provided the dealer registers with Treasury and satisfies certain requirements.

**USED ELECTRIC VEHICLE CREDIT**

The Act will establish a new tax credit for purchases of used electric vehicles with a model year at least 2 years earlier than the calendar year in which the taxpayer acquires the vehicle. This credit will be the lesser of $4,000 and 30% of the sales price of the vehicle. This credit is subject to income limits that are half of the limits for new electric vehicles, so $150,000 for joint filers, $112,500 for heads of household, and $75,000 for single filers. This credit will not be available to a taxpayer who has been allowed the credit within the 3 years before the sale.

These credits will be transferable to the dealer selling the vehicle, provided the dealer registers with Treasury and satisfies certain requirements.

**COMMERCIAL ELECTRIC VEHICLES**

There will be a new tax credit for commercial electric vehicles acquired after December 31, 2022, and before January 1, 2033. These vehicles must be acquired for use or lease by the taxpayer and not for resale. The credit is equal to the lesser of 15% of the basis of the vehicle (30% in the case of a vehicle not powered by a gasoline or diesel internal combustion engine) and the “incremental cost” of the vehicle. The “incremental cost” is the excess of the purchase price of the vehicle over that of a comparable vehicle powered solely by a gasoline or diesel internal combustion engine. The credit is capped at $7,500 per vehicle for vehicles with a gross vehicle weight rating of less than 14,000 pounds and $40,000 for other vehicles.

The commercial electric vehicle tax credit is subject to recapture under rules that may be provided by Treasury.

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2 Presumably the intent is to also include materials extracted or processed within the US itself, but this portion of the bill text only refers to “any country with which the United States has a free trade agreement in effect.”
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