

FUNDING FOR INDOOR AIR, HEALTHY HOMES AND WOOD HEAT INTERVENTIONS INTRIBAL, RURAL AND COLD-CLIMATE COMMUNITIES





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Congressional Appropriation of \$370 billion through Inflation Reduction Act of 2022

Funding <u>Directly to Consumers</u>

(At point of purchase or in filing taxes)

Funding to

Communities via <u>Federal Agency</u> Grants and Loans

(Housing and Urban Development, Dept of Energy, Environmental Protection Agency)





INFLATION REDUCTION ACT (CLIMATE BILL) OF 2022

- MORE THAN 100 DIFFERENT PROGRAMS IN THE \$370B
 BILL
- 2. PRIMAY AIM: <u>DECARBONIZATION</u> AND CLEAN ENERGY
- 3. DUAL AIM: <u>SUPPORT LOW-INCOME</u>, <u>AND DISADVANTAGED COMMUNITIES</u> WITH \$60B
- 4. TRIBAL NATIONS HAVE SPECIFIC SET-ASIDES





IRA BILL AND TRIBAL NATIONS

"This legislation will result in hundreds of millions of funding available for Tribes, and non-profits that work with tribes and <u>tribal communities</u> to support the clean energy transition for tribal communities, reduce energy costs for tribal members, and create jobs," said Ms. Thomas of Quarles & Brady."

"The IRA will provide a substantial down payment for every tribe to take advantage of clean energy technologies, energy efficiency and energy savings, and climate resilient solutions for their communities and tribal members individually."

Source: https://www.natlawreview.com/article/inflation-reduction-act-how-do-tribal-communities-benefit





INFLATION REDUCTION ACT OF 2022

SAVINGS AND BENEFITS FOR INDIVIDUALS AND FAMILIES

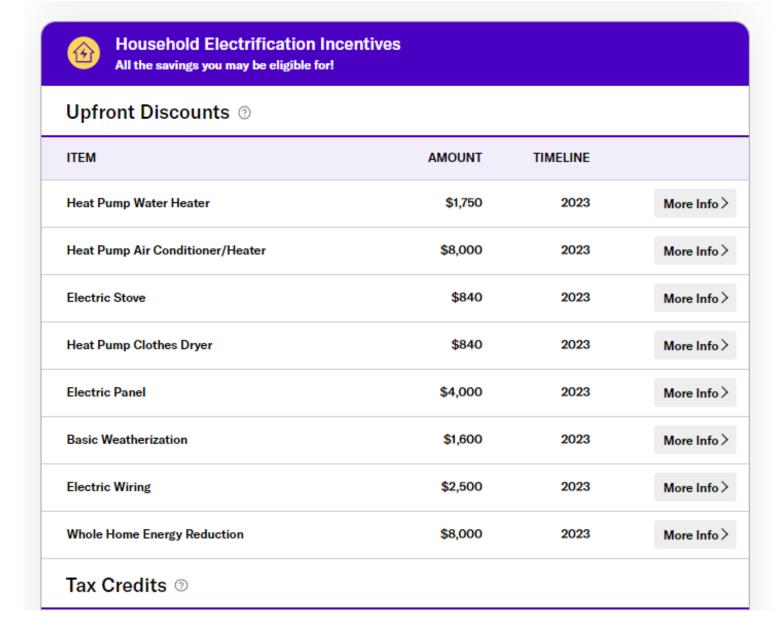


Benefits Calculator:

https://www.rewiringamerica.org/app/ira-calculator

INFLATION REDUCTION ACT OF 2022

SAVINGS AND BENEFITS FOR INDIVIDUALS AND FAMILIES

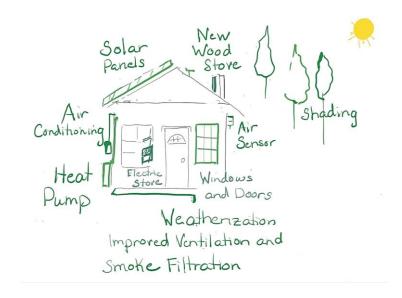


INFLATION REDUCTION ACT OF 2022

SAVINGS AND BENEFITS FOR INDIVIDUALS AND FAMILIES

ITEM	AMOUNT	TIMELINE	
Rooftop Solar Installation	30%	Available Now!	More Info
Geothermal Heating Installation	30%	Available Now!	More Info
Battery Storage Installation	30%	2023	More Info
New Electric Vehicle	\$7,500	2023	More Info
Used Electric Vehicle	\$4,000	2023	More Info
Electric Vehicle Charger	\$1,000	2023	More Info
Heat Pump Air Conditioner/Heater	\$2,000	2023	More Info
Heat Pump Water Heater	\$2,000	2023	More Info
Electric Panel	\$600	2023	More Info
Basic Weatherization	\$1,200	2023	More Info

WHICH IRA GRANT AND TAX CREDIT PROGRAMS WILL HAVE A DIRECT IMPACT ON INDOOR AIR QUALITY AND OCCUPANT HEALTH?







HIGHEST IMPACT IRA PROGRAMS FROM INDOOR AIR AND HEALTHY HOMES PERSPECTIVE

- 1. High-Efficiency Electric Home Rebate Program (HEEHRA)
- 2. Hope for HOMES Rebate Program
- 3. Energy Efficient Home Improvement Credit
- 4. Affordable Housing Resilience and Efficiency Investments
- 5. Environmental & Climate Justice Block Grants
- 6. Greenhouse Gas Reduction Fund
- 7. Climate Pollution Reduction Grants
- 8. Tribal Electrification Program





Funding to Consumers

High-Efficiency Electric Home Rebate Program (HEEHRA)

Up to \$4.5 billion through FY 2031 via Department of Energy



About:

Targets low to moderate income consumers with point-of-sale rebates. Will cover both appliance and installation. For low-income (less than 80% of AMI) 100% of costs covered. For moderate-income (80-150% of AMI), 50% of costs covered.

What's Likely to be Covered:

Heat pump HVAC, heat pump water heater, electric cooktop/stove, heat pump clothes dryer, breaker box, wiring, weatherization.

- A Can fund removal of combustion appliances, such as gas stoves, that emit harmful VOCs and combustion gases.
- A Can provide heat pumps, a cleaner heat alternative or supplement to woodstoves.
- A Heat pumps provide moderately effective filtration of indoor air.
- A Can improve energy efficiency, reducing demand for wood heat.
- A Can provide ventilation upgrades, which when combined with filtration, can improve indoor air quality and occupant comfort.





Funding to Consumers

Hope for HOMES Rebate Program

Up to \$4.3 billion through FY 2031. Includes \$500 million for training credits, via Department of Energy (through state energy offices)



About:

Will provide consumer rebates for comprehensive home energy retrofits. Rebates for retrofits (doubled) for low- and moderate-income households. Can't be combined with other <u>federal</u> rebate programs (such as HEEHRA), but can be combined with tax credits, or with state or utility rebates. (See https://www.dsireusa.org/). <u>Homeowners AND multifamily building owners and aggregators eligible</u>.

What's Likely to be Covered:

Appliances (eg heat pumps, air conditioners, boilers) as well as new roofs, windows, doors and skylights that meet EnergyStar requirements.

- A Lowers consumer cost of heat pumps, a cleaner heat alternative than many woodstoves.
- ↑ Heat pumps provide moderately effective filtration of indoor air.
- ↑ Can improve energy efficiency, reducing demand for wood heat.





Funding to Consumers



Energy Efficient Home Improvement Credit

About:

EnergyStar program provides list of certified products that are eligible. This is an extension and expansion of existing tax credits for homeowners to "green" their homes.

What's Likely to be Covered:

Provides tax credits for a range of energy-saving improvements, such as heat pumps, certain water heaters, air conditioning systems, etc. Provides 30% tax credit for qualified home improvements.

https://www.energystar.gov/about/federal_tax_credits Includes appliances (e.g. heat pumps, air conditioners, boilers) as well as new roofs, windows, doors and skylights that meet EnergyStar requirements.

- A Lowers consumer cost of heat pumps, a cleaner heat alternative or supplement to woodstoves.
- A Can improve energy efficiency, reducing demand for wood heat.
- A Lower cost of air conditioning, which can protect residents from excessive indoor heat during climate-related heat events.





Funding to Communities via Federal Agencies



Affordable Housing Resilience and Efficiency Investments

Up to \$1 billion invested for HUD's multi-family housing programs (owners and operators of Sec 8, Sec 202 and Sec 236)

About:

Housing and Urban Development New grant or loan program to fund energy efficiency, indoor air quality, and work that will increase the climate resilience of affordable housing.

What's Likely to be Covered: TBD





Funding to Communities via Federal Agencies

Environmental & Climate Justice Block Grants

Up to \$3 billion through FY 2026 Environmental Protection Agency



About:

Block grants will be provided to partnerships between Tribes, local governments, universities, non-profits, etc. Eligible projects address environmental harms in low-income and disadvantaged communities.

What's Likely to be Covered:

Air quality monitoring; zero-emission infrastructure; transportation emissions reduction; climate resiliency; pollution prevention; low-and zero-emission energy technologies; indoor air toxics and indoor air pollution; engagement of disadvantaged communities.

- Λ Indoor air monitoring, assessments and inspections can provide key information on indoor pollutant sources and levels.
- A Resident education and outreach can aid in reducing occupant behaviors that contribute to indoor air pollution.
- A Funding may enable direct mitigation of indoor air toxics (i.e., radon, lead, woodsmoke, CO) specific activities are TBD
- A Funding specifically available to upgrade or replace woodstoves.





Environmental & Climate Justice Block Grants

Up to \$3 billion through FY 2026 Environmental Protection Agency

Eligible Activities: "(B) mitigating climate and health risks from urban heat islands, extreme heat, wood heater emissions, and wildfire events; "(D) reducing indoor toxics and indoor air pollution; or

Eligibility: "(A) a partnership between—

- "(i) an Indian tribe, a local government, or an institution of higher education; and
- "(ii) a community-based nonprofit organization;
- "(B) a community-based nonprofit organization; or
- "(C) a partnership of community-based nonprofit organizations.

Funding to Communities via Federal Agencies



Greenhouse Gas Reduction Fund

Up to \$27 billion Green Bank (administered via EPA)

About:

Zero emission technologies available to states, municipalities, tribal governments, and eligible recipients for zero emission technologies. Grants and loans will be also be available (up to \$8 billion for low-income and disadvantaged communities) to deploy or benefit from "zero-emission technologies"

What's Likely to be Covered:

Financing of solar panels, residential energy efficiency projects, electrical vehicles and other. (TBD)

Potential Indoor Air/Healthy Homes Impacts:

A Potential to meaningfully reduce mobile emissions, including key pollutants with adverse health effects (CO, PM, NOx, SO₂, VOCs) and that are found in indoor environments where structures are in close proximity to roadway.





Funding to Communities via Federal Agencies



Climate Pollution Reduction Grants

Up to \$5 billion through FY 2026. Environmental Protection Agency

About:

Principally to <u>states</u>, <u>municipalities</u> or <u>air pollution control agencies</u>. Will also fund projects that reduce GHG pollution sources in <u>low-income and disadvantaged communities</u>.

What's Likely to be Covered:

Greenhouse gas air pollution planning and implementation activities.

Potential Indoor Air/Healthy Homes Impacts:

A Potential to meaningfully reduce ambient air quality through reductions in mobile emissions, including pollutants with adverse health effects (CO, PM, NOx, SO₂, VOCs) that are detected in indoor environments (especially where structures are close to major roadway).





Tribal Electrification Program

Up to \$150 million for tribal home electrification and \$75 million for loans to tribal energy development.

About:

Will fund "transitioning electrified homes" via zero-emissions energy systems.

What's Likely to be Covered:

Will support home repairs and retrofits necessary for the installation of zero-emission equipment. <u>Tribal homes that already have electricity are also eligible for renewable energy installations.</u>

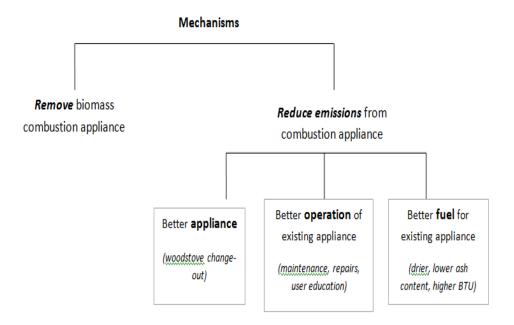
Potential Indoor Air/Healthy Homes Impacts:

A Funding may provide households that rely exclusively on wood heat (i.e., not electrified), with electric heat pumps.





WHICH INTERVENTIONS RELATED TO WOOD HEATING MIGHT BE FUNDED UNDER THE IRA?







2. Hope for HOMES Rebate Program

5. Environmental & Climate Justice Block Grants

5. Environmental & Climate Justice Block Grants

Recommendation	1.	Convert	Drimary	Heating	Source t	ο ΛI+	ornativo	lase	alactric	otc)
Recommendation	т.	Convert	Primary	neaung	Source t	O AIL	ernative	igas.	electric.	elli

The most effective, though sometimes more expensive way to reduce woodsmoke is to convert a home to a cleaner heating method. Cost of installation, cost of operation, location and climate are key factors that may make this approach prohibitive.

Activity Type	Intensity	Risk Impact	Relative Effectiveness	Resident Involvement	Potential Funders	
☐ Policy☐ Program☐ Practice	☑ High ☐ Moderate ☐ Low	☐ Prevents = Avoids Risk ☐ Remediates = Removes Risk ☐ Mitigates = Lowers Risk	✓ High✓ Moderate✓ Low	☐ High ☐ Moderate ☐ Low ☑ None (once installed)	□ EPA ☑ HUD ☑ DOE ☑ USDA	☑ BIA □ IHS □ DHHS

Recommendation 2: Provide Air Cleaners for At-Risk Households

When woodstoves cannot be removed or replaced, an effective way to protect the health of the occupants is to provide an air filtration unit in one or more rooms of the house. When used regularly, researchers have found that up to 60% of the particulate matter can be removed from the indoor air through a stand-alone HEPA air filter.

Activity Type	Intensity	Risk Impact	Relative Effectiveness	Resident Involvement	Potential Funders	
☐ Policy ☑ Program ☑ Practice	☐ High☐ Moderate☐ Low	☐ Prevents = Avoids Risk ☐ Remediates = Removes Risk ☑ Mitigates = Lowers Risk	☐ High ☑ Moderate ☐ Low	☐ High ☐ Moderate ☑ Low ☐ None	□ EPA □ HUD □ DOE □ USDA	□ BIA □ IHS □ DHHS





Environmental & Climate Justice Block Grants

Energy Efficient Home Improvement Credit

High-Efficiency Electric Home Rebate Program (HEEHRA)

Hope for HOMES Rebate Program

Energy Efficient Home Improvement Credit

Recommendation 3: Replace uncertified or older wood stoves with EPA-Certified Wood Stove

Not only do EPA-certified woodstoves burn more cleanly, but they burn more efficiently, reducing the amount of wood fuel needed each heating season. The limiting factor of woodstove changeouts is that even with a new stove, users may continue to burn wet wood.

Activity Type	Intensity	Risk Impact	Relative Effectiveness	Resident Involvement	Potentia	l Funders
☐ Policy ☑ Program ☑ Practice	☑ High ☐ Moderate ☐ Low	☐ Prevents = Avoids Risk ☐ Remediates = Removes Risk ☑ Mitigates = Lowers Risk	☐ High ☑ Moderate ☐ Low	☐ High ☑ Moderate ☐ Low ☐ None	□ EPA ☑ HUD □ DOE □ USDA	☑ BIA □ IHS □ DHHS

Recommendation 4: Reduce seasonal demand for wood heat through weatherization

Homes that are weatherized often have better-performing insulation, weather-stripping around leaks, and windows with a higher R-value. Combined, these measures increase the homes' energy efficiency and in turn, lower the amount of wood heat required to keep the home at comfortable temperature.

Activity Type	Intensity	Risk Impact	Relative Effectiveness	Resident Involvement	Potential	Funders
☐ Policy ☑ Program ☐ Practice	☐ High ☐ Moderate ☑ Low	☐ Prevents = Avoids Risk ☐ Remediates = Removes Risk ☑ Mitigates = Lowers Risk	☐ High ☑ Moderate ☐ Low	☐ High ☐ Moderate ☐ Low ☑ None	□ EPA ☑ HUD ☑ DOE ☑ USDA	☑ BIA □ IHS □ DHHS





High-Efficiency Electric Home Rebate Program (HEEHRA)

Environmental & Climate Justice Block Grants

Recommendation 5: Reduce demand for wood heat with ductless heat pump

As with weatherization, this approach seeks to heat a home more efficiently and in turn, reduce the demand for wood heat. Ductless heat pumps, which work by extracting warm air from outside air, can be installed in less than a day. Many utilities offer incentives and tax credit that make purchase and installation more affordable.

Activity Type	Intensity	Risk Impact	Relative Effectiveness	Resident Involvement	Potential Funders
Policy Program Practice	☑ High ☐ Moderate ☐ Low	☐ Prevents = Avoids Risk ☑ Remediates = Removes Risk	☑ High ☑ Moderate □ Low	☐ High ☐ Moderate ☑ Low ☐ None	☐ EPA ☐ IHS ☐ DHHS ☐ DOE ☐ USDA

Environmental & Climate Justice Block Grants

Energy Efficient Home Improvement Credit

Recommendation 6: Improve air quality through ventilation and filtration upgrades

It is not uncommon for homes with older wood stoves to have insufficient ventilation and air exchange. This can compound the exposure to woodsmoke. Increasing air exchange, in homes without HVAC, may include installing vents, repairing or upgrades kitchen and bathroom fans, providing air cleaners, etc. For homes with HVAC, this may include providing MERV-13 or higher furnace filters.

Activity Type	Intensity	Risk Impact	Relative Effectiveness	Resident Involvement	Potential Funde	ers
☐ Policy ☑ Program ☑ Practice	☐ High ☐ Moderate ☑ Low	☐ Prevents = Avoids Risk ☐ Remediates = Removes Risk ☑ Mitigates = Lowers Risk	☐ High ☑ Moderate ☐ Low	☐ High ☐ Moderate ☑ Low ☐ None	☐ EPA ☐ IH: ☐ HUD ☐ DH ☐ DOE ☐ USDA	S





Environmental & Climate Justice Block Grants

Wood banks oper		/-based organization, a	_	community Wood Ba lity, can ensure the com		
Activity Type	Intensity	Risk Impact	Relative Effectiveness	Resident Involvement	Potentia	l Funders
☐ Policy ☑ Program ☐ Practice	☐ High ☐ Moderate ☑ Low	☐ Prevents = Avoids Risk ☐ Remediates = Removes Risk ☑ Mitigates =	☐ High ☑ Moderate ☐ Low	☐ High ☑ Moderate ☐ Low ☐ None	□ EPA □ HUD ☑ DOE ☑ USDA	□ BIA □ IHS □ DHHS

Recommendation 8: Reduce ambient and indoor woodsmoke through program of providing free or low-cost high-BTU, low-emission fuel such as Compressed Wood Logs (Briquettes)

Research demonstrates that briquettes have a high BTU yet emit substantially lower levels of particulates and gases during combustion. In some states, the LIHEAP program provides free briquettes for income-qualified households.

Lowers Risk

Activity Type	Intensity	Risk Impact	Relative Effectiveness	Resident Involvement	Potential F	Funders
☐ Policy ☑ Program ☑ Practice	☐ High ☐ Moderate ☑ Low	☐ Prevents = Avoids Risk ☐ Remediates = Removes Risk ☑ Mitigates = Lowers Risk	☑ High ☑ Moderate □ Low	☐ High ☐ Moderate ☑ Low ☐ None		□ BIA □ IHS ☑ DHHS





Recommendation 9: Reduce woodstove emissions and increase safety through a community-wide Wood Stove Inspection and Maintenance Program

In rural and remote communities, access is limited to woodstove maintenance services. In low-income households, the costs of annual inspection and routine maintenance may be prohibitive. Higher emissions, lower heat output, and greater risk of chimney fires or back drafting are all possible outcomes. Developing a circuit-rider program, in which eligible households receive free or low-cost inspections and maintenance, can be organized and funded at the community level.

Activity Type	Intensity	Risk Impact	Relative Effectiveness	Resident Involvement	Potentia	l Funders
✓ Policy ✓ Program ☐ Practice	☐ High ☑ Moderate ☑ Low	✓ Prevents = Avoids Risk ☐ Remediates = Removes Risk ✓ Mitigates = Lowers Risk	☐ High ☑ Moderate ☐ Low	☐ High ☐ Moderate ☐ Low ☑ None	□ EPA □ HUD □ DOE □ USDA	□ BIA □ IHS □ DHHS





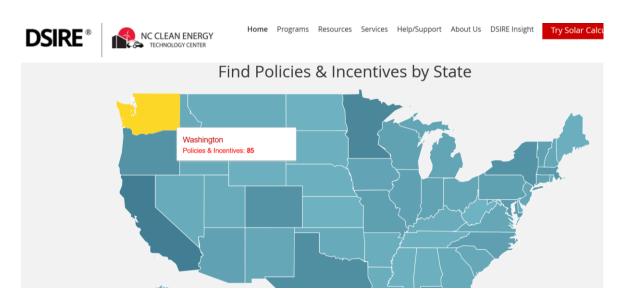
DATABASES FOR FINDING TAX CREDITS, REBATES, INCENTIVES AND FOR GRANTS AND LOANS

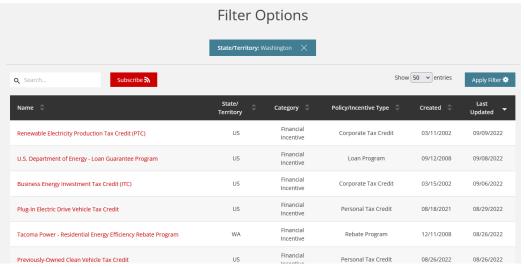




Database of State Incentives for Renewables & Efficiency

https://www.dsireusa.org/









Database of Tribal Healthy Homes Grants and Loans (Tribal Specific but Many Programs have Non-Tribal Corollaries)

https://tribalindoorairfunding.org









BENEFIT CALCULATOR FOR INDIVIDUALS AND HOUSEHOLDS



FULL TEXT OF THE ENTIRE BILL







IRA Funding Proposals

What you can start doing now

Inventory and Needs Assessment

(Airshed status and trends, woodsmoke impacts, proportion of homes w/ uncertified stoves, proportion of homes w/out weatherization, health risk factors in target community, training needs, etc)

Capacity Plan

(Partner Selection,
Identification of
Interventions and
Strategies, Review of
Evidence-Base, Anticipated
Health Outcomes,
Anticipated Equity
Outcomes)

Implementation

Evaluation