

# Inflation Reduction Act of 2022

## Efficiency, Clean Energy, and Climate Programs

October 21, 2022



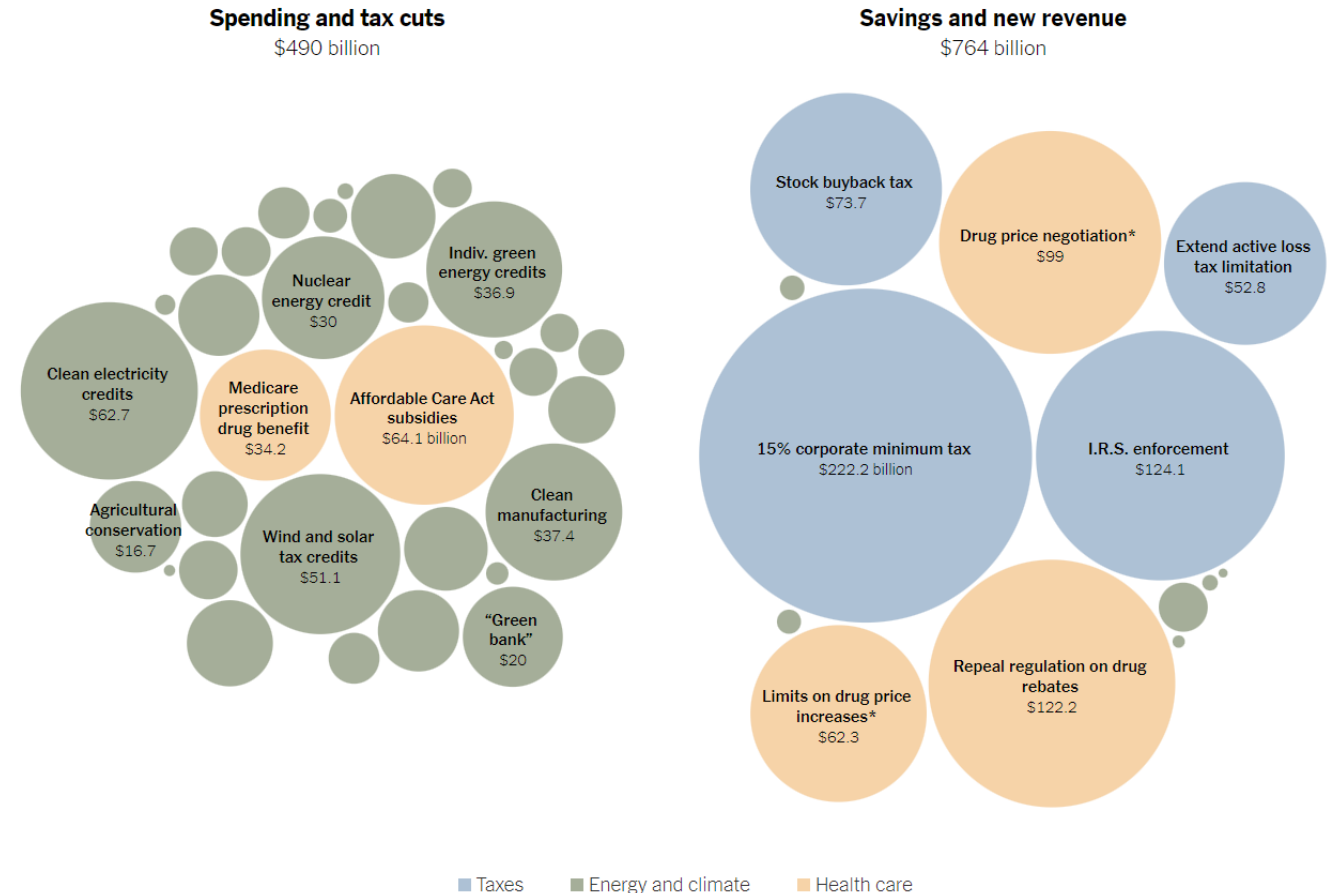
[ameresco.com](https://www.ameresco.com)

© 2021 Ameresco, Inc. All rights reserved.



# Inflation Reduction Act of 2022

- Signed into law August 16, 2022
- Final outcome of the belabored Build Back Better Act
- \$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



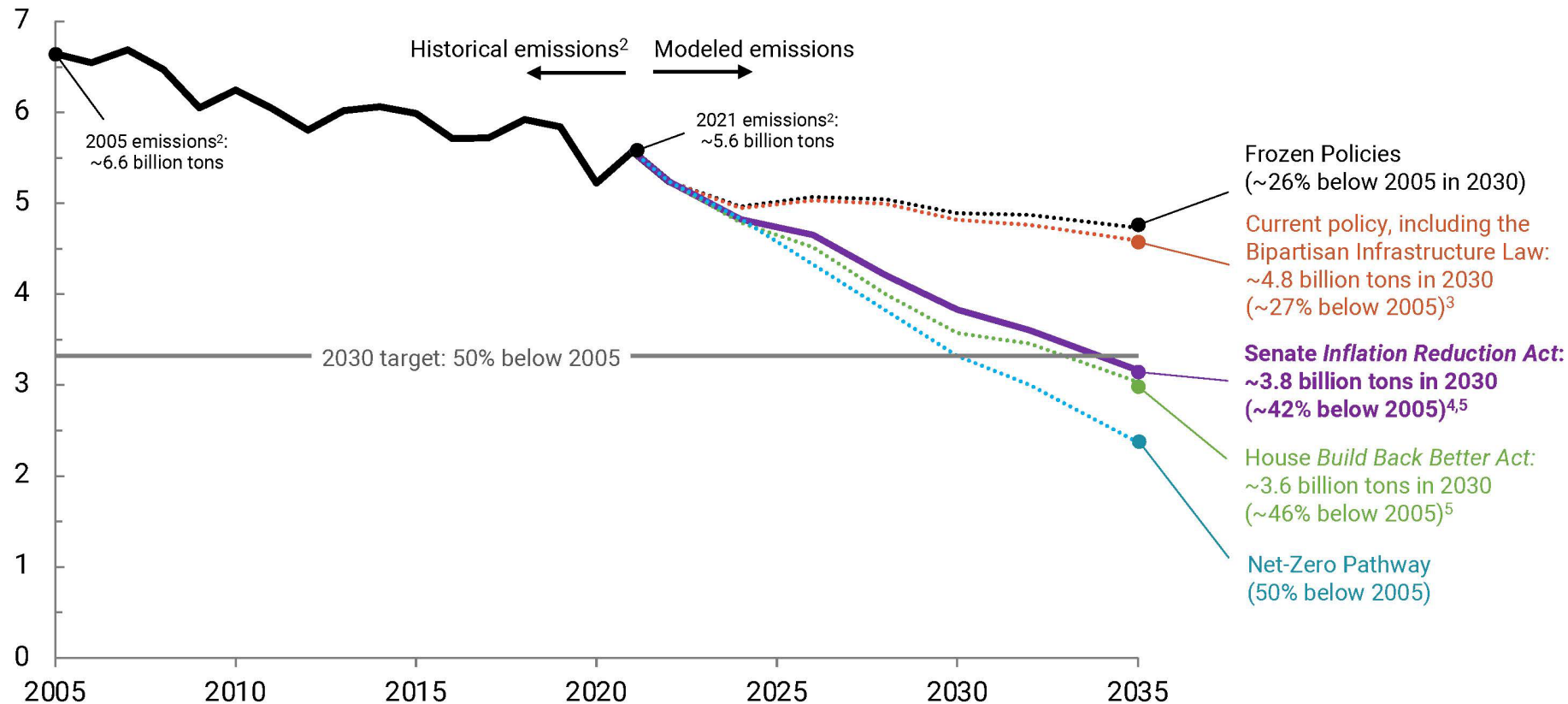
[Source: New York Times](#)

# Climate Impact of Inflation Reduction Act

*IRA could reduce U.S. GHG emissions by 32% to 40% by 2030 compared to 2005 levels*

## Historical and Modeled Net U.S. Greenhouse Gas Emissions (Including Land Carbon Sinks)

billion metric tons CO<sub>2</sub>-equivalent (Gt CO<sub>2</sub>-e)<sup>1</sup>



Source: [Repeat Project](#)



# Clean Energy Tax Incentives





# Clean Energy Tax Credits – Non-Residential

- Extension and enhancement of existing clean energy tax credits
  - Investment Tax Credit (ITC) (45)
    - Credit is a percentage of project cost
    - Historically more used by solar and other clean energy technologies
  - Production Tax Credit (PTC) (48)
    - Credit on a per unit of energy generated basis over 10 years
    - Adjusted annually for inflation
    - Historically used by wind facilities
- Transition to technology neutral credits after 2024
- Introduced direct pay for tax exempt entities
- Tiers of credits based on project size, timing, labor provisions, domestic content, and project location
- Additional credits for carbon capture (45Q), clean hydrogen (45V)



# ITC and PTC Highlights

- ITC: Base + Bonus Structure
  - Base credit = **6%**
  - Bonus credit = **24%**
- PTC: Base + Bonus Structure
  - Base credit = **0.5 cents** / kwh
  - Bonus credit = **2.1 cents** / kwh
  - Adjusted annually for inflation
- Associated Requirements
  - For projects > 1 MW-ac, additional labor requirements will apply to receive full credit
    - Grace period pending additional Federal guidance



# Achieving full ITC/PTC credit

How can my project claim the full 30% ITC or the full 100% PTC?		
<b>Option 1</b>	Project is under 1 MW	Projects under 1 MW AC will always be exempt from prevailing wage and apprenticeship requirements
<b>Option 2</b>	Project starts construction soon	<p>Projects that start construction less than 60 days after Treasury issues guidance on how to meet prevailing wage and apprenticeship standards are exempt from prevailing wage and apprentice requirements. TBD on how quickly Treasury will issue guidance.</p> <p>For example, if Treasury guidance comes out on February 1st, 2023, those who commence construction before April 2, 2023 would qualify for the full rates, without having to meet new labor standards. That includes those that started construction before the legislation was passed.</p>
<b>Option 3</b>	Pay prevailing wage and meet apprenticeship requirements	Projects that pay prevailing wage and meet registered apprenticeship requirements will also be eligible for full credit values.



# Enhancements to ITC/PTC

- Solar now eligible for ITC or PTC
- New technologies eligible for ITC if placed in service after Dec 31, 2022

Technology	When is it eligible for the new ITC?
Solar energy, geothermal, fiber-optic solar, fuel cell, microturbine, small wind, offshore wind, combined heat and power, and waste energy recovery	Projects placed in service <b>after December 31, 2021</b>
Energy & thermal storage technology, biogas property, microgrid controllers, dynamic glass, fuel cells using electromechanical processes, and linear generators	Projects placed in service <b>after December 31, 2022</b>

- 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.

## 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.



# Labor Provisions

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 start construction soon exempt

## Prevailing Wage

- Prevailing wages for laborers and mechanics employed by contractor and subcontractor
- 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



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

# 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.
- Cost and availability waivers possible

## 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.

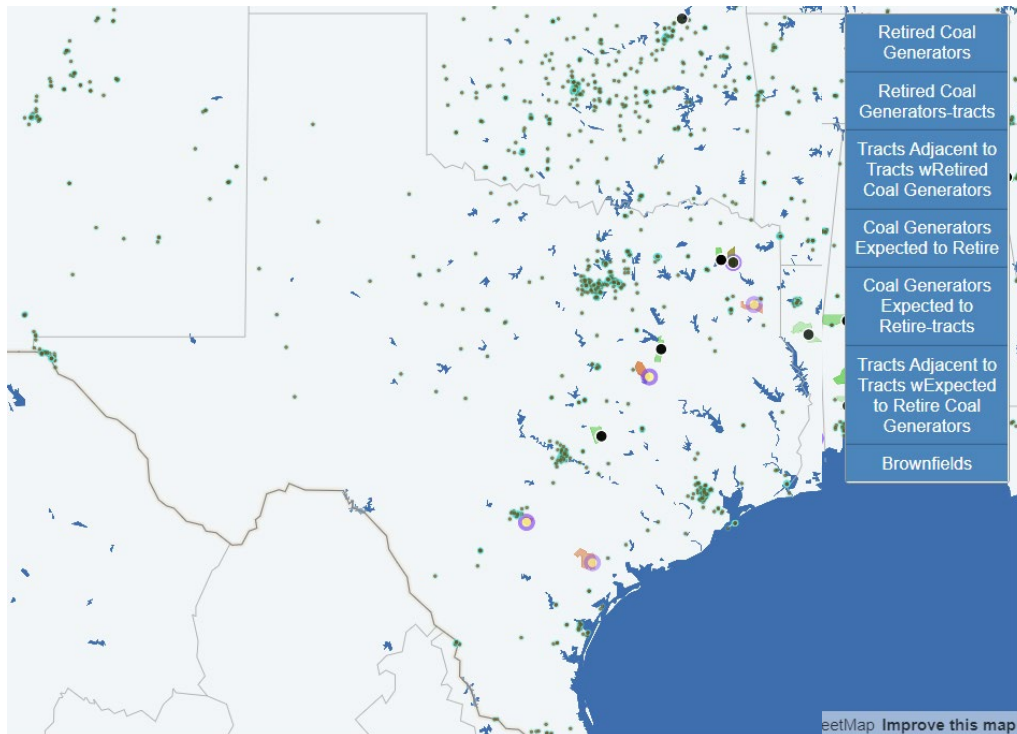
## Low Income Communities = 10% or 20% *allocated* bonus

- Only available for ITC. Apply through Treasury
- 1.8 GW per year competitive capacity cap
- 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

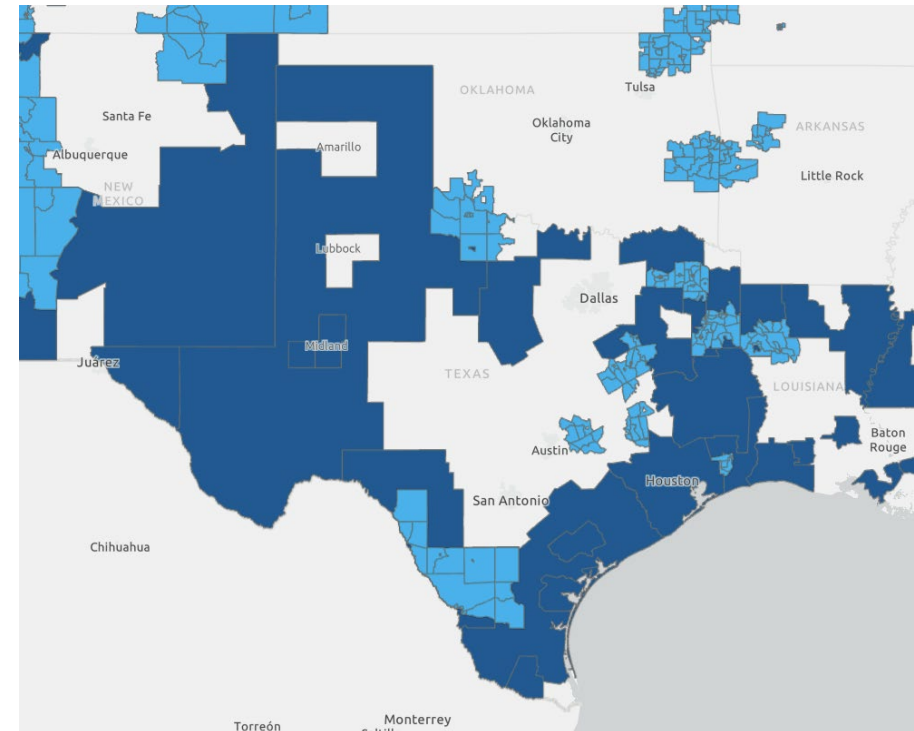
Bonus Credits are only available for projects placed in service after Dec. 31, 2022. To get full value of bonus credits, project >1 MW must meet labor provisions.

# Texas Energy Communities

- 10% ITC bonus available for locations identified as “energy communities”
- Unofficial maps provide early indication of eligible locations, with more anticipated in official maps



SEIA Energy Communities Map



[American Clean Power Energy Communities Map](#)



# 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 @ 25% improvement

Maximum base deduction - \$1.00/SF @ 50% improvement



Minimum bonus deduction – \$2.50/SF @ 25%

Maximum bonus deduction - \$5.00/SF @ 50%

Prevailing wage and apprenticeship



Up from a previous maximum of \$1.80/SF



Deduction can be assigned to “designer”

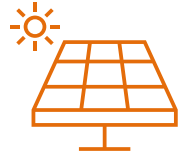


# Grant and Incentive Programs





# GHG Reduction and Climate Action



## Greenhouse Gas Reduction Fund (EPA)

\$27B total for grants for state/local governments to deploy clean energy in low income areas:

- \$7B: Competitive grants to states, local governments, non-profit capital providers to provide grants, loans, and other technical assistance to deploy zero emission technologies

Green Bank seed funding:

- \$11.97B: General assistance for non-profit capital providers to provide direct and indirect assistance
- \$8B: Low income assistance, for non-profit capital providers to provide direct and indirect assistance

**All amounts to be available by February 2023**



## Climate Pollution Reduction Grants (EPA)

\$250 million for grants for the costs of developing plans to reduce greenhouse gas air pollution

- FOA expected by May 2023, through 2031

\$4.75 billion for EPA to competitively award grants to implement greenhouse gas air pollution reduction plans.

- FOA TBD, available through 2026



# GHG Reduction and Climate Action



## Clean Heavy-Duty Vehicles Grants and Rebates (EPA)

\$600M for up to 100% of incremental cost of zero emissions heavy duty vehicle plus fueling/charging infrastructure, workforce development and technical activities  
Extra \$400M for non-attainment zones  
Municipalities and nonprofit school transportation associations



## Environmental and Climate Justice Block Grants (EPA)

\$3 billion for community-led projects to address environmental or public health risks  
Includes low- and zero- emission and resilient infrastructure and technologies  
Community non-profit must be primary partner



## Funding to Address Air Pollution at School (EPA)

\$40 million to address air pollution and GHG emissions in low-income or disadvantaged schools



## Funding for Department of Energy Loan Programs Office

\$ 40 billion of loan guarantee authority for EPACT05 projects  
\$ 3.6 billion for the costs of guarantees

# Residential Rebate Programs



To be run through state energy offices (SECO for Texas)

## Home Energy Performance-Based, Whole-House Rebate (HOMES) Program - \$4.3B

- Non-LMI homeowners: Up to \$4,000 or 50% of project cost for a 20-35 percent reduction
- LMI homeowners: Up to \$8,000 or 80% of project cost for 20-35 percent reduction
- Multifamily buildings: Up to \$400,000 or 50% of project cost for a 35 percent reduction (buildings with 50 percent LMI residents can claim up to 80% of project cost)

## High-Efficiency Electric Home Rebate Program (HEERA) - \$4.5B

- 10 year rebate program for LMI home electrification
  - Low income (80% AMI) – 100% of material and installation
  - Moderate income (150% AMI) – 50% of costs
  - >50% LMI multifamily qualifies for 50%
- Point-of-sale rebates for: heat pump HVAC, heat pump water heaters, electric stove/cooktop, heat pump clothes dryer, breaker box, electric wiring, weatherization
- Household maximum of \$14,000



# Other EE/RE for Community

---

## **Assistance for Latest and Zero Building Energy Code Adoption (DOE)**

- \$330M for adoption and enforcement of ASHRAE 90.1-2019/IECC 2021 or later
- \$670M for adoption of zero energy provisions in IECC 2021 or other stretch codes

## **Improving Energy Efficiency, Water Efficiency, or Resilience of Affordable Housing (HUD)**

- \$42.5M for energy and water benchmarking and assessments
- \$837.5M for loans and grants for energy, water, IEQ, clean energy, low-emitting building materials, energy storage, building electrification, or building climate resilience

## **Low Emissions Electricity Outreach Program (EPA)**

- \$87M for outreach, technical assistance, and education for low income and disadvantaged communities around clean energy and GHG emissions reduction

# Other Climate Funding

## Grants to Reduce Air Pollution at Ports (EPA)

- \$3B for Rebates and grants to reduce emissions and improve air quality at ports (including inland ports)

## State and Private Forestry Conservation Programs (USDA)

- \$1.5B for competitive grants for tree planting and other nature-based solutions

## Neighborhood Access and Equity Grant Program (FHWA)

- \$3B for highway removal, remediation, or capping; mitigating local impacts of highways; building or improving “complete streets, multi-use trails, regional greenways, or active transportation networks”; and providing “affordable access to essential destinations, public spaces, or transportation links and hubs”.



# IRA Funding Resources

[Federal Funding Opportunities for Local Decarbonization \(FFOLD\)](#)

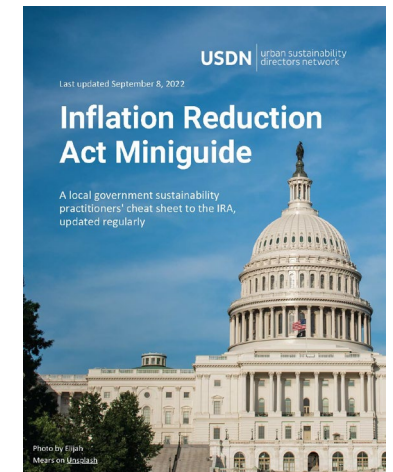


[Climate Program Portal](#)



CLIMATE  
PROGRAM  
PORTAL

[USDN Inflation Reduction Act Miniguide](#)



# Thank You



Cassidy Ellis  
New Market Strategy Manager  
CEllis@ameresco.com  
818.399.4623