The Inflation Reduction Act: Printable Summary

Investment Tax Credit Extension (Section 1302), Production Tax Credit Addition (Section 1301), and Transition to New Technology Neutral Credit (Sections 13701 and 13702)

Section 48 and 45 incentives: first ~2.5 years on current structure, then, ~+8 years on new structure

> The first ~2.5 years – projects that start construction before the end of 2024 -- are eligible for the ITC. Also, solar is allowed to choose the PTC instead of just the ITC for projects starting construction before January 1, 2025.
>
> For projects placed in service (PIS) after January 1st, 2025 there is a transition to a new technology-neutral tax credit system (those that commence construction before January 1st, 2025 can still opt to receive the earlier ITC). After that date, zero-emissions electricity production will be able to choose between an ITC (48E) and a PTC (45Y). This technology-neutral structure extends until power sector emissions are reduced by 75% from 2022 levels or begins stepping down after 2032, whichever is later.

Signed into Law - January 1, 2025	**January 11, 2025 - 2032 at least**	**2033 - 2035 or after 75% reduction**
ITC Extension	Tech Neutral ITC (48E)	100%, 75%, 50%, then 0
PTC for Solar	Tech Neutral PTC (45Y)	100%, 75%, 50%, then 0

New Section 48 ITC and Section 45 PTC Levels

If the legislation passes into law, projects that subsequently commence construction will receive a 6% ITC, though they can receive an additional 24% if they meet one of three conditions.

Those that choose the PTC will only receive 20% of the PTC level, though can receive 100% of the PTC if they meet any of those same three conditions. The PTC base rate at 20% will be .3 cents, and the 100% rate is 1.5 cents. However, the PTC is adjusted for inflation every year and currently the 100% PTC would be 2.6 cents per kWh.

Conditions to get 30% ITC and 100% PTC:

Project is less than 1 MW AC maximum net output

Project starts less than 60 days after Treasury issues guidance on how to meet prevailing wage and apprenticeship standards. For example, if Treasury guidance comes out on February 1st, 2023, those who commence construction before 60 days after that date would qualify for the full rates. That includes those that started construction before the legislation was passed.

Projects carry out prevailing wage and apprenticeship requirements

Note: if a project started during 2020 or 2021 and is placed in service after Jan. 1, 2022, they would automatically meet condition #2 above, thereby receiving a 30% credit.

	2022	2023	2024	PIS 2025 - 2032	2033*	2034	2035
ITC	6% x 5 = 30%	6% x 5 = 30%	6% x 5 = 30%	6% x 5 = 30%	6% x 5 = 30%	6% x 5 = 30% x .75	6% x 5 = .50
PTC (base unadjusted for inflation)	0.3c/kWh x5 = 1.5c/kWh base	0.3c/kWh x5 = 1.5c/kWh base	0.3c/kWh x5 = 1.5c/kWh base	0.3c/kWh x5 = 1.5c/kWh base	0.3c/kWh x5 = 1.5c/kWh base	0.3c/kWh x5 = 1.5c/kWh x .75 for phasedown year	0.3c/kW x5 = 1.5c/kW .50 for phasedo year
PTC Current (inflation adjusted)	2.6¢/kWh	Adjusted for Inflation	Adjusted for Inflation	Adjusted for Inflation	100% phasedown year	75% phasedown year	50% phasedo year

Note: The technology-neutral structure extends until power sector emissions are reduced by 75% from 2022 levels or begins stepping down after 2032, whichever is later. This table shows the phasedown starting after 2032.

Prevailing Wage & Apprenticeship Standard

There are two instances in which receiving a higher ITC or PTC on projects over 1 MW is contingent on prevailing wage and apprenticeship standards. First, with respect to receiving higher underlying ITC and PTC rates. Second, with respect to receiving higher "adder" credits.

The Treasury Department will need to issue guidance explaining precisely how prevailing wage and apprenticeship standards can be met. Sixty days after that guidance is issued, new projects over 1 MW will no longer be able to receive the higher ITC and PTC without meeting those standards. And, those seeking "adder" credits will only be able to receive the full value of those additional credits if they are also meeting prevailing wage and apprenticeship standards.

Prevailing Wage Standards

Prevailing wage rate is determined by the Secretary of Labor, with reference to local rates.

Prevailing rates must be paid to laborers and mechanics employed by the taxpayer or any contractor or subcontractor during construction under the ITC/PTC in order to receive what will now be considered "bonus" rates (for example, to receive a 30% ITC instead of 6% ITC or 100% PTC instead of a 20% PTC). The prevailing wage rates also must be paid for alteration and repair during the 5 years after a project is placed in service if taking the ITC. This five-year period corresponds with the ITC recapture period (in section 50 (A)(1)(b). If utilizing the PTC, they must be paid for 10 years after a project is placed in service. This 10-year period corresponds with the period during which the PTC pays out.

There are mechanisms to rectify or cure certain errors or noncompliance actions related to prevailing wage. If prevailing wage errors made during

construction are not rectified, the project will not qualify for the ITC/PTC in the first place. If prevailing wage errors made during the 5- or 10-year period are not rectified during the period after a project is placed in service (see previous paragraph), the credits will be recaptured subject to the recapture schedule (in section 50 (A)(1)(b)) or PTC schedules. Note that any preceding prevailing wages requirements - federal, state, or local - will still apply unless the IRS guidance and/or a DOL requirements provide for a waiver.

Rectifying Prevailing Wage Errors

The legislation sets out a path toward rectifying inadvertent errors on prevailing wage payments:

Pay the laborer or mechanic the shortfall to make up for prevailing wage

Pay to the worker interest on the underpayment equal to the amount defined in 26 US Code 6621(A)2. This amount is the sum of the federal short term interest rate plus 6%.

Make a payment to the Secretary (of Treasury) of a penalty in an amount equal to the product of $5,000 x the total number of laborers or mechanics who were paid wages at a rate below the required prevailing wage for any period during the year.

If the Secretary determines that any failure to pay prevailing wage is due to intentional disregard, the company can be required to pay 3 times the sum of back wages and interest to the worker, and a payment of $10,000 instead of $5,000 to the Secretary of Treasury.

There may be additional state, local, or other contractual requirements to consider.

Apprenticeship Standards

Participants of federally Registered Apprenticeship Programs (from the DOL's Office of Apprenticeship or State Apprenticeship Agencies and as defined in Title 29 of the U.S. Code of Federal Regulations, Subtitle A, Part 29) must be utilized during construction under ITC and PTC in order to receive "bonus" rates (for example, to receive a 30% ITC instead of 6% ITC). While paying prevailing wage is required after projects are placed in service, there are no apprenticeship requirements after a project is placed in service.

There are three key provisions on apprenticeships: 1) required apprentice hours as a percent of total hours, 2) apprentice-to-journey worker ratio, and 3) participation.

Percent of total hours

The applicable required apprentice hours as a percentage of total hours of construction, alteration, or repair of any qualified facility shall be performed by qualified apprentices as follows. Total hours does not include professions in Executive, Administrative, Professional, Computer and Outside Sales Employees capacities as specifically excluded by Title 29 of the U.S. CFR, Subtitle B, Chapter V, Subchapter A, Part 541. Companies are strongly recommended to consult with their labor attorneys.

Start before 2023	Start during 2023	Start after January 1, 2024
10%	12.5%	15%

Apprentice-to-journey-worker ratio

Layered on top of the requirement to have a certain percentage of apprentice hours is the requirement that those numbers are subject to any additional applicable requirements for apprentice to journey worker of the Department of Labor or applicable state apprenticeship agency.

Participation Requirement

In addition to the above two requirements, each contractor or subcontractor who employs 4 or more individuals to perform construction, alteration, or repair work on a qualified facility shall employ one or more qualified apprentices.

Exceptions and Corrections on Apprenticeships

Exceptions: there are some exceptions to the apprenticeship requirements (such as if apprentices aren't available). A project is not considered as having failed to meet the apprenticeship requirements if the taxpayer makes a good faith effort (defined below) to comply with the requirements.

Good faith effort defined: If a taxpayer seeks apprentices and such request has been denied, provided that such denial is not the refusal by the contractors or subcontractors engaged in the performance of construction, alteration, or repair work on such qualified facility to comply with the established

standards and requirements of the apprenticeship program, or the registered apprenticeship program fails to respond to such request within 5 business days after the date on which such registered apprenticeship program received such request.

Corrections: In a taxpayer fails to meet the percentage requirements (see #1 above) or the requirement to have one worker for every subcontractor that has four workers on the project (see #3 above) and the good faith effort exception (see #1 above) didn't apply, they can come into compliance by paying the Secretary $50 for every labor hour for which the requirement on construction, alteration, or repair was not met.

Adder Credits for Domestic Content and Energy Communities

There are three "adder" credits in the legislation. These can be obtained 1) By meeting specified domestic content requirements; or 2) By placing projects in energy communities as defined by the bill; or 3) an allocated credit is available upon application and award for certain low-income solar activities. Adders can be "stacked" on top of the underlying credits to receive higher ITC or PTC levels. However, the low-income adder only provides the opportunity for a higher ITC, not PTC.

Domestic Content Bonus Credit

An additional 2 percentage points of bonus ITC credit is available for projects that meet domestic content requirements. The domestic content standard will be set by Treasury under 661 of Federal Regulations. These requirements are 100% steel/iron under 661.5(B) and for manufactured products a 40% requirement through 2024 followed by 45% in 2025, 50% in 2026, and 55% in 2027 and beyond. Manufactured content is further explained:

> The products which are components of a qualified facility upon completion will be deemed to have been produced in the United States if the adjusted percentage of the total costs of all such manufactured products of the facility are attributable to manufactured products (including components) which are mined, produced, or manufactured in the United States.

If the project also meets requirements to receive a higher underlying ITC/PTC credit (See New ITC and PTC Levels; Transition Issues), such as meeting prevailing wage and apprenticeship standards, it is 8 additional ITC percentage points for a total of 10 percentage points. That would mean a total of a 40% ITC. On the PTC for solar, a company will receive an additional 10% of what it qualified for (either 10% of .3 cents or 10% of 1.5 cents, adjusted for inflation. That would mean a total of 110% of the PTC.

Energy Community Bonus Credit

The same structure of bonus credit (2 plus 8 percentage points for the ITC, or 2% + 8% for the PTC) is available for siting a project in an energy community. The term "energy community" includes three types of communities:

Brownfield sites as defined under Sections 101(39)(A), (B), and (D)(ii)(III) of CERCLA;

As determined by the Secretary, (1) a metropolitan or non-metropolitan statistical area with unemployment rates, from the previous year, at or above the national average and (2) at least 0.17% of employment or 25% of local tax revenues are related to the extraction, processing, transport, or storage of coal, oil, or natural gas at any time beginning in 2010; and

Census tracts, plus their adjacent census tracts, where a coal mine closed after 1999 or a coal-fired power plant was retired after 2009.

Note: The adder credits for Domestic Content and Energy Communities are only available for projects placed in service after December 31, 2022.

Allocated Adder Credit for Low Income Communities

There is a third type of adder credit, a low-income ITC that is "allocated". This means that a company will have to apply to the Treasury to get these particular credits. Treasury can allocate 1.8 GW direct current capacity total of wind and solar credits per year starting for 2023, and if they fall short of this amount, the remaining amount can be allocated the following years. The credits may also cover energy storage installed in connection with the solar or wind property. The project must have a maximum net output of less than 5 MWAC. Construction of some types of facilities would qualify for a 10% ITC. Other types would qualify for a 20% ITC. If this

measure passes into law, Treasury will need to create an application process.

10%: the project is located in a low-income community[1] or on Indian land.[2]

20%: the project is part of a qualified low-income residential building project[3] or a qualified low-income economic benefit project.[4]

The Secretary will establish a program within 180 days to begin allocating these credits. This will include consideration of multiple projects in a single application if projects will be placed in service by a single taxpayer (for example, a single company).

If the project ceases to meet the criteria above (i.e., not serve low income communities to the specifications above), the value of the tax credit bonus may be recaptured, though after 12 months a taxpayer will have the chance to fix the problem.

This program will not take effect until January 1, 2023 (and for technology-neutral credits, January 1, 2025).

[1]"Low-income community" is defined as a census tract with a poverty rate of at least 20%, as well as a census tract where the median family income ("MFI") is 80% or less of statewide MFI (for tracts in metropolitan areas, the MFI can't exceed 80% of the greater of statewide MFI or metropolitan area MFI). See IRA § 13103(a), to be codified at 26 U.S.C. § 48(e)(2)(A)(iii)(I); 26 U.S.C. § 45D(e)(1).

[2]"Indian land" means any land located within the boundaries of an Indian reservation, pueblo, or rancheria; lands held by a tribe (including lands conveyed by the U.S. to an Alaskan Native Corporation), individual Indian, dependent Indian community, or in trust by the U.S. for the benefit of a tribe or Indian; and land in a census tract in which a majority of residents are Alaskan Natives or enrolled members of a federally recognized tribe or village. See IRA § 13103(a), to be codified at 26 U.S.C. § 48(e)(2)(A)(iii)(I); 25 U.S.C. § 3501(2).

[3]The project must be installed on a residential rental building that is part of a housing program under the Violence Against Women Act, Title V of the Housing Act of 1949, a tribally designated housing entity, or other programs determined by HUD; and the "financial benefits" of the electricity produced by the project are "allocated equitably" among the occupants of the building. See IRA § 13103(a), to be codified at 26 U.S.C. § 48(e)(2)(B).

[4]Projects where at least 50 percent of the "financial benefits" of the electricity produced (including electricity acquired at a below-market rate) are provided to households with income of less than: 200 percent of the poverty line; or 80% of area median gross income. See IRA § 13103(a), to be codified at 26 U.S.C. § 48(e)(2)(C)-(D).

Commercial Energy Storage

Standalone energy storage projects are added as qualifying projects under the section 48 ITC (see section on 25D for homeowner-owned storage). Storage is defined as property (other than property primarily used in the transportation of goods or individuals and not for the production of electricity) which receives, stores, and delivers energy for conversion to electricity (or, in the case of hydrogen, which stores energy), and has a nameplate capacity of not less than 5 kilowatt hours, or (ii) thermal energy storage property.

Like the other new parts of the ITC, the credit will be set at 6% with a 24% additional credit available. In order to qualify for the full 30% amount of the ITC, storage projects must meet one of three requirements below.

Project is less than 1 MWac net output.
Project commence construction less than 60 days after Treasury issues guidance on how to meet prevailing wage and apprenticeship standards. For example, if guidance comes out on December 1st, 2022, those who commence construction before January 30, 2023 (60 days later) qualify for 30% ITC rate automatically.
Projects carry out prevailing wage and apprenticeship requirements
Note: the standalone storage credit is available for projects placed in service after December 31, 2022.

The minimum battery size is 5 kWh.

Interconnection Costs

The cost of interconnection can be claimed under section 48 ITC for projects with a net output of less than 5 MWAC.

The credit is designed so that the cost a developer pays to a utility for interconnection may be applied to the ITC, as long as the cost is paid or incurred by the taxpayer.

Residential ITC (Section 25D)

Extended through 2034, with projects placed in service in 2022 moving up to 30% after the legislation is signed into law.

Year Placed in Service	2022	2023 - 2032	2033	2034	2035
Credit	~~26%~~ 30%	30%	26%	22%	0%

Stand-alone batteries added at same percentages as solar. Battery capacity must be at least 3 kWh.

Section 25C Investment Tax Credit for Energy Efficient Home Improvement (including panelboards)

The existing 25C credit is extended at 30% through 2032, with no changes for property placed in service in 2022.
Beginning for property placed in service after 2022, the previous lifetime cap is replaced with an annual overall cap of $1,200, with the following exceptions:

$600 annual cap on certain high-efficiency boilers and stoves; panelboards, sub-panelboards, branch circuits or feeders that have capacity of at least 200 amps and are installed in conjunction with and “enables the installation and use” other eligible property; and windows.

The annual cap is $2,000 for heat pumps, heat pump water heaters, biomass stoves, and biomass boilers.

$250 annual cap on a single exterior door and $500 on all exterior doors

To qualify for this credit, installed items must meet highest applicable Energy Star, IECC, or CEE standards for the year the item is placed in service. After 2024, qualified product identification numbers must be provided to the IRS.

Transmission

The transmission ITC was not included in the legislation. However:

$2 billion will be available for loans to non-federal entities for constructing new electric transmission facilities in designated national interest corridors.

The loan can't exceed 80% of the cost of the project, can't be subordinate to other financing, and is limited to a term that is the lesser of 90% of the project's life or 30 years.

Direct Pay and Domestic Content

Direct pay generally is available to companies only for manufacturing production credits (45X) as well as for hydrogen projects and carbon capture projects.

However, direct pay for other energy projects is only available for certain entities:

Any entity exempt from the tax

Any State government (or political subdivision thereof),

The Tennessee Valley Authority

An Indian tribal government

An Alaska Native Corporation.

Any corporation operating on a cooperative basis which is engaged in furnishing electric energy to persons in rural areas

These entities may take direct pay for solar and storage in the ITC and PTC as well as the ITC/PTC when tech neutral starts after 2025. These and others are listed here: 30C (alternative refueling property), 45(a) (renewables attributable to facilities placed in service after December 31, 2022), 45Q (CCUS), 45U(a) (nuclear), 45V (Hydrogen), 45W (vehicles), 45X(a) (advanced manufacturing), 45Y(a) (clean electricity production credit), 45Z (clean fuel production credit), 48 (energy credit), and 48E (electricity ITC).

Direct pay of the PTC may only be received for projects originally placed in service after December 31st, 2022.

The legislation includes provisions for how partnerships must process direct pay.

For those that can qualify for direct pay -- a project loses its ability to receive 100% direct pay over time absent meeting domestic content requirements. The table below indicates what percentage of direct pay qualifying entities would receive if they are or are not meeting the domestic content requirements.

Direct Pay Percentages

	2023	2024	2025	2026	2027
Steel/Iron Requirement	100% Steel/Iron	100% Steel/Iron	100% Steel/Iron	100% Steel/Iron	100% Steel/Iron
Manufactured Goods Required	40%	40%	45%	50%	55%
% of Direct Pay if Domestic Content Not Met	100%	90%	85%	0%	0%
% of Direct Pay if Domestic Content Met	100%	100%	100%	100%	100%

The domestic content requirements are 1) 100% steel/iron, and 2) For manufactured products, a 40% requirement for projects starting through 2024 followed by 45% in 2025, 50% in 2026, and 55% in 2027 and beyond.

The steel and iron requirement will be carried out in a manner consistent with section 661.5 of title 49, Code of Federal Regulations. The legislation directs the manufacture goods requirement to be governed by under the broader section 661 of title 49, Code of Federal Regulations. Specifically: *the products which are components of a qualified facility upon completion will be deemed to have been produced in the United States if the adjusted percentage of*

the total costs of all such manufactured products of the facility are attributable to manufactured products (including components) which are mined, produced, or manufactured in the United States.

Advanced Production Manufacturing Credit

Section 45X, the Advanced Manufacturing Production Credit, provides tax credits for defined manufactured goods produced and sold in the United States. The credit lasts through 2029 and then begins to phase down. The percentages in the table below are the percentages of the amounts below.

2023 - 2029	2030	2031	2032	2033 -
100%	75%	50%	35%	0%

The phasedown does not apply to the critical minerals listed in the legislation.

Manufacturers may elect to take these credits as “direct pay” for five consecutive years after electing to receive direct pay. For example, if a company starts selling solar polysilicon and elects to take direct pay, it may only do so for the following five years. This applies to components produced and sold after December 31, 2022.

45X credits may be combined. For example, an entity who manufacturers c-Si cells and assembles the cells into a module would receive a credit of 11 cents per Watt-DC.

Qualifying components and the amount of the credit include:

Solar modules: 7 cents per Watt-DC capacity

Thin film photovoltaic cells: 5 cents per Watt-DC capacity

Crystalline silicon photovoltaic cells: 4 cents per Watt-DC capacity

Photovoltaic wafers: $12 per square meter

Solar grade polysilicon: $3 per kilogram

Polymer backsheets: 40 cents per square meter

Inverters: varying amounts based on the type of inverter and rated output

Trackers:

Torque tube or longitudinal purlins: 87 cents per kilogram

Structural fasteners: $2.28 per kilogram.

Batteries:

Electrode active materials:10% of production cost

Cells: $35 per kWh (limited to batteries with capacity to power ratio not exceeding 100:1)

Modules: $10 per kWh ($45 for batteries which don't use cells)

Critical minerals: 10% of production cost

Transferability

Companies (for example, developers) may choose to transfer the ITC or PTC to another taxpayer (as well as alternative fuel refueling credits, carbon capture credits, zero-emission nuclear production credits, hydrogen production credits, advanced manufacturing credits (such as the SEMA provisions in 45X), the clean fuel production credit, and 48C manufacturing credit.

A transferee (the party receiving a transferred credit) must pay for the credit in cash, and the funds received for the credit won't be included in the gross income of the original recipient of the credit, and the transferee can't deduct the amount paid for the credit.

The provisions include the process for transferring the credit within a partnership, and a credit may not be transferred twice.

Production tax credits for renewable electricity (and carbon capture and hydrogen) will elect to transfer if they choose for each taxable year during the 10 year period after the project is placed in service.

The Secretary of Treasury may ask for information/disclosures to prevent improper payments, excessive payments, etc.

Penalties are established for excessive transfer, unless the transferee demonstrates that the transfer resulted from reasonable cause. Excessive transfer is defined.

48C Manufacturing Capex Support

Manufacturers of qualifying advanced energy projects can apply for a 30% tax credit based on capital expenditures – for example, building a manufacturing line.

There is no direct pay option for 48C tax credits unless the recipient is an entity exempt from the tax, State or local government (or political subdivision thereof), the Tennessee Valley Authority, an Indian tribal government, or an Alaska Native Corporation.

To receive the full 30% tax credit, a project must meet prevailing wage and apprenticeship requirements. Otherwise, the credit will be 6%.

Up to $10 billion may be allocated for 48C tax credits, and no more than six billion dollars can go to projects located outside of certain qualifying energy communities (Section 45(b)(11)(B)(iii)).

Qualifying energy communities include census tracts, and adjoining census tracts, where a coal mine closed after 1999 or a coal fired plant retired after 2009. Moreover, a qualifying energy community cannot have a project which received Section 48C credits prior to passage of the bill.

DOE has granted credits to wide-variety of technologies, including factories producing inverters, silane gas, solar-grade polysilicon, modules (thin-film and c-Si), c-Si cells, and wafers. The bill amends the definition of qualifying facilities to include references to energy storage systems, recycling facilities, and grid modernization components.

There is a no doubling dipping provision which prohibits a manufacturer from taking both the 48C tax credit and either a credit under sections 48B, 48D, 45Q, or 45V. Facilities built with support from 48C tax credits are also ineligible to claim the Advanced Manufacturing Production Credits (section 45X).

Once the Secretary approves an application, the manufacturer has two years to complete the project.

The Secretary has up to 180 days to develop a program to award credits to eligible projects.

Other Notable Additions or Expansions of Credits

Microgrid Controllers

A new 30% credit is put in place for qualified microgrid equipment. To qualify, the equipment must be part of a microgrid, with a generating capacity of between 4 and 20 MW, capable of operating in connection with the electrical grid, and capable of operating independently of the electrical grid.

To receive the credit, the system must not be part of a bulk power system (as defined in section 215 of the Federal Power Act (16 U.S.C. 824o)) 16 USC § 824o(a)(1)

(1) The term “bulk-power system” means— (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy.
In order to receive the credit, the microgrid controller must be placed in service after January 1, 2023.

Hydrogen

Qualifying clean hydrogen facilities can claim either a PTC or ITC

The hydrogen PTC and ITC have base credits which are subject to multipliers based on CO2 emissions and prevailing wage plus apprenticeship requirements.

The multiplier below is based on CO2 emissions for each kg of hydrogen produced. In the case of the ITC, the multiplier is based on CO2 emissions the facility is designed to and reasonably expected to emit for each kg of hydrogen produced.

20% if production results at least 2.5 kg and no more than 4 kg of CO2

25% if production results at least 1.5 kg and less than 2.5 kg of CO2

33.4% if production results at least 0.45 kg and less than 1.5 kg of CO2

100% if production results in less than 0.45 kg of CO2

Lifecycle greenhouse gas emissions will use the definitions under Section 211(o)(1)(H) of the Clean Air Act. And emissions calculations will be based on Argonne's GREET model

The base credit is multiplied by five if apprenticeship and prevailing wage requirements are met.

For facilities beginning construction before 60 days after the Secretary publishes guidance on prevailing wage and apprenticeships, meet prevailing wage requirements for alternations and repairs

For other facilities, pay prevailing wage and meet apprenticeships requirements

Hydrogen ITC

Base credit is 6 percent subject to the multipliers for CO2 emissions and meeting prevailing wage and apprenticeship requirements. The maximum investment tax credit is 30%.

Hydrogen PTC

After 2022, eligible facilities may receive a production credit for 10 years. The credits can be received via direct pay.

The base credit is $0.60 per kg, to be adjusted for inflation, of clean hydrogen produced. The maximum credit, subject to inflation, is $3.00 per kg if the facility can hit certain CO2 emissions targets and meet certain prevailing wage and apprenticeships requirements.

There is a no double dipping rule to prevent facilities from claiming both the hydrogen production credit and 45Q (carbon capture) credits

Appears that one can claim the PTC or ITC for electricity used to produce clean hydrogen

Residential Efficiency and Electrification Rebates

The IRA provides $4.3 billion to State Energy Offices to establish rebates for a variety of home energy upgrades under the Home Owner Managing Energy Savings (HOMES) rebate program. Rebates for home energy retrofits up to the lesser $8,000 per home or 80% of project cost if the project saves at least 35%.

Lesser amounts available if projects save less than 35%. Multi-family rebates are also supported with different rebate amounts. Caps can increase for low- and moderate-income families with approval of the Secretary.

While all ultimate rebates are subject to state implementation, the draft legislation sets the following maximum values but those values could be increased by states for low- and moderate-income households:

Single-Family

For retrofit projects modeled energy savings at least 20% and up to 35%, the lesser of $2,000 or 50% of project costs

For retrofit projects modeled energy savings more than 35%, the lesser of $4,000 or 50% of project costs

For measured energy savings, of at least 15%, an amount scaled relative to average home energy use in the state where the project is installed where $2,000 would awarded for 20% energy savings, or 50% of project cost

Multi-Family

For retrofit projects modeled energy savings at least 20% and up to 35%, $2,000 per dwelling unit and maximum of $200,000 per multifamily building

For retrofit projects modeled energy savings more than 35%, $4,000 per dwelling unit and a maximum of $400,000 per multifamily building

For measured energy savings, of at least 15%, an amount scaled relative to average home energy use in the state where the project is installed where $4,000 would awarded for 20% energy savings or 80 of project cost

Cannot be combined with High-Efficiency Electric Home Rebate Program.

High-Efficiency Electric Home Rebate Program

The IRA provides $4.275 billion for grants to State Energy Offices and $224 million to Indian Tribes to establish rebate programs for home electrification. Importantly, this explicitly includes rebates up to $4,000 for “electric load

service center upgrades," i.e. main panel upgrades and up to $2,500 for "electric wiring." These provisions are capped at 50% of qualifying costs for households making between 80% and 150% of area median income. It appears that households earning more than 150% of area median income are not eligible for these rebates.

While all ultimate rebates are subject to state implementation, the draft legislation sets the following maximum values:

	The lesser of:		
Upgrade	**Maximum Rebate Amount**	**Maximum Rebate as Percent of Cost**	
		Households 80% - 150% of Area Median Income*	**Households Less Than 80% of Area Median Income****
Heat pump water heater	$1,750	50%	100%
Heat pump for HVAC	$8,000	50%	100%
Electric stove, cooktop, range, oven, or heat pump clothes dryer	$840	50%	100%
Electric load service center	$4,000	50%	100%
Insulation, air sealing and ventilation	$1,600	50%	100%
Electric Wiring	$2,500	50%	100%
Maximum total across all upgrades	$14,000	50%	100%

* For multi-family properties if at least 50% of resident households are 80% to 150% of area median income.

** For multi-family properties if at least 50% of resident households are less than 80% of area median income.

Cannot be combined with Residential Efficiency and Electrification Rebates.

Defense Production Act

An additional $500,000,000 in appropriations to implement the Defense Production Act, including for domestic solar manufacturing purposes.

Greenhouse Gas Reduction Fund

The Greenhouse Gas Reduction Fund provides $29 billion for deployment of low- and zero-emission technologies. This investment will be structured as a competitive grant program overseen by the EPA Administrator.

$20 billion will be available to nonprofit financing institutions designed to provide capital, including by leveraging private capital, for the rapid deployment of low- and zero-emission technology. 40% of these investments must be in low-income and disadvantaged communities.

Funds could also be used to establish state and local financing programs that deploy low- and zero-emission technologies.

$7 billion will be available for state, local and nonprofit programs to directly install zero-emission distributed technologies in low-income and disadvantaged communities.

$2 billion will be available to state, local, and nonprofit programs to install zero-emission vehicle charging infrastructure.

The structure and administration of this fund will need to be further defined through the EPA's regulatory process.

Climate Pollution Reduction Grants

$5 billion will be available to states, municipalities, or air pollution control agencies for greenhouse gas air pollution planning and implementation grants.

$250 million will go to Greenhouse Gas Air Pollution Planning Grants and $4.75 billion will go to Greenhouse Gas Air Pollution Implementation Grants.

Funding for both of these grants will be awarded to at least one entity in each state to develop programs, policies, measures, and projects that will

help to reduce greenhouse gas air pollution.

The structure and administration of this grant will need to be further defined through the EPA's regulatory process.

Environmental and Climate Justice Block Grants

$3 billion will be available as a block grant to fund environmental justice projects for disadvantaged communities.

Eligible projects include those that address environmental harms in low-income and disadvantaged communities related to pollution monitoring, investment in zero-emission infrastructure, transportation emissions reduction, climate resiliency, pollution prevention, and deployment of low- and zero-emission energy technologies.

The structure and administration of this block grant will need to be further defined through the EPA's regulatory process.

DOE Loan Program Office

$40 billion in additional commitment authority.

With some exceptions, including national interest transmission corridor projects, loan guarantees now require Presidential certification that the project is not receiving other federal funding or assistance.

New $250 billion commitment authority for projects that "retool, repower, repurpose, or replace" electricity or fossil fuel infrastructure that has ceased operations, or enable operating infrastructure to avoid, reduce, utilize, or sequester air pollutants or greenhouse gases; terms limited to 30 years.

Grants to Facilitate the Siting of Interstate Electricity Transmission Lines

$760 million will be provided for the Department of Energy to issue grants to state, local, or tribal entities for studying covered transmission projects 275 kV and higher and carrying out related economic development and regulatory proceedings.

Funding is contingent on the transmission project being approved or, in the case of a non-permitting entity, commencement of construction.

Solar Right-of-Way Restrictions

For a period of 10 years post-enactment, DOI is prohibited from issuing a solar right-of-way on onshore federal lands unless:

Interior has held an onshore oil and gas lease sale in the previous 120 days; and

In the previous year, the lesser of (1) 2,000,000 acres, or (2) 50% of acreage for which expressions of interest have been submitted, have been offered for lease

$150,000,000 for additional hiring of Interior personnel for project review and permitting.

Department of Agriculture Programs

Additional $1B for rural renewable energy electrification loans and expansion of the program to include storage.

Additional $1B for REAP, with total grants limited to 50% of the total cost of an eligible project.

$9.6B for loans and financing for rural co-ops to purchase renewable energy, generation, zero-emission systems, and related transmission, limited to 25% of total cost.