

Inflation Reduction Act Tax Credits and Incentives Overview

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Agenda



01 IRA OVERVIEW

02 179D/45L

03 TAX CREDIT ENHANCEMENTS

04 RENEWABLE & ENERGY
PRODUCTION INCENTIVES

05 DIRECT PAY &
TRANSFERABILITY PROVISIONS

06 CARBON SEQUESTRATION

07 MANUFACTURING PRODUCTION
CREDITS

TRANSPORTATION & FUEL
CREDITS



IRA Overview



What does the IRA include?

- Prescription drug price reform
- Affordable Care Act funding extension
- IRS tax enforcement
 - Invests \$80 billion over next 10 years
- 15% corporate minimum tax rate
 - AMT on Book Income of corporations with more than \$1B of income
 - 1% excise tax on corporate stock buybacks
- Clean energy investments



IRC § 179D
Energy Efficient Commercial
Building Deduction



§ 179D Background (Pre-IRA)

- Created in 2006
- Made permanent in 2020



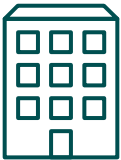
Background (Pre-IRA) (Cont.)

- Pre-IRA deduction: Energy efficient commercial building deduction of up to \$1.80 per square foot (adjusted for inflation: \$1.82/SF in 2021, \$1.88/SF in 2022)
- Available for newly constructed buildings or building improvements placed in-service after January 1, 2006
- Must be claimed in the tax year when the property was placed in service; for previously filed open returns, an amended return or a filed Form 3115 is required to claim the deduction



Background (Pre-IRA) (Cont.)

Pre-IRA, § 179D deduction can be claimed by:



Owners and tenants of commercial buildings who've built or installed improvements



Owners of four-story or greater residential buildings who've built or installed the improvements



Designers of government-owned, energy-efficient buildings (architects, engineers, or contractors)



Eligibility

Pre-IRA Law: Jan 1, 2006, to Dec 31, 2022

- Commercial building owners
- Designers of buildings owned by government entities

IRA Update: Beginning Jan 1, 2023

- Commercial building owners
- REITs
- Designers of buildings owned by:
 - Government entities
 - Not-for-profit organizations
 - Churches and other religious organizations
 - Tribal organizations
 - Not-for-profit schools and universities



Tax Deduction Range

Pre-IRA Law: Jan 1, 2006, to Dec 31, 2022

- \$0.60/square foot for each of three eligible systems (HVAC and hot water, interior lighting, and building envelope)
- \$1.80/square foot maximum if energy savings is 50% or greater

Adjusted for inflation

- 2021: \$0.61/system to \$1.82 max
- 2022: \$0.63/system to \$1.88 max



Tax Deduction Range (Cont.)

IRA Update: Beginning Jan 1, 2023

Base deduction: Sliding scale of \$0.50/square foot for energy savings of 25% and up to \$1.00/square foot for energy savings of 50% or greater.

No partial allowance if any of the three systems don't meet the requirements.

Bonus deduction: Sliding scale of \$2.50/square foot for energy savings of 25% and up to \$5.00/square foot for energy savings of 50% or greater



Technical Requirements - §179D

Pre-IRA Law: Jan 1, 2006 to Dec 31, 2022

ASHRAE standard in effect from two years prior to start of construction

IRA Update: Beginning Jan 1, 2023

ASHRAE standard in effect from four years prior to start of construction



Deduction Cap

PRE-IRA LAW: JAN 1, 2006, TO DEC 31, 2022

Since 2006, there's been a lifetime cap of \$1.80/SF (or \$1.88/SF with inflation adjustment)

IRA UPDATE: BEGINNING JAN 1, 2023

A three-year cap that allows IRC § 179D to be claimed on buildings if the previous full deduction claim occurred more than three taxable years ago



Bonus Deduction

**PRE-IRA LAW: JAN 1, 2006,
TO DEC 31, 2022**

Not applicable

**IRA UPDATE: BEGINNING
JAN 1, 2023**

- Meet local prevailing wage
- Meet apprenticeship percentage hours for up to 15% of labor hours

Expect to see guidance from Treasury regarding prevailing wage and apprenticeship requirements

Note that these requirements are waived for construction that begins any time earlier than 60 days after the IRS produces guidance



IRC § 45L
New Energy Efficient
Homes Credit



IRA Extension of Existing Credit

Existing credit was extended retroactively from Jan. 1, 2022–
Dec. 31, 2022

- Available for single-family home builders and multifamily developers who have basis in the construction of new (or renovated) dwelling units
 - \$2,000/dwelling unit tax credit that is transferred (sold/leased/rented) during your tax year
 - \$1,000 or \$2,000/unit tax credit for manufactured home developers
 - Units meet or exceed a 50% reduction in energy consumption from baseline unit using 2006 International Energy Conservation Code (IECC) standard



IRA Extension of Existing Credit (Cont.)

Existing credit was extended retroactively from Jan. 1, 2022–Dec. 31, 2022

- Eligible dwelling unit types:
 - Single-family homes + townhomes
 - Multifamily developments (three stories or less)
 - Senior living facilities (not memory care units)
 - House boats
 - Manufactured and mobile homes

Amend tax returns to claim credits in prior open tax years



Credit Amounts 2023–2032

Taxpayer	Credit through Dec. 31, 2022	Credit 2023-2032 ENERGY STAR	Credit 2023-2032 w/ ZERH	Credit 2023-2032 w/ PW	Credit 2023-2032 w/ ZERH + PW
Single-family home builder	\$2,000	\$2,500	\$5,000	PW N/A	PW N/A
Multifamily developer	\$2,000	\$500	\$1,000	\$2,500	\$5,000
Manufactured home developer	\$1,000 or \$2,000	\$2,500	\$5,000	PW N/A	PW N/A

ENERGY STAR: Relevant Department of Energy's ENERGY STAR Program based on Residence Type

ZERH: Department of Energy's Zero Energy Ready Homes

PW: Prevailing Wage



Credit Amounts years 2023–2032 (Cont.)

- 2023 energy certification changes: Department of Energy’s (DOE) ENERGY STAR Single-family Homes National Program, DOE’s ENERGY STAR Manufactured Homes, DOE’s ENERGY STAR Multifamily New Construction National Program, Optional DOE’s Zero Energy Ready Homes (ZERH)
 - In some cases, HUD and LIHTC projects already require prevailing wages
 - Multifamily properties four stories or greater are now eligible for 45L as well as 179D beginning in 2023



Tax Credit Enhancements



Credit Base Rate, Prevailing Wage, Apprenticeship, and Bonus Credits

Creates enhanced credit rate provision for the following:

- §48 Energy Credit
- §48C Qualifying Advanced Energy Project Credit
- §48E Clean Energy Electricity Investment Credit



Credit Base Rate, Prevailing Wage, Apprenticeship, and Bonus Credits (Cont.)

- Base rate = 6%
- Bonus rate = 5x multiplier of base rate if prevailing wage and apprenticeship requirements are met
- Prevailing wage
- Apprenticeship = minimum percentage of total labor hours to construct facility
 - 10% for 2022, 12.5% for 2023, and 15% after 2023



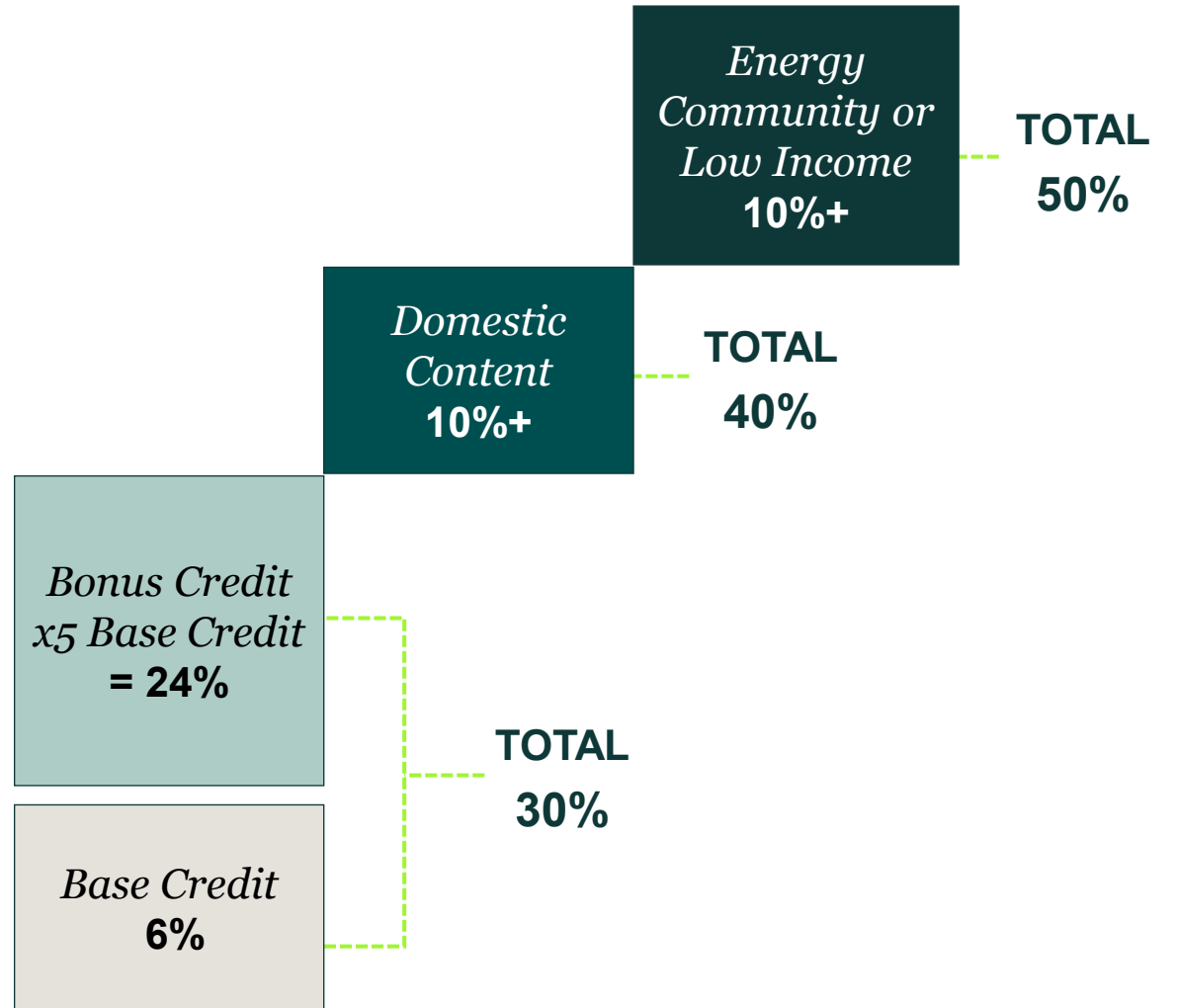
Credit Base Rate, Prevailing Wage, Apprenticeship, and Bonus Credits (Cont.)

- Bonus credits are available for projects placed in service after 2022:
 - Domestic content: PTC or ITC = 10%
 - Located in energy communities: PTC or ITC = 10%
 - Located in low-income communities = ITC for solar and wind up to 20%
- Exempt Projects:
 - Less than one MWac projects
 - Began construction before Treasury guidance on apprenticeship/prevailing wage + 60 days
 - Prevailing wage and apprenticeship requirements are met



Tax Credit Enhancements

Example



Renewable and Energy Production Credits



Federal Tax Credit Basics

- Investment Tax Credits (ITC) – Based on the cost of eligible property (e.g., solar panels, hydropower facilities, biomass facilities)
 - Credit earned on placed-in-service date
 - Start of construction date relevant
 - 5-year recapture period
 - Subject to reduction for certain tax-exempt ownership
 - Can be owned and operated by different parties
- Production Tax Credits (PTC) – Tax credits based on the production and sale of a manufactured product (e.g., electricity, renewable energy equipment)
 - Credit earned annually as production and sales are made to unrelated parties
 - Start of construction date relevant
 - No recapture
 - Must be sold to unrelated party
 - Must be owned and operated by same party



§ 45 Production Tax Credit (PTC)

- For the first 10 years of production at a qualifying renewable electricity production facility that began construction before 2022
- 0.3 cents per kWh (0.5 cents per kWh in 2021 or 0.3 cents for half credit technologies after being adjusted for inflation). Taxpayers may claim an increased credit for facilities placed into service after December 31, 2021, if such facilities meet domestic content requirements.
- Prevailing wage requirements for the duration of construction and for 10-year PTC. Apprenticeship requirement must be met during construction only.
- Additional 10% for PTC if placed in service after December 31, 2022 if domestic content requirements are met or located in energy community.
- Transferrable for taxable years after 2022



§ 45Y Clean Energy Electricity PTC

NEW §45Y CLEAN ENERGY ELECTRICITY PRODUCTION CREDIT

- This provision creates a new clean electricity production tax credit (PTC) and is intended to replace Section 45 PTC after December 31, 2024.
- Technology Neutral
- This new PTC would be for the sale of domestically produced electricity with a greenhouse gas emissions rate not greater than zero.
- The PTC would be available for electricity produced during the facility's first 10 years of operation.
- The credit would be increased by 10% for electricity produced in energy communities.
- The provision would provide that for facilities financed with tax-exempt bonds, the credit amount is reduced by the lesser of (1) 15%; or (2) the fraction of the proceeds of a tax-exempt obligation used to finance the project over the aggregate amount of the project's financing costs.



§ 45Y Clean Energy Electricity PTC Con't

NEW §45Y CLEAN ENERGY ELECTRICITY PRODUCTION CREDIT

- A 10% domestic content bonus would be available for electricity produced at facilities that certify that certain steel, iron, and manufactured products used in the facility were domestically produced. The ability to claim the credit as direct pay would be subject to meeting domestic content requirements.
- Taxpayers would choose between the clean electricity PTC and ITC but could not claim both.
- The tax credit would phase out when emissions reduction target levels are achieved or after 2032 (the later of the two). The emissions target phaseout would begin after the calendar year in which greenhouse gas emissions from the electric power sector are equal to or less than 25% of 2022 electric power sector emissions. Once phaseout begins, the full credit amount would remain available for facilities that begin construction the following year. The credit amount for facilities beginning construction in the second year would be 75% of the full credit amount. This would be reduced to 50% for facilities beginning construction in the third year, and zero afterward.



§ 48 Energy Credit

§48 ENERGY TAX CREDIT: EXTENSION AND MODIFICATION

- Current law provides a temporary investment tax credit (ITC) for investments in certain energy property.
- The ITC for eligible projects is 30% if construction of the facility begins prior to 60 days after the IRS releases guidance on prevailing wage and apprenticeship requirements. As such, any facility that has been placed in service in 2022 or has yet to be placed in service may now qualify for the 30% ITC if construction of such facility began prior to the release of the guidance. This includes facilities originally intended to qualify for the 26% ITC by beginning construction in 2020, 2021, or 2022. For facilities that were placed in service prior to January 1, 2022, the historical ITC phase-downs remain intact.
- The ITC would be extended through 2024 at a base rate of 6% for solar, fuel cells, waste energy recovery, combined heat and power, and small wind property, and 2% for microturbine property.



§ 48 Energy Credit Con't

§48 ENERGY TAX CREDIT: EXTENSION AND MODIFICATION

- Prevailing wage requirements for the duration of construction and for 10-year PTC. Apprenticeship requirement must be met during construction only.
- Additional 10% for PTC if placed in service after December 31, 2022 if domestic content requirements are met or located in an energy community.
- Transferrable for taxable years after 2022.
- After January 1, 2025, the intention of the IRA is that Section 45Y Clean Energy Electricity Production Credit (Technology Neutral) will replace Section 45 (PTC)



§ 48E Clean Energy Electricity ITC

NEW §45E CLEAN ENERGY INVESTMENT CREDIT

- This new ITC would be for investment in qualifying zero-emission electricity generation facilities or energy storage technology.
- This credit would be available for facilities and property placed in service after December 31, 2024 and is technology neutral.
- Base credit is 6% and up to 30% if prevailing wage and apprenticeship requirements are met
- Wage requirements must be met for the 5-year recapture period for ITCs.
- Apprenticeship requirements must be met during construction only.
- 10% Bonus credit for:
 - Domestic content
 - Located in energy community
 - Located in a low-income community or Tribal land and less than 5MW
- Intended to replace Section 48 ITC after 2024.



Manufacturing Production Credits



§ 48C Advanced Energy Project Credit

- Authorizes \$10 billion in credits
- At least \$4B is allocated to investments in:
 - A brownfield site
 - Communities formerly reliant on fossil fuel industries (coal, oil, natural gas)

The term qualifying advanced energy project is defined as a project that re-equips, expands, or establishes a manufacturing facility to produce various types of renewable or clean energy—solar, wind and CCS, electric grids, EVs, and components.



Advanced Energy Project Credit (Cont.)

- Legislation expands the definition of qualified manufacturing facilities
- A taxpayer isn't allowed to benefit from the expanded section 48C credit if the investment in the factory already qualifies for a tax credit under §§ 48B, 48D, 45Q, or 45V
- Existing and modified industrial or manufacturing facilities may be eligible for the credit



Advanced Manufacturing Production Credit

NEW § 45X ADVANCED MANUFACTURING PRODUCTION CREDIT

- New production tax credit that can be claimed for the domestic production and sale of qualifying solar and wind components
- This includes related components, batteries and critical minerals
- The tax credit for each component decreases by 25% each year beginning in 2029 and ends in 2032
- Direct pay: Any eligible taxpayer may elect direct pay during the first five years of the credit



Direct Pay and Transferability



§ 6417 Direct Pay

- Available to applicable entities:
 - Tax-exempt entities, states, or local governments
 - Tennessee Valley Authority
 - Indian Tribal Authority
 - Any Alaska Native Corporation
 - Any cooperative engaged in furnishing electric energy to persons in rural areas
 - Exceptions for § 45V, 45Q, and 45X



Direct Pay and Transferability

CREDIT SECTION	NAME	DIRECT PAY	TRANSFERABLE
30C	Alternative Fuel Vehicle Refueling	Applicable Entities	Yes
45	Production Tax Credit	Applicable Entities	Yes
45Y	Clean Electricity Production Credit – Technology Neutral	Applicable Entities	Yes
45Q	Carbon Oxide Sequestration Credit	Yes	Yes
45U	Zero Emissions Nuclear Power Production Credit	Applicable Entities	Yes
45V	Clean Hydrogen Production	Yes	Yes
45W	Qualified Commercial Clean Vehicles	Applicable Entities	No
45X	Advanced Manufacturing Production Credit	Yes	Yes
45Z	Clean Fuel Production	Applicable Entities	Yes
48C	Qualifying Advanced Energy Project Credit	Applicable Entities	Yes
48	Energy Investment Tax Credit	Applicable Entities	Yes
48E	Clean Electricity Investment Credit – Technology Neutral	Applicable Entities	Yes



§ 6418 Transferability

- Placed in service on or after January 1, 2023
- Elect to transfer all or a portion of an eligible tax credit to an unrelated third party for cash
- Transfer once
- Proceeds aren't a part of the taxable income of the transferring party nor deductible by the transferee
- Carried back three years or forward 20 years
- The transferee will be subject to recapture and basis reduction



§ 6418 Transferability (Cont.)

- Election must be made no later than the due date of the transferor's tax return or 180 days after the date of enactment, if later
- The transferee, generally, must claim the credits in the year that ends, or is the first one that includes, the transferor's tax year when the credit arose
- If the transferee claims more credit than allowed, the transferor must pay the excess plus 20% to the government unless there is a reasonable cause



Topics for Additional Consideration

TRANSFER PROCESS AND ADDITIONAL PROCEDURES

- Similar to state programs for certificated credits?
- Will cost certifications and certifications for prevailing wages and apprenticeship programs be required?
- Purchase and sale agreements, indemnity/guarantees against recapture, credit insurance considerations



Topics for Additional Consideration (Cont.)

TYPES OF INCOME OFFSETS

- Passive activity income and/or portfolio income for individuals? W-2 income?
- Corporate tax: minimum tax applicability and 75% offset limitation
- State tax implications?



Carbon Oxide Sequestration



§ 45Q

Carbon Oxide Sequestration Credit

- Under current law, industrial carbon capture or direct air capture (DAC) facilities that begin construction by December 31, 2025, can qualify for the § 45Q tax credit for carbon oxide sequestration
- This tax credit can be claimed for carbon oxide captured during the 12-year period following a qualifying facility's being placed in service



Carbon Oxide Sequestration Credit (Cont.)

- Under the Inflation Reduction Act, the credit amounts (per metric ton of carbon oxide) are as follows, assuming the prevailing wage and apprenticeship requirements are met:
 - Carbon oxide captured and geologically sequestered - \$85
 - Carbon oxide captured and reused - \$60
 - Carbon oxide captured using direct air capture and geologically sequestered - \$180
 - Carbon oxide captured using direct air capture, then utilized in a qualified manner - \$130
- Available for direct pay in first five years of project



Transportation and Fuel Credits



Qualified Commercial Clean Vehicles

- Creates a new tax credit for qualified commercial clean vehicles placed in service by the taxpayer during the year
- The credit would be the lesser of (1) 15% of the vehicle's cost (30% for vehicles not powered by a gasoline or diesel internal combustion engine); or (2) the incremental cost of the vehicle relative to a comparable vehicle
- Credit cannot exceed \$7,500 for vehicles less than 14,000 lbs, or \$40,000 for those that exceed 14,000 lbs



Qualified Commercial Clean Vehicles (Cont.)

- Mobile machinery and qualified commercial fuel cell vehicles are eligible
- Vehicle manufacturer must be registered with Treasury
- Tax-exempt entities would have the option of electing to receive direct payments
- The credit applies to any vehicles placed in service after December 31, 2022, and before January 1, 2033



Sustainable Aviation Fuel Credit

- SAF is currently 2-4x more expensive than conventional jet fuel
- IRA makes SAF eligible for two credits: Blender's Tax Credit and the Clean Fuel Production Credit



Sustainable Aviation Fuel Credit (Cont.)

BLENDER'S TAX CREDIT (BTC):

- BTC starting at \$1.25 per gallon for blenders that supply SAF with 50% or greater lifecycle emissions reductions compared to conventional jet fuel
- Fuels that exceed the minimum threshold are eligible for an additional \$0.01 per gallon credit for each percentage point of emissions reductions over 50%



§ 45Z Clean Fuel Production Credit

After the BTC sunsets in 2024, SAF will be eligible for the new Clean Fuel Production Credit until it expires at the end of 2027.

Creates a new business credit for clean fuel the taxpayer produces at a qualifying facility and sells for qualifying purposes.



Clean Fuel Production Credit (Cont.)

The fuel must meet certain emissions standards.

- The base credit amount for zero-emissions fuels would be \$0.20 for nonaviation fuel and \$0.35 for aviation fuel
- Applicable amounts would be \$1.00 for nonaviation fuel and \$1.75 for aviation fuel, if wage and apprenticeship requirements are met



§ 45V Clean Hydrogen Production

- Creates a new 10-year incentive for clean hydrogen production with four tiers projects must begin construction by 2033
- Eligibility includes retrofit facilities
- Cannot stack with the carbon capture and sequestration tax credit (45Q)
- Includes direct pay and transferability
- Intensity calculated with GREET model



Alternative Fuel and Low Emissions Aviation Technology Program

Competitive grant program

The IRA allocates \$297 million over five years to the program:

- \$244.5 million for projects related to production, transportation, blending, or storage of SAF
- \$46.5 million will go to projects related to low-emission aviation technologies, a broadly defined term that encompasses any technologies that improve fuel efficiency, increase the utilization of SAF, or reduce aircraft emissions



CHIPS Act - Overview

Amount

The credit amount may be up to 25% of the investment in “qualified property” placed into service during a taxable year.

- Qualified property is most often facilities and related manufacturing equipment, but certain tangible personal property may also count. Buildings or portions thereof used solely for offices, administrative services, and other non-manufacturing functions, however, are not included in the definition.

Eligibility

Any qualified taxpayer making investments related to manufacturing semiconductors is eligible to apply for and receive the credit, with a few exceptions.

Timeframe

The credit can be claimed with respect to qualifying investments placed into service after December 31, 2022. Construction of qualified property must begin before December 31, 2026, in order for that property to be eligible to receive the credit.

If construction of qualified property begins before January 1, 2023, the credit will only apply to qualified investments made between August 9, 2022, and December 31, 2026.



CHIPS Act – Election and State Incentive Considerations

Election

Some taxpayers in the manufacturing space have difficulty monetizing large credits for which they are eligible. The CHIPS Act offers the taxpayer an election to treat the credit as a payment against tax.

- With the election, excess credit may be paid directly to the taxpayer in the same taxable year as the credit was claimed in the form of a refund.
- If no election is made, excess credit would be carried forward to other taxable years.

Related State Incentives

In the wake of the CHIPS Act, several States have enacted similar credit and incentive legislation.

- Idaho, Illinois, Massachusetts, New York, and Ohio have enacted complementary CHIPs legislation; other similar programs are likely to follow (e.g., Oregon)..
- Other States may leverage existing programs to attract semiconductor manufacturing (e.g., Arkansas, Arizona, Alabama, Texas, Washington, and Wyoming).





Questions?

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