# Inflation Reduction Act provides major tax incentives for public power

Treasury is requesting comments on the new provisions by November 4, 2022

Steve Watson

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The Inflation Reduction Act, signed into law by President Biden on August 16, 2022, provides major tax incentives for public power agencies to finance and own clean energy projects.

On October 5, 2022, the Treasury Department requested comments on the new provisions. The Treasury said it seeks input by November, 4, 2022, but that it will consider comments received after that date if the consideration will not delay issuance of guidance.

The new incentives for public power will be in the form of cash payments from the Internal Revenue Service. The payments are called "refundable tax credits" because they are based on tax credits for taxable entities that are payable in cash. The payments have similarities to direct-pay subsidies for Build America Bonds and New Clean Renewable Energy Bonds but there are significant differences.

The incentives include a production tax credit (PTC) and an investment tax credit (ITC) for generating renewable energy or installing batteries and other energy storage facilities, as well as credits for carbon oxide sequestration, production of clean hydrogen, and production of energy from existing nuclear facilities. Direct-pay subsidies generally will be available only for facilities placed in service after 2022.

A public power agency will need to own a facility in order to receive subsidies for it.

For each of the credits there is a base rate that is increased to a full rate if the facility meets certain wage and/or apprenticeship requirements. Additional, bonus rates are available for PTC and ITC facilities that are located in certain areas or meet domestic content requirements.

For facilities financed with tax-exempt debt, the credits are reduced by 15% or, if less, the percentage of the facility financed with tax-exempt proceeds. This reduction does not apply to the existing nuclear facility credit.

PTC and ITC facilities that start construction after 2023 generally must meet or be excepted from domestic content requirements to qualify for certain direct payments.

# **Overview of credits**

## PTC - In general

The PTC is a per-MWh credit for producing energy from a qualifying resource. For 2022 the base rate is \$5.20 per MWh and the full rate, which applies if wage and apprenticeship requirements are met, is \$26 per MWh. Subject to possible clarification from Congress or the Treasury, these rates may be increased for 2022 to \$5.50 and \$27.50, respectively, based on a rounding convention in the IRA. The rates are adjusted annually for inflation.

The PTC is paid over the 10-year period beginning on the date the facility is placed in service.

There are two types of PTC. One is limited to specified renewable generation facilities. The other is technology-neutral.

## **Renewable generation PTC**

The renewable generation PTC applies to certain facilities that start construction before 2025. It is calculated based on the amount of electricity produced and sold to unrelated persons.

It is available for facilities that produce electricity using one of the following resources: wind, solar, geothermal, incremental hydropower, marine and hydrokinetic, biomass, or municipal solid waste (from landfill gas or otherwise). Detailed rules apply to determine whether a facility using one of these resources is eligible for the PTC.

The renewable generation PTC is reduced by one-half for facilities using municipal solid waste or biomass. This reduction does not apply, however, to "closed-loop" biomass facilities that use plants grown exclusively to produce electricity.

A generation facility using renewable natural gas is not eligible for the PTC if the RNG was produced at a facility claiming the ITC.

If a public power agency owns both a PTC-eligible generation facility and a qualified clean hydrogen production facility described below, and uses electricity generated by the generation facility to produce qualified clean hydrogen, the agency is eligible to claim production credits for both the electricity and the hydrogen production if the production and use of each are verified by an unrelated party and other requirements are met. This treatment is an exception to the requirement that electricity from renewable generation PTC facilities must be sold to unrelated persons.

## **Technology-neutral PTC**

The second PTC is technology-neutral. It applies to generation facilities with a greenhouse gas emissions rate of zero or less that are placed in service after 2024.

Facilities eligible for the tech-neutral PTC include not only renewable resources but also, for example, nuclear facilities and natural-gas fired plants that meet carbon capture and storage or utilization requirements. The tech-neutral PTC is calculated based on the amount of electricity produced and sold to unrelated persons and, if the facility has a metering device owned and operated by an unrelated person, sold, consumed or stored by the facility owner.

For a combined heat and power facility, both electricity and thermal energy produced are taken into account in computing the tech-neutral PTC and greenhouse gas emissions. Thermal energy is converted to a megawatt-hour equivalent based on the facility's heat rate.

For each year beginning in 2025, the Treasury is directed to publish a table identifying greenhouse gas emissions rates for types and categories of facilities.

The tech-neutral PTC will start to phase out after 2032 or, if later, the year total US greenhouse gas emissions from electricity production fall by at least 75% from the 2022 amount. The PTC will be reduced to 75% of its value for facilities starting construction in the second year after the phase-out is triggered. It will be reduced to 50% for facilities starting construction in the third year after the phase-out trigger and 0% for facilities starting construction in any subsequent year.

# ITC - In general

The ITC is a one-time payment after the facility is placed in service. It is calculated based on a percentage of the cost of qualifying energy property. For most ITC projects the base rate is 6% and the full rate is 30%.

There are two types of ITC. One is limited to certain types of energy property. The other is technology-neutral.

# **Energy-property ITC**

Property eligible for the first ITC includes a variety of generation facilities including solar, wind, geothermal, fuel cell, microturbine, and combined heat and power system property. It also includes energy storage technology, renewable natural gas production facilities, microgrid controllers, waste energy recovery property that generates electricity from building or equipment heat, electrochromic glass, and geothermal heat pumps. The owner of a PTC-eligible facility can elect to claim the ITC instead of the PTC.

The ITC is available for certain hydrogen production facilities in lieu of the hydrogen production credit described below. The ITC amount for these facilities varies depending on the expected lifecycle greenhouse gas emissions rate through the point of production.

The ITC is also available for network upgrades and gen-tie lines needed to connect generation assets to the grid. It applies only with respect to generation facilities that have a maximum net output of five megawatts (AC) or less and for which the ITC is claimed. The interconnection property is required to be installed pursuant to an "interconnection agreement" with a utility and must be owned by the utility.

If a municipal utility owns the generation facility and the interconnection property, there will not be an interconnection agreement. From a policy standpoint, it appears that a municipal utility should be eligible for an ITC for the interconnection property in these circumstances. However, confirmation from the Treasury may be needed on this point.

For most facilities claiming the energy-property ITC, construction must begin before 2025. It must start before 2033 for hydrogen production projects and before 2035 for geothermal heat pumps. The ITC starts to phase down for geothermal heat pumps starting construction after 2032.

Detailed rules apply to determine whether facilities are ITC-eligible.

## **Technology-neutral ITC**

The second ITC is technology-neutral. It applies to generation facilities with anticipated greenhouse gas emissions rates of not greater than zero and to energy storage facilities, in each case that are placed in service after 2024.

As with the tech-neutral PTC, generation facilities eligible for the tech-neutral ITC include not only renewable resources but also, for example, nuclear facilities and facilities producing electricity through combustion or gasification but with a net greenhouse gas emissions rate of zero or less.

For each year beginning in 2025, the Treasury is directed to publish a table identifying greenhouse gas emissions rates for types and categories of facilities. Interconnection property for generation facilities with a maximum net output of five megawatts (AC) or less is eligible for the tech-neutral ITC in the same manner as described above for the energy-property ITC.

The tech-neutral ITC will phase down on the same schedule that applies to the tech-neutral PTC as described above.

#### **Carbon capture**

The carbon capture credit is available for certain electricity generation facilities that capture CO2 and other carbon oxide using carbon capture equipment placed in service after 2022. The credit is paid over the 12-year period beginning on the date the carbon capture equipment is placed in service.

The full credit equals \$85 per metric ton of carbon oxide captured and stored permanently underground and \$60 per metric ton of carbon oxide captured and used for enhanced oil or natural gas recovery or used to make a commercial product. These amounts will be adjusted for inflation each year after 2026.

To be eligible for the credit, a generation facility must capture at least 18,750 metric tons of carbon oxide during the year and the capture equipment must have a design capacity of at least 75 percent of the baseline carbon oxide emissions for the turbine with which it is paired.

## Clean hydrogen

The clean hydrogen production credit is available for facilities that start construction before 2033 and produce hydrogen through a process that results in a lifecycle greenhouse gas emissions rate through the point of production of not greater than four kilograms of CO2e per kilogram of hydrogen. It is paid over the 10-year period beginning on the date the facility is placed in service.

If wage and apprenticeship requirements are met, the credit equals the applicable percentage of \$3, multiplied by the kilograms of qualified clean hydrogen produced and sold or used by the facility owner during the year and verified by an unrelated party. The applicable percentage ranges from 20 to 100 percent depending on the lifecycle greenhouse gas emissions rate of the production process. The \$3 is available only where the lifecycle emissions to produce the hydrogen are less than 0.45 kilograms per kilogram of hydrogen. The \$3 amount will be adjusted annually for inflation beginning in 2024. The IRA states that direct-pay subsidies are available for qualified clean hydrogen production facilities placed in service after 2012. Clarification from Congress or the Treasury may be needed to confirm whether 2012 (and not 2022) was the intended date.

#### **Existing nuclear**

Certain nuclear facilities are eligible for a production credit if they were put in service before the enactment of the IRA and are not "advanced" facilities described in section 45J of the tax code. The credit is available over a nine-year period for electricity produced and sold after 2023.

If prevailing wage requirements are met for any alteration or repair of the facility, the credit is \$15, multiplied by the megawatt hours of electricity produced and sold during the year to unrelated persons.

The credit is reduced by 16 percent of the excess of (1) gross receipts from electricity sales, over (2) the product of \$25 and the megawatt hours of such sales. Gross receipts are increased to include certain amounts received by the facility owner under a federal, state or local government zero-emission credit program.

The \$15 and \$25 amounts will be adjusted for inflation after 2024.

Treasury guidance will be needed on the calculation of gross receipts including the determination of gross receipts for a public power agency that is a member of a regional transmission organization and also supplies wholesale electricity to other municipal utilities.

If a public power agency owns both an existing nuclear facility and a qualified clean hydrogen production facility, and uses electricity generated by the nuclear facility to produce qualified clean hydrogen, it appears the agency should be eligible to claim production credits for both the electricity and the hydrogen production if the production and use of each are verified by an unrelated party and other requirements are met. Treasury guidance will be needed to clarify how a facility owner may be eligible for both credits in these circumstances including how receipts from deemed electricity sales would be determined.

# Wage and apprenticeship

For each of the credits described herein, the base rate is increased by a multiple of five if the facility satisfies wage and apprenticeship requirements (except that for existing nuclear, only wage, and not apprenticeship, requirements apply).

A facility is deemed to meet the wage and apprenticeship requirements if its construction starts no later than 59 days after the US Treasury publishes guidance on those requirements (except that facilities claiming the hydrogen production credit must satisfy the wage requirements for alterations or repairs to receive the full credit, regardless of when construction begins).

Projects claiming the ITC or PTC are deemed to satisfy the wage and apprenticeship provisions if they have a maximum net output of less than one megawatt (AC) of electrical energy (or, for certain ITC projects, less than one megawatt of thermal energy).

To meet the wage requirements, the facility owner must ensure that any laborers and mechanics employed by it or any contractor or subcontractor in the construction of the facility, and in its alteration or repair during the applicable credit period, are paid wages not less than Davis-Bacon prevailing rates.

For the PTC and hydrogen production credit, the credit period is the first ten years of facility operation. For carbon oxide sequestration, it is the 12-year period beginning on the date the carbon capture equipment is placed in service. For the ITC, it is the first five years of facility operation.

For existing nuclear, the wage requirements apply only to alterations or repairs (and not original construction, which will have occurred in the past) and appear to apply throughout the nine-year credit period, subject to possible clarification from the Treasury.

To meet the apprenticeship requirements, the facility owner must ensure that qualified apprentices perform a minimum percentage of the total labor hours of the construction, alteration or repair work. The minimum percentage is 10% if construction starts before 2023, 12.5% if it starts in 2023 and 15% if it starts after 2023. The apprenticeship requirements will be deemed met if the facility owner and its contractors and subcontractors make a good faith effort to comply but are unable to find apprentices from a registered apprenticeship program.

Additional rules apply to the wage and apprenticeship requirements, and there are cure provisions if the IRS asserts later on audit that some workers were paid too little or total labor hours worked by apprentices fell short of what was required.

# **Domestic content**

# **Bonus credit**

A bonus credit applies to PTC and ITC facilities that meet domestic content requirements. For the PTC, the bonus is 10% of the otherwise-applicable direct payment (excluding any energy community bonus described below). For the ITC, it is an additional ten percentage points if the facility meets wage and apprenticeship requirements, and an extra two percentage points if it does not.

A facility meets the domestic content requirements if all the steel and iron, and a specified portion of manufactured products, that are components of the facility are produced in the United States.

For facilities (other than offshore wind) that begin construction before 2025, manufactured components are considered produced in the United States if at least 40% of their total cost is attributable to mining, production or manufacturing in the United States. The percentage is increased to 45% if construction starts in 2025, 50% if it starts in 2026, and 55% if it starts after 2026.

For offshore wind the percentages are 20% if construction starts before 2025, 27.5% if it starts in 2025, 35% if it starts in 2026, 45% if it starts in 2027, and 55% if it starts after 2027.

For the tech-neutral ITC, clarification from Congress or the Treasury may be needed as to whether the 40% (20% for offshore wind) threshold is increased for construction starting after 2024.

Additional Treasury guidance will be necessary to clarify the domestic content bonus requirements.

# Requirements if construction starts after 2023

PTC and ITC projects that start construction after 2023 must meet domestic content requirements, or be excepted from them, to qualify for certain direct payments.

For projects starting construction in 2024 or 2025, the otherwise-available direct payments are reduced to 90% or 85% of their value, respectively, unless the project meets or is excepted from domestic content requirements. For projects that begin construction after 2025, direct payments are not available unless domestic content requirements are met or an exception applies.

These reductions do not apply to PTC and ITC projects with a maximum net output of less than one megawatt (AC).

The IRA directs the Treasury to provide exceptions for projects if the inclusion of US-made steel, iron or manufactured products would increase overall construction costs by more than 25%, or the relevant steel, iron or manufactured products are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality.

# **Energy communities**

A bonus credit applies to any PTC or ITC project located in an energy community. For the PTC, the bonus is 10% of the otherwise-applicable direct payment (excluding any domestic content bonus). For the ITC, it is an additional ten percentage points if the facility meets wage and apprenticeship requirements, and an extra two percentage points if it does not.

There are three types of energy communities.

The first is a brownfield site, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

The second is a metropolitan or non-metropolitan statistical area with an unemployment rate at or above the national average that has, or at any time after 2009 had, at least 0.17% direct employment or 25% local tax revenues related to the extraction, processing, transport or storage of coal, oil or natural gas.

The third is a census tract in which a coal mine closed after 1999 or a coal-fired electric generating unit was retired after 2009, or any census tract that directly adjoins such a tract.

Treasury guidance will be needed to clarify the areas that qualify as energy communities.

# **Environmental justice allocation**

Certain ITC projects are eligible for a 10- or even 20-percent bonus if the facility owner applies for and receives an "environmental justice" allocation from the IRS. A project with such an allocation could receive a total ITC of as high as 70%, assuming compliance with wage and apprenticeship, domestic content and energy community requirements and eligibility for the 20% environmental justice bonus.

Eligible projects are wind and solar (and certain related storage) facilities with a maximum net output of less than five megawatts (AC) that either are located in a low-income community or on Indian land, or are part of a qualified lowincome residential building project or a qualified low-income economic benefit project.

Projects in a low-income community or on Indian land are eligible for a 10% bonus. Facilities that are part of a qualified low-income residential building project can receive a 20% bonus if the financial benefits of the electricity produced by the facility are allocated equitably among residents. Qualified low-income economic benefit projects can receive a 20% bonus if low-income households receive at least one-half of the financial benefits.

A nationwide allocation of 1,800 megawatts (DC) will be available for each year from 2023 through at least 2032.

Beginning in 2025 eligible facilities will be expanded to include not only solar and wind but also other zero-emission generation projects that do not use fuel combustion or gasification.

# **Direct-pay procedures**

Treasury guidance will be needed on the procedures and timing for requesting direct payments. The IRA provides that the right of a state or local government to receive a directpay subsidy for a year accrues on the date the entity would be required to file a Form 990 tax return for that year if it were a 501(c)(3) organization (or, if later, the date it submits a claim for the subsidy). Thus, subject to Treasury guidance, it appears that a state or local government with a calendar year accounting period will file for year 1 subsidies by May 15 of year 2.

If a facility owner requests and receives a subsidy in excess of the permitted amount, the IRS is authorized to receive a return of the excessive payment plus a penalty equal to 20% of that excessive payment. The 20% penalty would not apply, however, if the facility owner demonstrates to the IRS that it had reasonable cause for requesting the excessive payment.

# **Sequestration**

The IRA contains a "gross-up" provision to prevent direct-pay subsidies from being reduced under budget sequestration rules. Under pre-IRA law, certain federal spending such as subsidies for Build America Bonds is subject to across-theboard cuts. The current sequester rate of 5.7% is scheduled to continue through the end of the federal government's 2030 fiscal year.

Under the IRA gross-up, the new direct-pay subsidies are automatically increased by 6.0445%. Thus, a \$1,000,000 subsidy is increased to \$1,060,445. If this grossed-up amount is reduced by 5.7%, the resulting subsidy equals the original \$1,000,000.

Thus, the current sequester does not adversely impact the newly-authorized direct payments. On the other hand, the IRA does not preclude the possibility of a future change in the gross-up percentage or sequestration rate.

The gross-up does not apply to BABs or other previouslyauthorized direct-pay bonds.

# Tax-exempt vs. taxable financing

One consideration for public power agencies will be whether tax-exempt or taxable financing is most advantageous for a project receiving a direct-pay subsidy. If a facility is financed with tax-exempt debt, the subsidy is reduced by 15% or, if less, the percentage of the facility financed with tax-exempt proceeds. For facilities claiming the direct-pay ITC, absent favorable Treasury guidance, overissuance rules generally will limit an issuer's ability to use long-term tax-exempt financing for the costs that are expected as of the date of bond issuance to be covered by the ITC.

For example, if an issuer finances 15% or more of the cost of a project with tax-exempt debt and otherwise would be eligible for a 30% ITC, the ITC will be reduced by 15% to 25.5%. The issuer will thus expect to receive a payment from the IRS for 25.5% of the project costs within a year or so after the project is placed in service.

Absent unique circumstances (for example, if the bonds were issued before the enactment of the IRA), overissuance rules generally would limit the term of any tax-exempt debt for the 25.5% portion based on the expected date of receipt of the subsidy from the IRS. Accordingly, any tax-exempt debt issued for the 25.5% portion generally would need to have a maturity or optional redemption date corresponding to the expected subsidy receipt date. The remaining 74.5% of the costs would be eligible for long-term tax-exempt financing under established tax rules.

# **PTC vs. ITC**

For certain renewable generation projects that would qualify for the PTC, the facility owner can elect to claim the ITC instead. A public power agency should consider a number of factors in evaluating whether the PTC or ITC would be more advantageous for a particular project.

The ITC is a one-time payment, equal to a percentage of project costs, for the date the facility is placed in service. The PTC is a per-MWh payment based on actual production over the first ten years of facility operation that is adjusted each year for inflation. It is paid once a year based on the preceding year's production.

An evaluation of the PTC vs. the ITC for a project would include a calculation of the present value of the expected subsidy amounts for each of the credits. Factors relevant to this determination would include the ITC percentage and PTC amount for the project, the expected project cost and capacity factor, the assumed discount rate, and the expected inflation rate. Other considerations would include the potential for future sequestration and the need to send the IRS only one payment request rather than ten.

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