Inflation Reduction Act of 2022

Clean Energy Tax Credits

May 25, 2023
Inflation Reduction Act of 2022

- Signed into law August 16, 2022
- $369 billion for energy and climate
- Majority of climate impact in clean energy tax credits and transportation
- Continued emphasis on equity and growing US economy

Source: New York Times
IRA could reduce U.S. GHG emissions by 32% to 40% by 2030 compared to 2005 levels

Source: Repeat Project
Clean Energy Tax Incentives
Available Tax Credits

• Alternative Fuel Refueling Property Credit (30C)
• **Production Tax Credit (45)**
• Credit for Carbon Oxide Sequestration (45Q)
• Credit for Production of Clean Hydrogen (45V)
• Clean Fuel Production Credit (45Z)
• **Investment Tax Credit (48)**
• Advanced Energy Project Credit (48C)
• **Energy Efficiency Commercial Buildings Deduction (179D)**
• **Clean Electricity Production Credit (45Y)** (After 2024)
• **Clean Electricity Investment Credit (48E)** (After 2024)

• New Energy Efficient Home Credit
• Zero-Emission Nuclear Power Production Credit
Clean Energy Tax Credits – Non-Residential

- **New tax credits, grants, and other incentives** to support clean energy deployment
- **10+ years of tax credit certainty** (through 2032 or later)
- **Investment Tax Credit (ITC) and Production Tax Credit (PTC)**
  - ITC = 30% of system cost. Good for capital intensive projects
  - PTC = Credit per kwh of electricity for 10 years. Good for efficient tech. Now an option for solar.
- **Transition to a tech-neutral tax credit system starts 1/1/25.**
  - Can choose either PTC or ITC. Any zero-emission electricity source is eligible.
Enhancements to ITC/PTC

- Solar now eligible for ITC or PTC
- New technologies eligible for ITC if placed in service after Dec 31, 2022
  - Solar energy
  - Geothermal
  - Fiber-optic Solar
  - Fuel cell
  - Microturbine
  - Small wind
  - Offshore wind
  - Combined heat and power
- Waste energy recovery
- Energy & thermal storage technology
- Biogas property
- Microgrid controllers
- Dynamic glass
- Fuel cells using electromechanical processes
- Linear generators

- Interconnection property eligible for ITC if project < 5 MW
- Storage systems > 5 kwh
- Microgrid controls between 4 kw and 20 MW
Long Term Impact on ITC and PTC

- Transition to technology neutral credits after December 31, 2024
- Clean Electricity Production Tax Credit (45Y) or Clean Electricity Investment Tax Credit (48E)
- Credit available until the later of 2032 or when US GHG emissions drop to 25% of current levels.
- Similar values
  - ITC = 30%
  - PTC = 2.6 cents/kwh (inflation adjusted)
Direct Pay

- All technologies eligible for the following entities:
  - Tax exempt entities
  - State/local government
  - Tennessee Valley Authority
  - Tribes and Alaska Native Corps
  - Rural electric cooperatives
- Direct Pay also available for hydrogen, carbon capture for taxed entities
- Direct pay only available for projects PIS after Dec 31, 2022
- Must use domestic content to get full value of direct pay over time

**Tax-Exempt Bonds:** For facilities financed with tax-exempt bonds, the credit amount would be 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.
Labor Provisions in IRA

Basic Structure v. Bonus Credit: the ITC and PTC are set at 20% of their bonus credit value, unless a project:

- Meets wage/apprenticeship requirements
- Is under 1 MWac net output, or
- Began construction before January 28, 2023 deadline

If a project meets one of these three criteria, it will receive a bonus credit, bring the ITC from 6% to 30% (extra 24%) and the PTC from 20% of the PTC value to 100% of the PTC value.
Meeting new labor standards enables a project to claim full value of ITC/PTC AND full bonus credits

- Projects < 1 MW-ac and those that started construction before January 29, 2023

**Prevailing Wage**
- Prevailing wages for laborers and mechanics employed by contractor and subcontractors
- For alteration and repair during 5 year recapture for ITC and 10 year payment period for PTC
- Cure and noncompliance provisions exist

**Registered Apprenticeship**
- An increasing percent of total hours worked must be met with apprentice labor (chart below)
- Apprentice to journeyman ratio
- Applies to contractors with 4+ employees
- Exemptions for good faith effort and lack of qualified apprentices
- Only required until facility is placed in service

<table>
<thead>
<tr>
<th>Started before 2023</th>
<th>Started during 2023</th>
<th>After 1/1/2024</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>12.5%</td>
<td>15%</td>
</tr>
</tbody>
</table>
Bonus Credits

**Domestic Content = 10% bonus**
- Requires 100% steel and iron, and
- Manufactured products = 40% of the total cost of the components of such product are mined, produced, or manufactured in the U.S. until 2025. Ramps to 55% by 2027.
- Required for full direct pay starting in 2024

**Energy Communities = 10% bonus**
- Energy communities = brownfield; a coal mine closed after December 31, 1999; coal-fired generated retired after December 31, 2009; or an area with significant employment related to the extraction, processing, transport, or storage of coal, oil, or natural gas.

**Allocated Environmental Justice Solar and Wind Capacity = 10% or 20% allocated bonus**
- Only available for ITC. Apply through Treasury
- 1.8 GW per year competitive capacity cap split into 4 categories
- Wind, solar, or solar+storage projects under 5 MW eligible
- Awarded to projects with greatest economic, health, and justice benefits
- 10% bonus if located in low income community
- 20% bonus for low income residential building of LMI economic benefit project (community solar)
- Eligible locations aligns with New Market Tax Credits

To get full value of bonus credits, project >1 MW must meet labor provisions.
Domestic Content – 10%

- Structural steel and iron components – 100% Domestic
- Manufactured Products
  - 40% of the cost of manufactured products (55% after 2026)
  - Components also have to be US made to get full value of product
  - Partial credit if components are US made, regardless of final manufacturing location

<table>
<thead>
<tr>
<th>Applicable Project Component</th>
<th>Categorization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel photovoltaic module racking</td>
<td>Steel/Iron</td>
</tr>
<tr>
<td>Pile or ground screw</td>
<td>Steel/Iron</td>
</tr>
<tr>
<td>Steel or iron rebar in foundation (e.g., concrete pad)</td>
<td>Steel/Iron</td>
</tr>
<tr>
<td>Photovoltaic tracker</td>
<td>Manufactured Product</td>
</tr>
<tr>
<td>Photovoltaic module (which includes the following Manufactured Product Components, if applicable: photovoltaic cells, mounting frame or backrail, glass, encapsulant, backsheet, junction box (including pigtails and connectors), edge seals, pottants, adhesives, bus ribbons, and bypass diodes)</td>
<td>Manufactured Product</td>
</tr>
<tr>
<td>Inverter</td>
<td>Manufactured Product</td>
</tr>
</tbody>
</table>
Texas Energy Communities – 10%

- 10% ITC bonus available for locations identified as “energy communities”
  - Brownfields
    - Case by case, not on map
  - Fossil Fuel Communities
    - FF employment on map
    - Unemployment data available from Bureau of Labor Statistics
  - Coal Communities
    - On the map
Allocated Environmental Justice Solar and Wind Capacity - 10-20%

- Applications for Categories 3&4 will be open for 60 days starting Q3 of 2023, Categories 1&2 will follow thereafter.
- Additional evaluation criteria will be developed in forthcoming guidance but anticipated to center around projects that further programs goals to increase access for historically disadvantaged communities including projects that:
  - (i) owned or developed by community-based organizations and mission-driven entities
  - (ii) have an impact on encouraging new market participants
  - (iii) provide substantial benefits to low-income communities and individuals marginalized from economic opportunities, and
  - (iv) have a higher degree of commercial readiness.

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Capacity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Located in a Low-Income Community</td>
<td>700 MW</td>
<td>10%</td>
</tr>
<tr>
<td>2</td>
<td>Located on Indian Land</td>
<td>200 MW</td>
<td>10%</td>
</tr>
<tr>
<td>3</td>
<td>Qualified Low-Income Residential Building Project</td>
<td>200 MW</td>
<td>20%</td>
</tr>
<tr>
<td>4</td>
<td>Qualified Low-Income Economic Benefit Project</td>
<td>700 MW</td>
<td>20%</td>
</tr>
</tbody>
</table>
Clean Energy Tax Credits - Residential

Energy Efficient Home Improvement Credit (25C)
- 30% credit, $1,200 annual limit
- Home energy audits ($150); exterior doors ($500); exterior windows and skylights, efficient central air conditioners, electric panel upgrades, natural gas, propane, or oil water heaters or boilers ($600); and electric or natural gas heat pump water heaters, electric or natural gas heat pumps, and biomass stoves and boilers ($2,000, annual limit does not apply)

Residential Clean Energy Tax Credit (25D)
- 30% credit for solar, wind, geothermal heat pumps, fuel cells, biomass, and storage >3 kWh

Energy Efficient New Homes Tax Credit (45L)
- $500 - $5,000 credit for new energy efficient single family, manufactured, and multifamily homes
Transportation Tax Credits

EV Tax Credit (30D)
• Tax credit or direct rebate for EV vehicle purchase: $7,500 new / $4,000 or 30% used
• Income, price, and domestic content limits apply

Qualified Commercial Clean Vehicles (45W)
• 30% of incremental cost between EV and ICE vehicle / 15% for hybrid with >15 kWh battery
• <14,000 lbs, $7,500 max / >14,000, $40,000 max

Alternative Fuel Refueling Property (30C)
• Placed in service before 2033
• 30% tax credit on alternative fuel refueling property up to $100,000 and a 20% tax credit on amounts over $100,000.
• 6% without prevailing wage and apprenticeship
• Non-urban or low-income areas only

Renewable Fuel Credits (40, 40B, 45Z)
• Extension of income and excise tax credits for biodiesel, second generation biofuel, sustainable aviation fuel and other alternative fuels.
• Transition to Clean Fuel Production Credit (45Z) in 2025
179(d) - Energy Efficient Commercial Buildings **Deduction**

- Sliding scale tax deduction for energy cost reduction over ASHRAE 90.1 or an EUI baseline for retrofits.
- Retrofits require “qualified retrofit plan”

| Minimum base deduction - $0.50/SF | $0.50/SF | 25% improvement |
| Maximum base deduction - $1.00/SF | $1.00/SF | @ 50% improvement |

| Minimum bonus deduction – $2.50/SF | $2.50/SF | 25% improvement |
| Maximum bonus deduction - $5.00/SF | $5.00/SF | @ 50% |

- Up from a previous maximum of $1.80/SF
- Deduction can be assigned to “designer”

<table>
<thead>
<tr>
<th>Date Placed in Service</th>
<th>Applicable Reference Standard 90.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before 1/1/2015</td>
<td>Reference Standard 90.1-2001</td>
</tr>
<tr>
<td>After 12/31/2014 and before 1/1/2027*</td>
<td>Reference Standard 90.1-2007</td>
</tr>
<tr>
<td>After 12/31/2026*</td>
<td>Reference Standard 90.1-2019</td>
</tr>
</tbody>
</table>

- Prevailing wage and apprenticeship

*After 12/31/2026*
Thank You

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