



Piecing Together the IRA

Moderator:

Heather Deese / *Dandelion Energy*

Panel:

Daniel Ellis / *Comfortworks, Inc.*

Jacob Goldman / *Energy Tax Savers*

Timothy Wright / *Enertech Global*

Jamal Lewis / *Rewiring America*

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Piecing Together the IRA

Panelist: Daniel Ellis

**Commercial geothermal projects can qualify
for IRA tax credits up to 50% of cost basis...**



Bonus Credit Requirements

Bonus Rate of 5x Base for Qualifying Energy Projects

- ✓ Maximum net output < 1MW of thermal energy
or
- ✓ Meet prevailing wage rate and apprenticeship requirements
or
- ✓ Construction commenced prior to January 29, 2023

GEOTHERMAL TAX CREDITS

GHP ITC	6% -> 30%
DOMESTIC CONTENT	2% -> 10%
ENERGY COMMUNITY	2% -> 10%
MAXIMUM CREDIT	10% -> 50%

Maximum Net Output <1 MW of Thermal Energy

GEO comments submitted for distributed heat pump systems

- ✓ Analysis based on DOE Energy Plus simulations using DOE prototype building models
- ✓ 4 building types (large office, large hotels, secondary schools, hi-rise multi-family)
- ✓ Modeled across 13 US climate zones
- ✓ Used ASHRAE 90.1 baseline building zone heat pump sizing ratio requirement of 1.15
- ✓ Resulting average diversity factor was 0.64
- ✓ **1 MW of maximum net thermal output < 445 tons of total installed capacity**

GEO comments submitted for centralized heat pump systems

- ✓ Diversity is already “baked in” to central plant sizing
- ✓ Resulting diversity factor is 1.0
- ✓ **1 MW of maximum net thermal output < 285 tons of total installed capacity**

We expect IRS rules by mid-summer

Domestic Content Bonus

Any iron, steel or manufactured product used in the project must be produced in the U.S.

- ✓ Applies to construction materials made primarily of iron or steel
- ✓ Does not include iron or steel used as components or sub-components of manufactured products

Manufactured products are deemed to have been manufactured in the U.S. if...

- ✓ At least 40% of the total cost of the incorporated components or subcomponents are mined, produced or manufactured in the U.S.
- ✓ Increases to 45% for projects that start construction in 2025, 50% in 2026, and 55% after 2026

Taxpayer must certify the above in a form prescribed by the IRS

Applies only to projects completed after 1/1/2023

We expect IRS rules by mid-May

Energy Communities

- ✓ Census Tract or adjoining tract with a Coal Mine closed since 2000
or
- ✓ Census Tract or adjoining tract with Coal Fired plant closed since 2010
or
- ✓ Defined as a “brownfield site” by the EPA
or
- ✓ A MSA or non-MSA that has (or had at any time since 2009) 0.17% or more of direct employment or at least 25% of local tax revenues related to the extraction, processing, transport or storage of coal, oil or natural gas AND unemployment is at or above the national average in the previous year



Applies only to projects completed after 1/1/2023

We expect further IRS rules by mid-May


US DOE Coal Closures / Fossil Fuel Employment

Coal Closure Energy Communities


Symbol

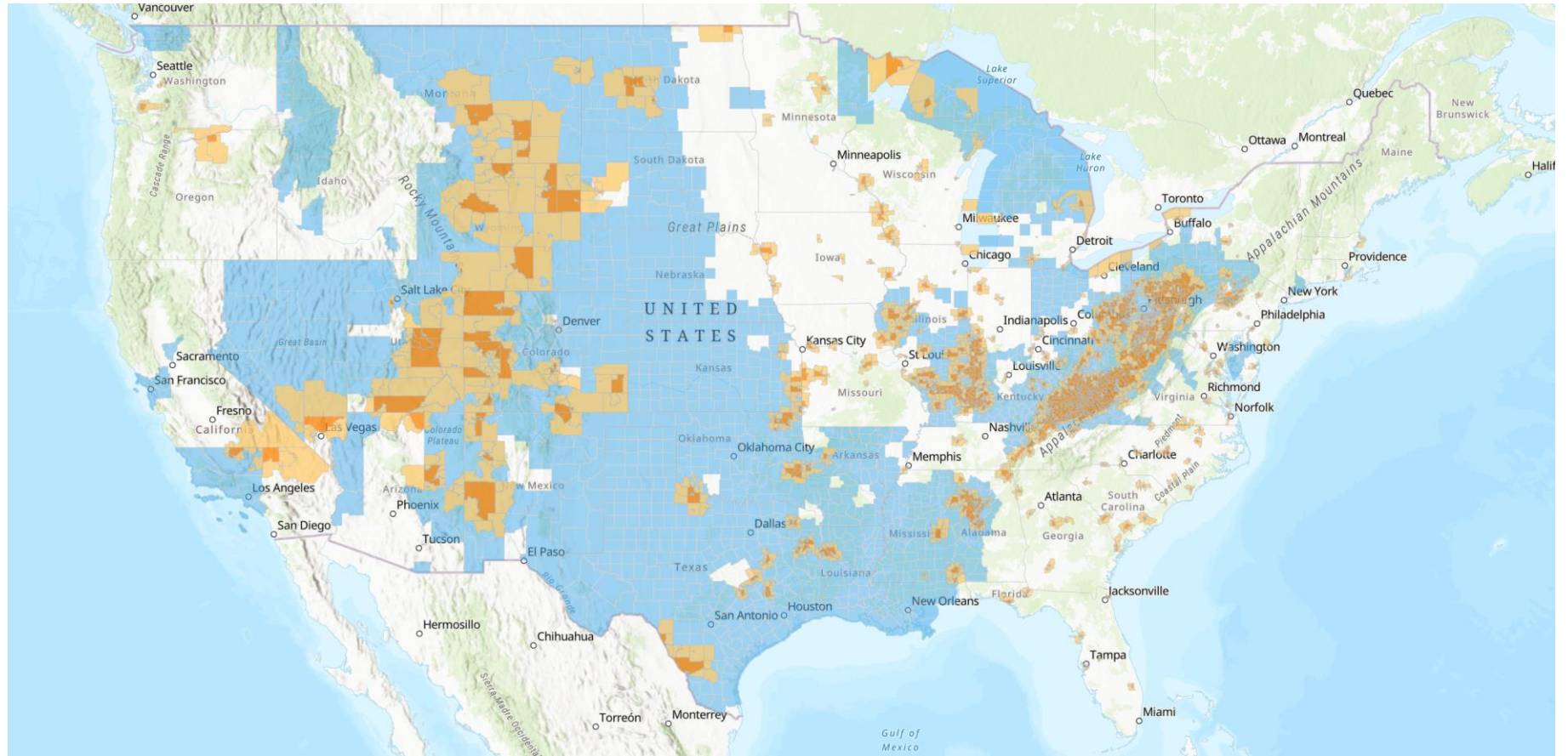
-  Census tract with a coal closure
-  Directly adjoins a tract with a coal closure

MSA/Non-MSAs that meet the Fossil Fuel Employment 0.17% Threshold

-  MSAs/non-MSAs that meet Fossil Fuel Employment (FFE) threshold of 0.17 percent

MSAs/non-MSAs that meet both the FFE threshold and the unemployment rate requirement (NOT YET DETERMINED)

-  MSAs/non-MSAs that meet both the FFE threshold and the unemployment rate requirement (NOT YET DETERMINED)



Awaiting overlay of unemployment rates on MSAs...

System Cost Basis

Geothermal Heat Pump Property

- ✓ equipment which uses the ground or ground water as a thermal energy source to heat a structure or as a thermal energy sink to cool a structure

IRS Capitalization Rules (Pub 946, Section 263)

- ✓ Includes direct costs associated with the purchase and installation of the property
- ✓ Includes indirect costs that may be fully or partially allocable to its construction (including taxes)

Interpretation since 2008

- ✓ Includes equipment such as GHXs or wells, piping, pumps, GHPs, ductwork and controls along with associated installation labor and materials.
- ✓ Also generally includes those portions of the electrical, plumbing, design and GC fees that are specific to the geothermal property

There have been no known IRS challenges or dissenting notices since 2008

Dual Use Property

Interpretations from 26 CFR § 1.48-9 Definition of Energy Property (1981)

Geothermal Property Includes

- ✓ Production equipment necessary to bring geothermal energy to the surface (*heat pump and upstream equipment*)
- ✓ Distribution equipment such as piping and ductwork that distribute the energy derived from the geothermal source within the building (*equipment downstream of heat pump*)

Dual Use Equipment

- ✓ Any equipment that uses energy derived both from a geothermal source and from other sources
- ✓ To be eligible for the ITC, any dual use equipment must receive at least 75% of its annual energy input from the geothermal source (*typically impacts only distribution equipment*)
- ✓ Even if eligible for the ITC, there is also a proportionate basis reduction for any dual use equipment
- ✓ Note that the annual energy input from other sources does not equate to the peak energy input from those sources

Supplemental heat rejection equipment is NOT an energy input

Third Party Ownership

Ownership Considerations

- ✓ Geothermal energy property ITC and depreciation deductions can only be claimed by the owner of the property

Limited Use Rules

- ✓ Any equipment that cannot be removed and that is dedicated to a single customer is considered “limited use”
- ✓ The IRS views the vendor of limited use property as a lender rather than a true owner for tax purposes
- ✓ The limited use rules apply to both leases or energy service arrangement

Geothermal property serving multiple customers can have true third-party owners

Beginning of Construction

➤ Relates to 1/29/2023 and Energy Community

- 5% Safe Harbor with Continuity Requirement or
- Physical Work Test with Continuity Requirement
 - Does **NOT** include preliminary activities: planning or designing, securing financing, exploring, researching, obtaining permits, licensing, conducting surveys, environmental and engineering studies, or clearing a site

Direct Pay

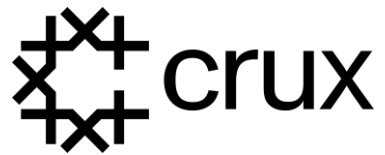
➤ Elective Payment of Applicable Credits-§6417 (2023-...)

- Some Gov't and Not-for-Profit can benefit from the credit
 - “(i) any organization exempt from the tax imposed by subtitle A,
 - “(ii) any State or political subdivision thereof, (**NOT FEDERAL PROJECTS**)
 - “(iii) the Tennessee Valley Authority,
 - “(iv) an Indian tribal government (as defined in § 30D(g)(9)),
 - “(v) any Alaska Native Corporation (as defined in section 3 of the Alaska Native Claims Settlement Act (43 U.S.C. 1602(m)), or
 - “(vi) any corporation operating on a cooperative basis which is engaged in furnishing electric energy to persons in rural areas.
- **3 ways to avoid 10% Haircut** §48(a)(13) → (§45(b)(10))
 1. <1MW or
 2. Meets Domestic Content or
 3. Start of Construction prior to 1/1/24
 - » Otherwise, 90% (some exceptions exist)
- **Up to a 15% haircut for projects paid for with Tax-Exempt Bonds** §48(a)(4) → §45(b)(3)

Credit Transfer

➤ **Tax credit from commercial clients can be Transferred to other Commercial Clients- §6418 (2023-...)**

- If credit receiver does not have tax capacity, they can sell the credit to a taxpayer that does
- This does **NOT** allow Gov't Buildings/Not-for-Profits to sell the credit
- Markets will be created



EPCAct 179D Overview

➤ **Tax Deduction for Lighting, HVAC, Building Envelope Projects**

- Deduction level depends on building energy efficiency and project scope
- Both new construction and retrofit projects can qualify
- For commercial buildings, projects since 1/1/2006 are eligible

➤ **EPCAct 179D for Design Firms**

- Design firms include architects, engineers, ESCOs, design & build firms, systems designers
- Designers can take the deduction for tax exempt buildings
- Designers can take 179D deduction for projects completed in prior 3 years

EAct 179D Updates (Inflation Reduction Act of 2022)

- **Changes go into effect on 1/1/2023**
- **Includes buildings owned by not-for-profits, instrumentalities, and Indian Tribal Governments**
 - Deduction can be taken by designers of these buildings
- **New deduction levels to replace current levels**
 - \$2.50-\$5.00 per square foot for projects meeting prevailing wage and apprenticeship labor requirements
 - \$0.50-\$1.00 per square foot if prevailing wage requirements not met
 - Overall building energy efficiency must be 25%-50% more efficient than standard to get the above levels (sliding scale)
 - No more individual system deductions (lighting/HVAC/envelope) → entire building must qualify
- **Two Methods for Taking EAct 179D Deduction**
 - Energy model the entire building (building energy usage compared to ASHRAE 90.1 2007)
 - RETROFITS: can elect 'energy use intensity' reduction study (building energy usage compared to prior state of building)
- **Deduction Reset**
 - Commercial buildings – every 3 years
 - Government & Tax Exempt buildings – every 4 years

Prevailing Wage Requirement For 5x Bonus & 179D (IRS Notice 2022-61)

- **Prevailing wages can be found at www.sam.gov**
- **Wage Determination for Unlisted Categories, IRAprevailingwage@dol.gov**
 - the type of facility,
 - facility location,
 - proposed labor classifications,
 - proposed prevailing wage rates,
 - job descriptions and duties, and
 - any rationale for the proposed classifications
- **Records required (Taxpayer's employees, contractors and subcontractors)**
 - identifying the applicable wage determination,
 - the laborers and mechanics who performed construction work on the facility,
 - the classifications of work they performed,
 - Apprentice/Journeyworker
 - Hours worked in each classification,
 - And the wage rates paid for the work and fringe benefits.

Apprenticeship Requirement For 5x Bonus & 179D (IRS Notice 2022-61)

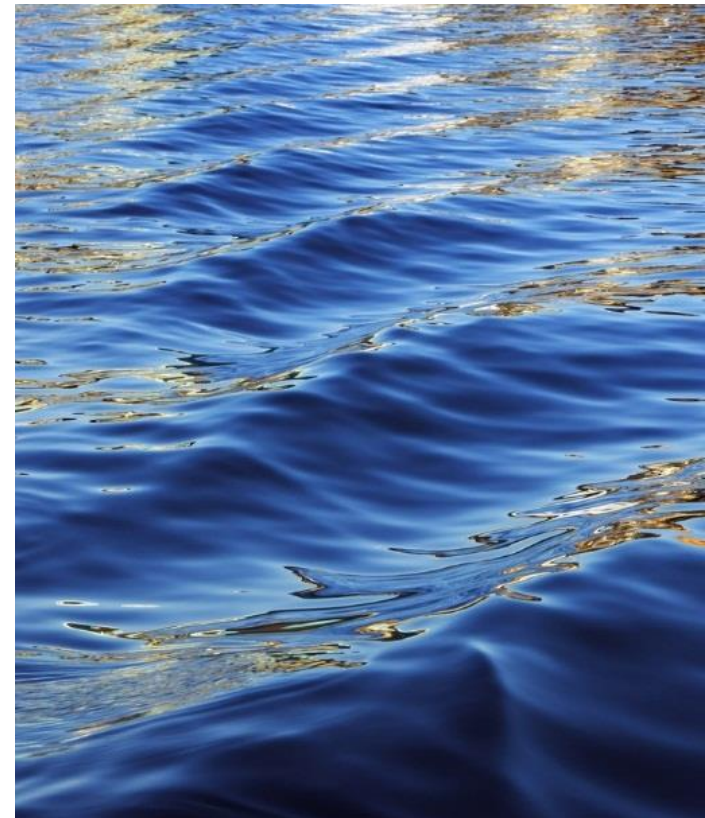
Projects Started:	Apprentices make up:
Before 1/1/2023	Exempt from Requirement
In 2023 1/29/23 and later	12.5% of Total Labor Hours
After 12/31/2023	15% of Total Labor Hours

- If a project has 4 or more workers, at least 1 is required to be an Apprentice
- Apprentice-to-Journeyworker ratio must be met DAILY
- Apprentice must be part of a registered apprenticeship program (3131(e)(3)(B))
- Good Faith Effort Exception
 - The taxpayer requests qualified apprentices from a registered apprenticeship program in accordance with usual and customary business practices for registered apprenticeship programs in a particular industry.
 - The taxpayer must maintain sufficient books and records establishing the taxpayer's request of qualified apprentices from a registered apprenticeship program and the program's denial of such request or non-response to such request



Inflation Reduction Act

What We Know & What We Need To Know



A Very Long & Hard-Fought Campaign

- Special thanks to all involved (Fly In's)
- Lobbyist – Invariant & others
- Res. & Comm. Provisions for a decade
- Revolutionary & Game-Changing dialogue
- White House, Treasury & IRS

POLITICO

WHITE HOUSE

Biden signs sweeping climate and health care bill into law



Why do people say clear as mud?

Is clear as mud a metaphor?

- (simile) Unclear, difficult, or impossible to understand or interpret.
- very difficult to understand
- informal. : very difficult to understand : not clear at all. The explanation was as clear as mud.

—Webster

We only have one option..... DIG IN and Get Dirty!

Construction Materials: Domestic Content Bonus Credit – Two Tier

Domestic Steel, Iron & Manufactured Products

- **10%** (projects that either meet prevailing wage/apprenticeship requirements)

OR

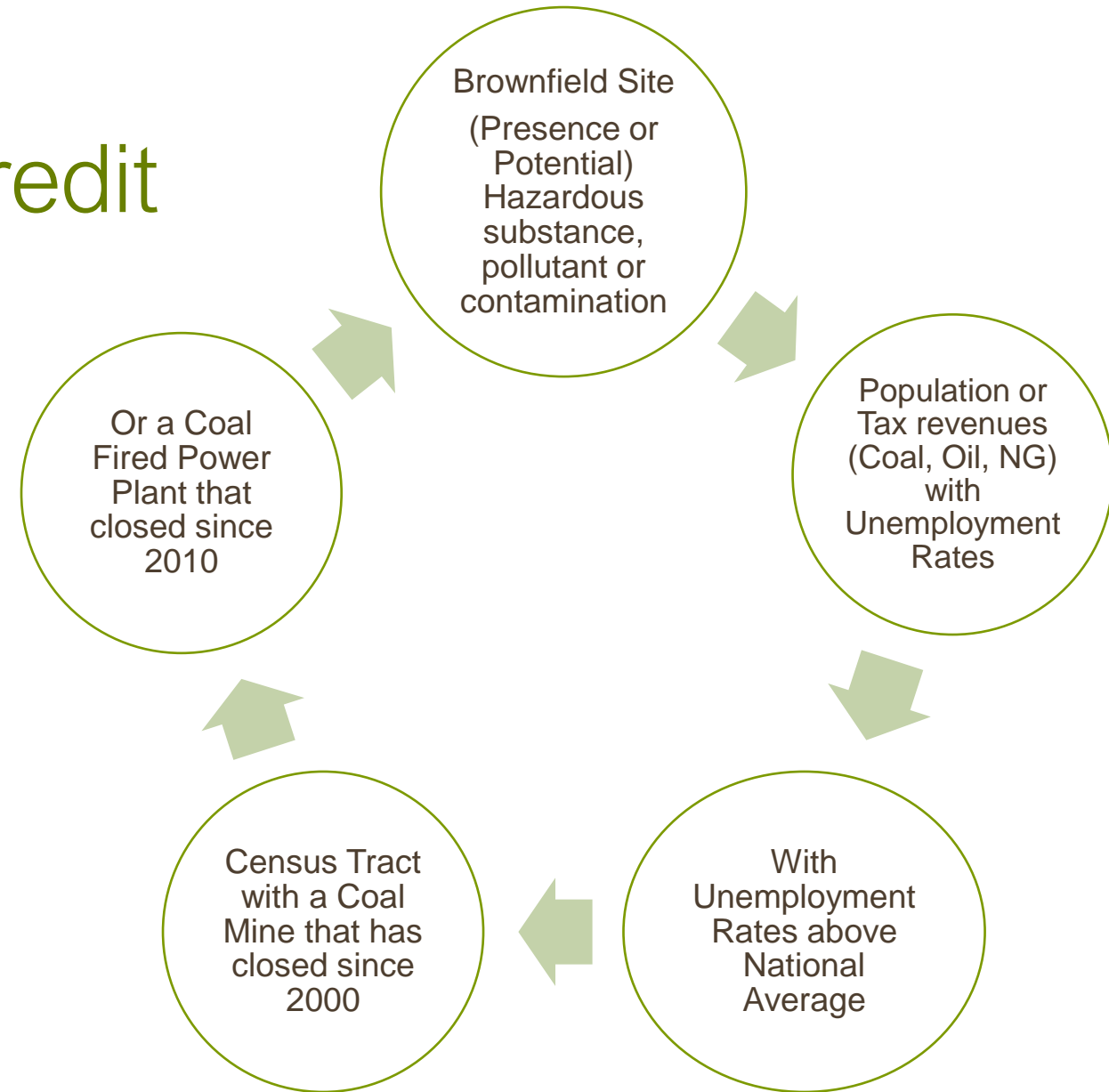
- Under 1 MW of Electric or Thermal Energy

***2%** (Projects over 1MW that don't meet prevailing wage or apprenticeship requirements)

% Dom.Content	Year
40%	Before 2025
45% of project	Begin in 2025
50% of Project	Begin in 2026
55% Domestic Content of Project that begin thereafter	

Additional 10% Bonus Credit

- Or 2% for Projects over 1MW that don't meet prevailing wage / apprenticeship requirements.



Snapshot of our Domestic Content

– Min. Threshold 40%

<u>US</u>	<u>62.87%</u>
Canada	3.28%
Mexico	9.45%
Other	24.40%
Total	100.00%

Derived from limited information & further Treasury/IRS clarification required



We Have All The
Runway That We
Need!

Seeking Clarity & Consistency





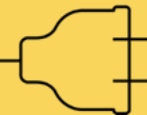
Thank you!

Tim Wright
Chief Strategy Officer, Enertech Global

Understanding the Inflation Reduction Act of 2022

For NY-GEO

April 27th, 2023



REWIRING
AMERICA


The Inflation Reduction Act will jumpstart the electrification movement.

The IRA leverages rebates, tax credits, low-cost financing, and domestic manufacturing incentives to lower costs and increase adoption of:

- Heat pumps, heat pump clothes dryers, electric stoves, and upgraded panels;
- Electric vehicles; and
- Solar and storage.

At the same time, it offers powerful incentives for the continued decarbonization of our electricity supply.






**The Inflation
Reduction Act:
Consumer
Rebates**

Home Electrification Rebates (formerly known as HEEHRA)

- \$4.5B through FY2031
- Point-of-sale rebates up to \$14,000 for LMI households that install new, electric qualified electrification projects (QEPs)
- Project costs covered:
 - 100% for households <80% AMI
 - 50% for households 80-150% AMI
- Max QEP rebate levels:
 - \$8,000 for heat pumps
 - \$1,750 for heat pump water heaters
 - \$840 for heat pump clothes dryers
 - \$840 for electric or induction stoves
 - \$4,000 for electrical panel upgrades
 - \$2,500 for rewiring
 - \$1,600 for basic weatherization
- Multifamily buildings also qualify if ≥50% of occupants are LMI
- Contractors can receive up to a \$500 incentive
- Value of the rebate must be passed onto the consumer
- Administered by State energy offices & Tribes

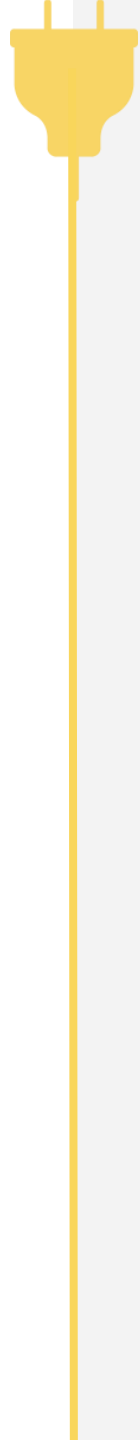


**The Inflation
Reduction Act:
Consumer
Rebates**

Home Efficiency Rebates (formerly known as HOMES)

- \$4.3B through FY2031*
- Rebates for energy-saving retrofits of at least 15%
 - Retrofits can include heat pumps and electrification
- Rebate amounts tied to energy savings
 - Modeled energy savings pathway
 - \$8,000 cap / 80% coverage for LMI households (<80% AMI)
 - \$4,000 cap / 50% coverage otherwise
 - Measured energy savings pathway: rebates are uncapped
- Multifamily buildings also qualify
- No point-of-sale requirement
- No requirement to pass rebates onto the consumer
- No set-aside or requirement to serve low-income households
- \$200 contractor incentive for projects in disadvantaged communities
- Administered by State energy offices & Tribes

*Plus an additional \$200M for workforce development




The Inflation Reduction Act: Additional Buildings Incentives

Improving Energy Efficiency or Water Efficiency or Climate Resilience of Affordable Housing (f.k.a. GREAHT)

- \$1B through FY2028, with authority to subsidize up to \$4B of loans
- Grants and loans to:
 - Improve energy or water efficiency
 - Improve indoor air quality
 - Install low-emission technologies, including zero-emission electricity generation, energy storage, and building electrification
- Funding designated for private affordable housing and federally subsidized housing (including Section 8)

Assistance for Latest and Zero Building Energy Code Adoption


- \$1B through FY2029
- Administered to states and local governments
- Purpose: to adopt and enforce residential/commercial building codes
 - Plans shall include “active training and enforcement programs” to “achieve full compliance with any building energy code adopted”



**The Inflation
Reduction Act:
Low-Cost
Financing**

Greenhouse Gas Reduction Fund

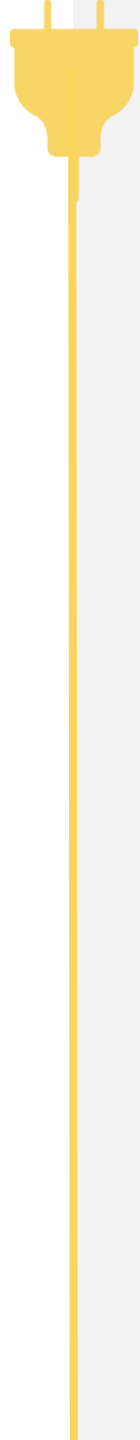
- EPA must disburse by Sept 30, 2024
- Qualified projects can range from electrification, energy efficiency, renewable energy such as rooftop solar and geothermal, and resiliency investments
- [Initial guidance](#) released in Feb
- [Implementation framework](#) released April 19, 2023
 - Comments on the framework due May 12, 2023
- Objectives
 - Reduce emissions of greenhouse gases and other air pollutants
 - Deliver benefits of greenhouse gas- and air pollution-reducing projects to American communities, particularly low-income and disadvantaged communities.
 - Mobilize financing and private capital to stimulate additional deployment of greenhouse gas- and air pollution-reducing projects



**The Inflation
Reduction Act:
Low-Cost
Financing**

Greenhouse Gas Reduction Fund

- \$14B for the **National Clean Investment Fund** program
 - 2-3 awards to national nonprofits “that will partner with private capital providers to deliver financing at scale to businesses, communities, community lenders, and others, catalyzing tens of thousands of clean technology projects to accelerate our progress towards energy independence and a net-zero economic future”
 - Justice40 covered program
- \$6 billion for the **Clean Communities Investment Accelerator**
 - 2-7 awards to “hub nonprofits” to “rapidly build the clean financing capacity of specific networks of public, quasi-public and non-profit community lenders.”
 - Includes CDFIs, credit unions, green banks, housing finance agencies, minority depository institutions, and others.
 - All funding must be spent in low-income and disadvantaged communities
- \$7 billion for the Solar for All program
 - Up to 60 grants to states, Tribal governments, municipalities, and nonprofits to deploy residential and community solar, storage, and enabling upgrades in LI/DAC
 - All funding must be spent in low-income and disadvantaged communities



The Inflation Reduction Act: Environmental Justice Grants

Climate Pollution Reduction Grants


- \$5B through FY2026
 - \$4.75B implementation grants and \$250M in planning grants
- Planning grants to at least one entity in each state; implementation grants are competitive
- Grants for programs that will achieve or facilitate the reduction of greenhouse gas air pollution

Environmental And Climate Justice Block Grants

- \$3B through FY2026
- Competitive grants to local governments, Tribes, and community-based nonprofits in disadvantaged communities
- Potential uses include investments in zero-emission technologies and related infrastructure and workforce development

Funding to Address Air Pollution in Schools

- \$50M through FY2031
 - \$37.5M for financial assistance
 - \$12.5M for technical assistance
- Activities to monitor or reduce air pollution and greenhouse gases in schools in low-income and disadvantaged communities



The Inflation Reduction Act: Indigenous and Tribal Communities

Tribal Electrification Program

- \$150M through FY2031
- Providing electricity to unelectrified homes through zero-emissions energy systems
- Transitioning electrified Tribal homes to zero-emissions energy systems
- Associated home repairs and retrofits necessary for installation of zero-emissions energy systems

Tribal Climate Resilience

- \$235M through FY 2031
- Tribal climate resilience and adaptation activities
- Fish hatchery operations and maintenance

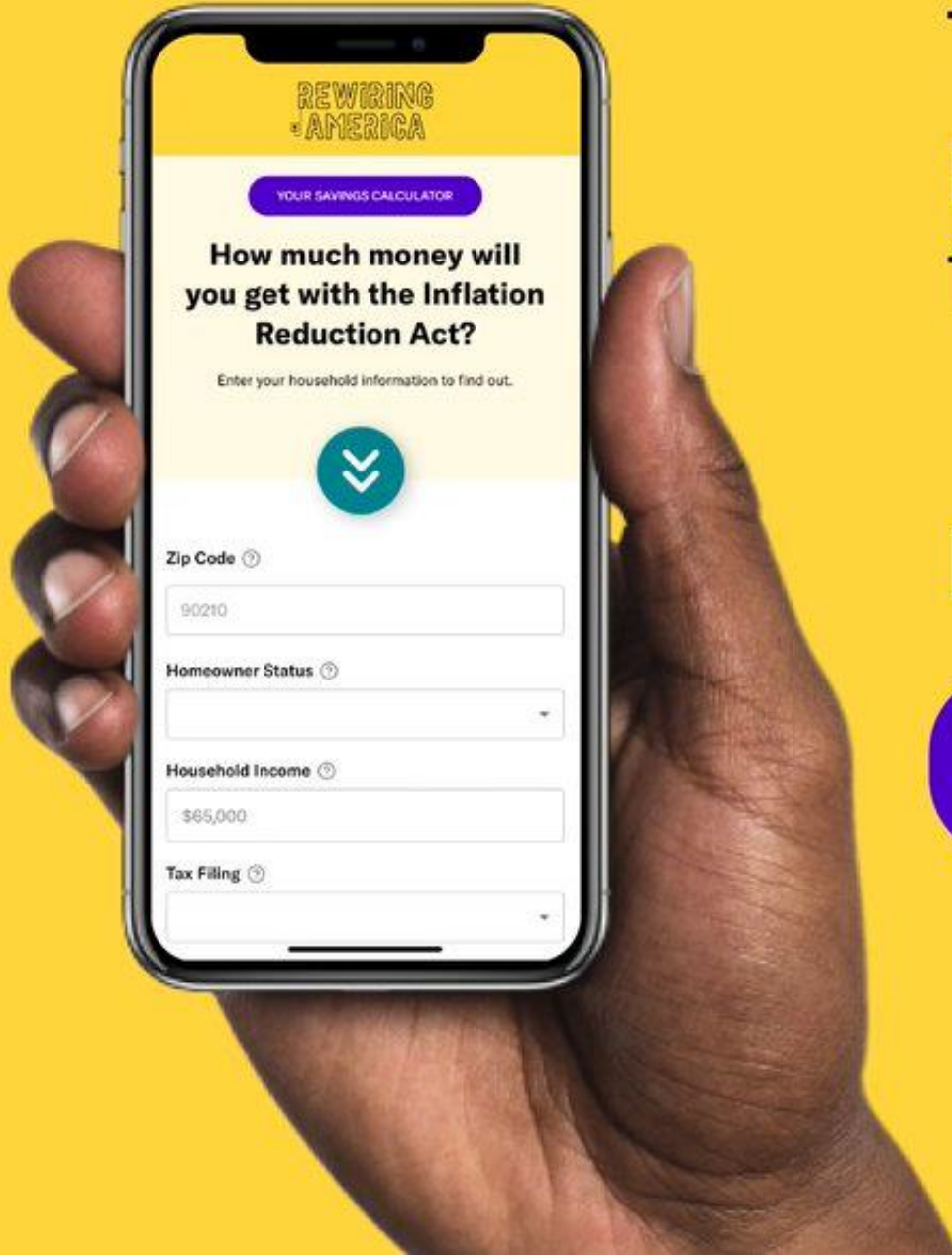
Native Hawaiian Climate Resilience and Adaptation

- \$25M through 2031
- Climate resilience and adaptation activities through financial assistance, technical assistance, direct expenditures, grants, contracts or cooperative agreements

The Inflation Reduction Act provides thousands of dollars for households to go electric.

How much will you get?

TRY OUR CALCULATOR!



**REWIRING
AMERICA**