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Maximizing Impact from the Inflation Reduction Act

Opportunities for Pennsylvania

*Prepared with support from **The Heinz Endowments***

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Introduction

About this Resource

Background

In partnership with the **Pittsburgh Foundation**, the **Heinz Endowments** engaged **Freedman Consulting LLC's What Works Plus** team to develop *Maximizing Impact from the Inflation Reduction Act: Opportunities for Pennsylvania*. The resource serves as **a primer for Pennsylvania's state and local elected officials about the Inflation Reduction Act (IRA)**; key opportunities, needs, barriers, models, case studies, and organizations related to its implementation in the Commonwealth; and roles that elected officials can play in maximizing the legislation's impact.

Methodology

Results were synthesized from diverse sources and perspectives in Pennsylvania and the national landscape of federal funding, including:

- Interviews with Pennsylvania stakeholders across philanthropy, nonprofits, and government who are involved in IRA implementation and related sectors, including renewables and energy efficiency
 - Research on the Inflation Reduction Act's funding streams and provisions
 - Supplemental research on relevant opportunities, needs, barriers, best practices, case studies, and organizations
 - What Works Plus knowledge of the federal funding implementation landscape, including philanthropic and nonprofit efforts
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Acknowledgments

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Executive Summary

The **Inflation Reduction Act (IRA)** is the United States' **most significant investment in clean energy and climate**. Through tax credits, grants, loans, and cooperative agreements, it invests **~\$400 billion** in energy, industry & manufacturing, the environment, buildings, agriculture, transportation, and water.

If implemented well, the IRA can bring significant benefits to Pennsylvania through economic investment, job creation, workforce development, consumer savings, pollution reduction, and health. The IRA is designed to help drive investment to Pennsylvania's rural, low-income, and energy communities.

While Pennsylvania is already seeing emerging IRA initiatives and results, it is significantly lagging other states. States such as New York, Michigan, and Georgia have each seen tens of billions in private sector investment and thousands of private sector jobs since the IRA's passage. Pennsylvania has seen only \$200M in private sector investment and fewer than 500 private sector jobs.

By acting now, Pennsylvania's leaders can significantly improve the Commonwealth's trajectory for clean energy investment, jobs, and other IRA benefits. States across the country are creating initiatives that can serve as models for Pennsylvania as it seeks to help add incentives, help communities access IRA funds, expand state agency capacity, and more.

To advance implementation, elected officials can:

Legislate

Consider policies such as **increased funding for state and local agencies** responsible for implementing key IRA funding streams; **additional state-level incentives and funds** for clean energy projects; and **increased flexibility for the Whole Home Repair program** to cover administrative and capacity costs.

Coordinate & Convene

Bring key stakeholders together to discuss IRA opportunities, barriers, and needs; help Pennsylvania's implementing organizations and philanthropies **work across regions; engage in application and implementation processes** for key IRA funding streams; and **help expand partnerships with and ensure coordination among philanthropic collaboratives** and connect national-level philanthropies to key organizations and individuals;

Educate

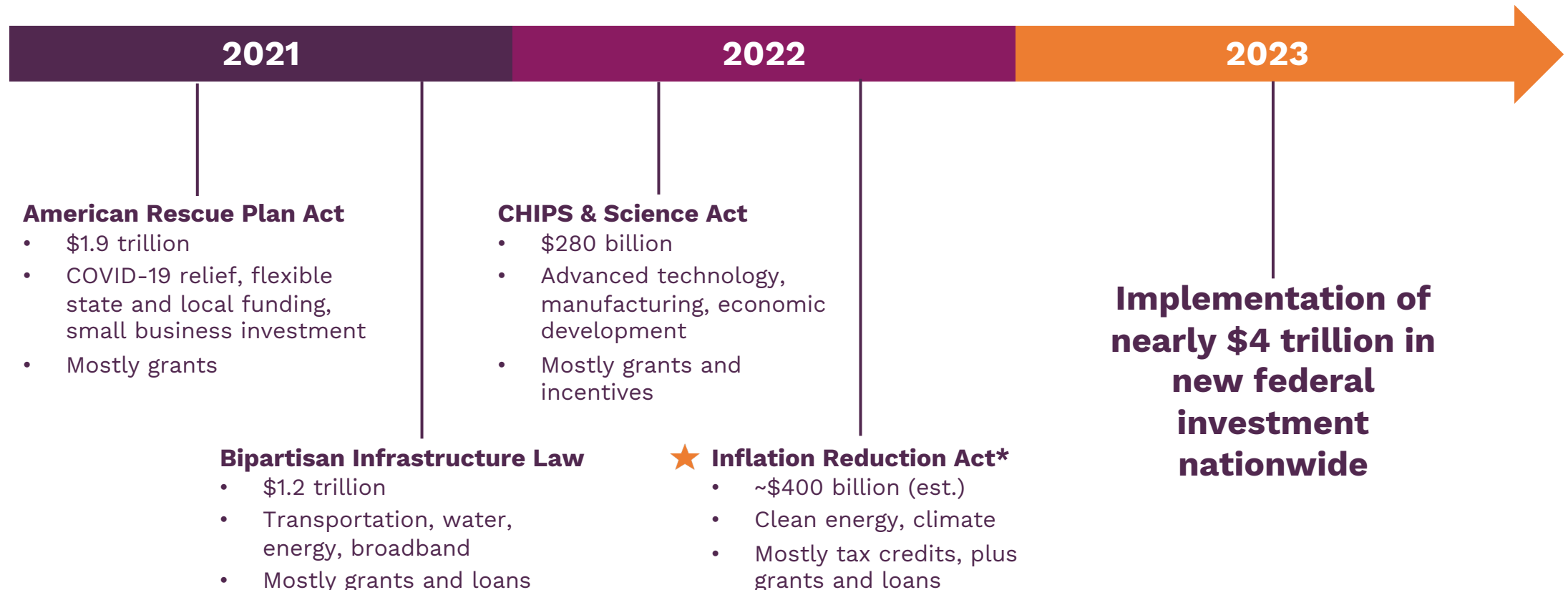
Help federal officials create **more accessible funding processes; share examples** of IRA-supported projects and initiatives; **inform local businesses, nonprofits, individuals, and others** about available IRA programs and how to access them; and **advise entities on how to be most competitive** when applying for federal fund.



The Inflation Reduction Act at a Glance

The Inflation Reduction Act: Part of an Historic Federal Investment

Passed in August 2022, the Inflation Reduction Act (IRA) is the **United States' most significant investment in clean energy and climate to date**. It's the latest in a suite of historic federal investments across climate, infrastructure, industry, and economic development.



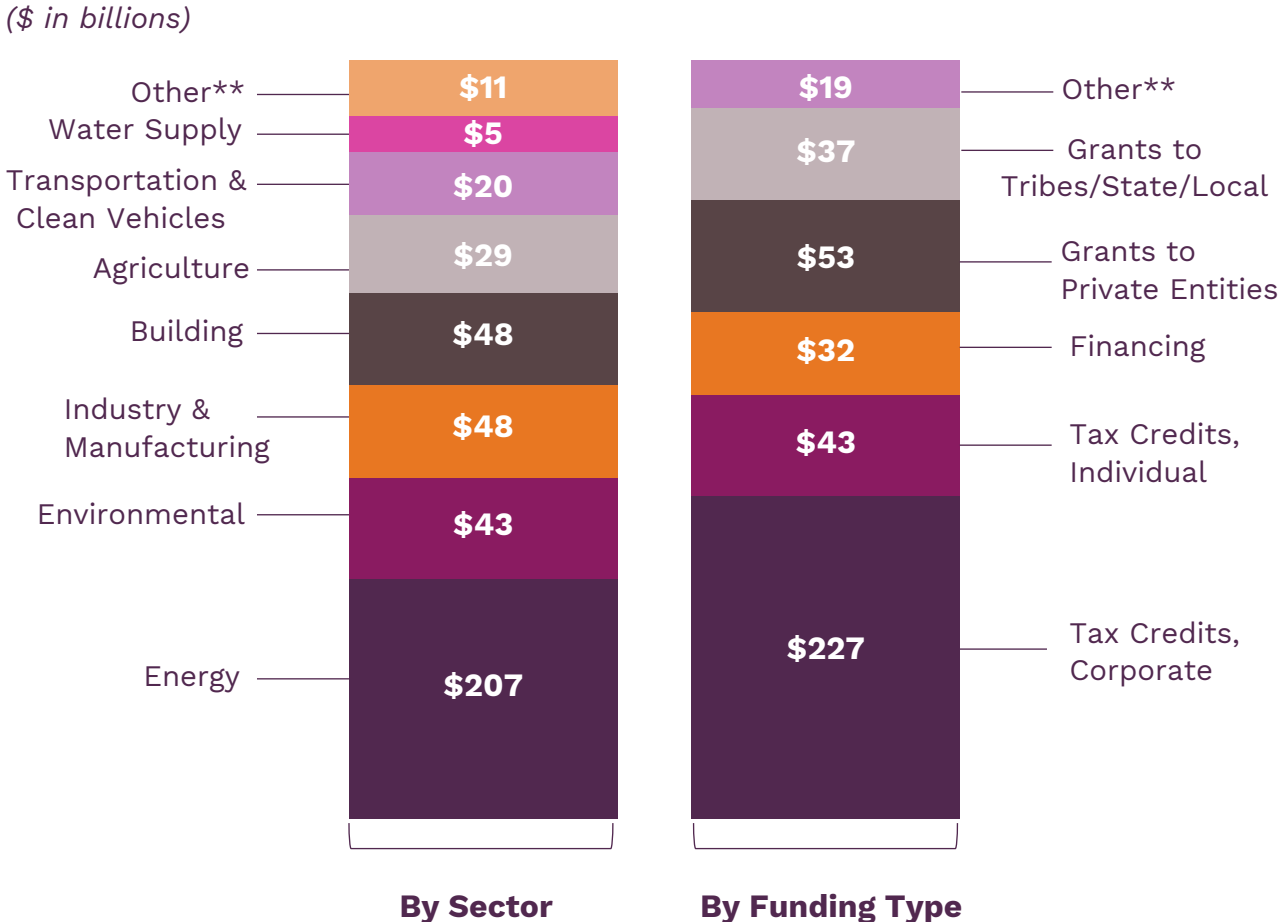
*The Inflation Reduction Act also includes significant provisions related to prescription drug prices and federal tax policy and administration. This resource does not address those provisions because they do not include direct investments available to entities in Pennsylvania, nor do they have a direct role for these entities to play.

Overview of IRA Funding

Summary

- What:** The IRA directs **~\$400 billion in new federal spending nationwide** to catalyze domestic energy product, increase domestic manufacturing capacity, encourage procurement of critical supplies domestically or from free-trade partners, and jump-start the expansion, R&D, and commercialization of leading-edge clean energy technologies across various sectors.*
- How:** Funding mechanisms for the IRA include **tax credits, grants, and loans**, featuring key provisions like **direct pay and stackable bonus credits** that expand eligibility and enhance financial incentives for certain activities. For many programs, states are eligible to apply directly or can partner with local governments and the private sector to maximize benefits for their communities.
- Who:** Entities eligible for funding include **states, local governments, nonprofits, businesses, consumers, households, higher education institutions, and tribal governments.**

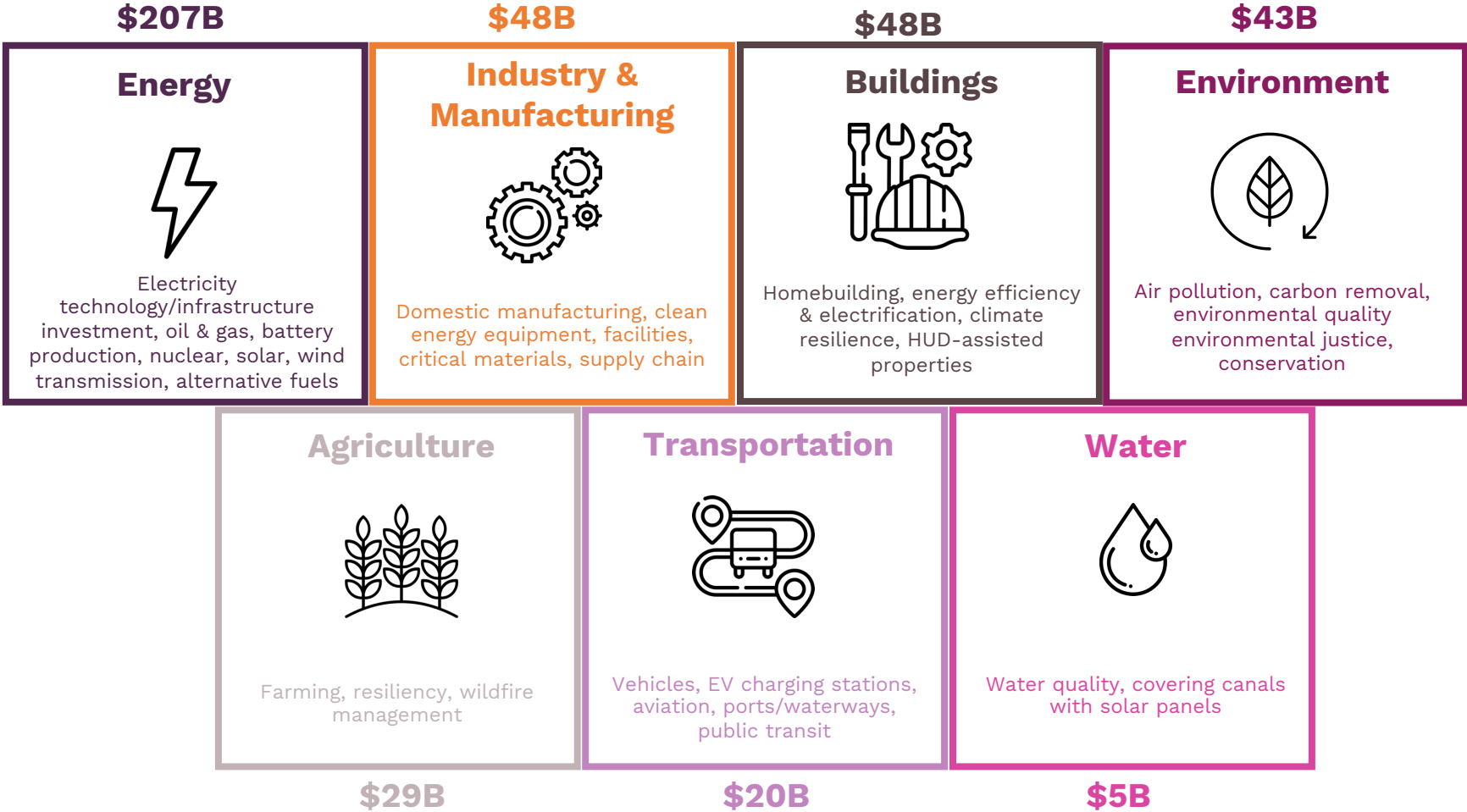
~\$400 Billion in National IRA Funding by Sector & Funding Type



Source: C40 Cities Climate Leadership Group Inc
 *The Inflation Reduction Act also includes significant provisions related to prescription drug prices and federal tax policy and administration. This resource does not address those provisions because they do not include direct investments available to entities in Pennsylvania, nor do they have a direct role for these entities to play.
 **Other includes funding for federal operations.

IRA Sectors Supported

Nationally, the IRA supports a wide variety of sectors and sub-sectors with clean electricity, transmission, and clean transportation programs commanding the biggest slices of funding. (Amounts are for *total* IRA funding, not only funding in Pennsylvania.)



Notes: Many IRA programs are cut across multiple sectors (see cross-cutting programs in appendix) including place-based and data & research focused programs.

IRA Funding Mechanisms

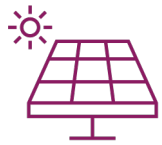
IRA funds will be delivered through a mix of tax incentives, grants, loans, and cooperative agreements.

	Overview	Highlights
Tax Credits	<ul style="list-style-type: none"> • Largest funding mechanism in the IRA primarily coming from investment tax credits (ITC) and production tax credits (PTC) available to businesses, individuals, and tax-exempt entities • Introduced novel funding mechanisms and provisions such as direct pay, bonus credits, and stackability that have increased the pool of eligible recipients and massively amplifies money received via incentive-based structures 	<ul style="list-style-type: none"> • PTC and ITC tax credits are structured to incentive investment in disadvantaged communities and job creation including additional bonuses for wind and solar projects in low-income communities
Grants	<ul style="list-style-type: none"> • Grants provide government funding to stakeholders that are not expected to be paid back and come in subtypes that include (i) non-competitive grants awarded to state and local governments often utilizing a “formula” to determine size and eligibility (ii) competitive grants awarded by federal agencies via application processes to eligible entities (e.g., implementation grants) and (iii) rebates processed after a transaction is complete 	<ul style="list-style-type: none"> • The EPA’s \$27B Greenhouse Gas Reduction Fund will award competitive grants to projects reducing greenhouse gas emissions with an emphasis on low income and disadvantaged communities across the country
Loans	<ul style="list-style-type: none"> • Basic loans offering flexible financing options to support critical clean energy, manufacturing and clean vehicle projects will largely be administered through the Department of Energy’s Loan Programs Office (DOE’s LPO) • DOE’s LPO may also provide loan guarantees to protect lenders from potential borrower defaults, expanding financing for riskier innovation projects 	<ul style="list-style-type: none"> • DOE’s LPO has \$40B in loan authority and \$3.6B in credit subsidy for loan guarantees for clean energy projects nationwide including renewables, carbon capture, nuclear, critical minerals processing, and manufacturing, & recycling
Cooperative Agreements	<ul style="list-style-type: none"> • While similar to grants, cooperative agreements differ in that they provide substantial involvement between the federal awarding agency or pass-through entity and the non-federal entity in carrying out the purpose of the agreement 	<ul style="list-style-type: none"> • \$5.8B Advanced Industrial Facilities Deployment Program to support projects that reduce greenhouse gas emissions through installation and implementation of advanced industrial technologies

Key Provision: Direct Pay

Direct pay (also called "elective pay") allows tax-exempt entities — local governments, state governments, rural electric cooperatives, territories, Tribal nations, and nonprofits — to receive the full value of 12 IRA tax credits. Funds are available on a non-competitive basis and can be accessed by filing tax returns with the IRS.

Example projects:



Generating clean electricity through solar, wind, and battery storage



Building community solar projects that bring clean energy to neighborhoods



Installing electric vehicle charging infrastructure



Purchasing clean vehicles for state or city vehicle fleets

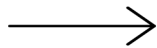
How to use direct pay:



STEP 1

Identify a project that qualifies for direct pay

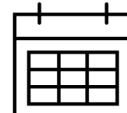
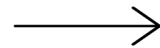
For example: A school district wants a new zero-emission vehicle fleet



STEP 2

Complete the project and put it into service

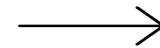
The district buys zero-emission vehicles, which come online in 2024



STEP 3

Determine what tax year to use and when the tax return is due

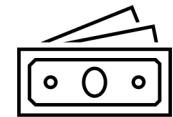
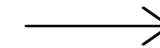
The district puts its purchase on its 2024 return, due on April 15, 2025



STEP 4

Register with the IRS before the tax return is due and filed

Before filing the return, the district registers its project with the IRS



STEP 5

File the tax return using the registration number by due date and **receive \$\$**

The district files its return by April 15, 2025 and receives up to \$40,000 in credits

Key Provision: Bonus Credits

Bonus credits can be applied to some of the IRA’s base tax credits for clean energy projects that meet goals related to workforce, labor, priority communities, and domestic industries. The appendix lists which bonus credits can be applied to each base credit.

Bonus Credit	Eligible Projects	Maximum Bonus Amount
Registered Apprenticeship	Projects that employ apprentices from registered apprenticeship programs for a certain number of hours	Up to 5 times base credit*
Prevailing Wage	Projects that pay laborers and mechanics employed in construction, alteration, or repair at least the prevailing wage rate in their area	Up to 5 times base credit*
Domestic Content	Facilities built using required amounts of domestically produced steel, iron, and manufactured products	10 percent or 10 percentage points , depending on base credit**
Low Income or Tribal Communities	Facilities in low-income communities and tribal communities , including facilities that are part of affordable housing developments or benefit low-income households	10 percentage points or 20 percentage points** (if part of LI residential buildings or providing service to LI households)
Energy Communities	Projects located in communities historically dependent on fossil energy jobs and tax revenues , including areas with closed coal mines or coal-fired power plants, and on brownfields	10 percent or 10 percentage points , depending on base credit**

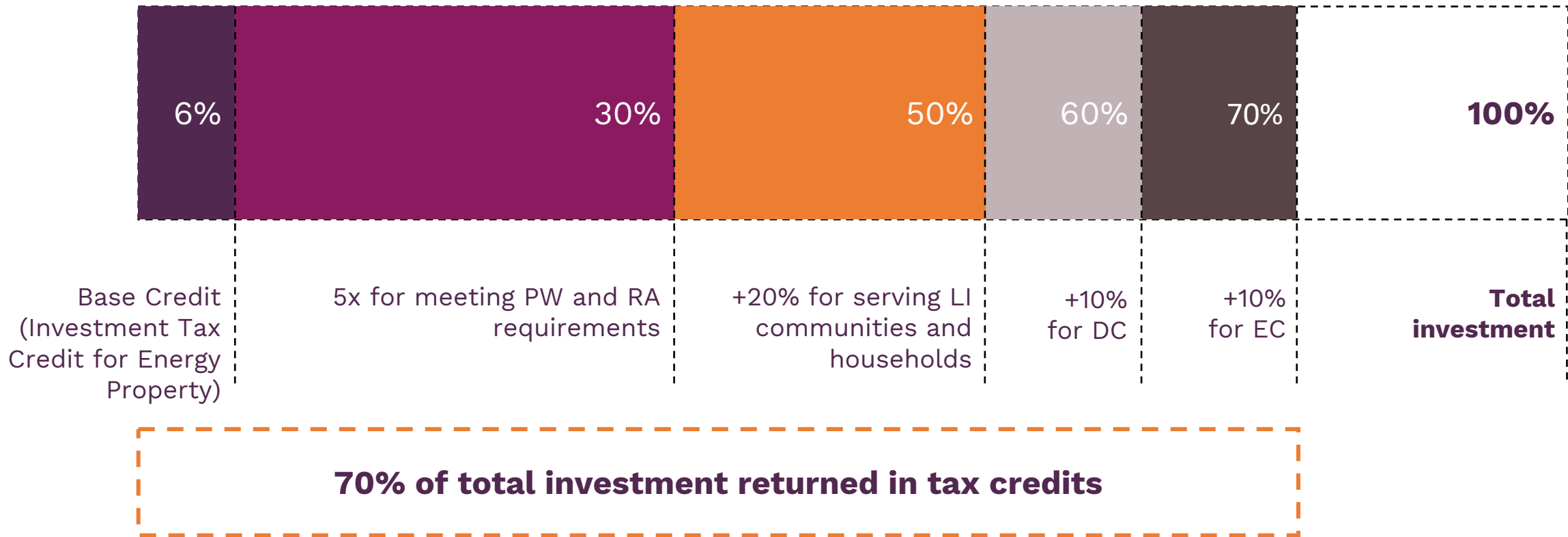
*Most (but not all) tax credits eligible for RA and PW bonus credits must meet both bonus credits’ requirements at the same time, resulting in a total of 5 times the base credit for both bonuses combined.

**There is a difference between percent and percentage point increases; a 10 percentage point increase is worth more than a 10% increase.

Bonus Credits
 RA = Registered Apprenticeship
 PW = Prevailing Wage
 DC = Domestic Content
 LI = Low Income or Tribal Communities
 EC = Energy Communities

Key Provision: Stackability




The IRA's bonus credits are **stackable** for certain base credits, meaning that they can be combined with one another. This allows projects to massively amplify the amount of money they receive. At the high end, some small-scale solar and wind projects claiming the IRA's Investment Tax Credit for Energy Property could qualify for all five bonus credits and receive 70% of the total investment back in tax credits.*



*Eligibility depends on the project type and specifics. Most of the IRA's base credits only are not eligible for multiple bonus credits.

Example Projects Eligible for IRA Tax Credits

The IRA’s tax credits, bonus credits, stackability, and direct pay provisions can support a virtually limitless array of projects. The following hypothetical examples, provided by the White House, all focus on entities eligible for direct pay.

	Project (Hypothetical)	Applicable IRA Benefits
Local Government	 The City of Vroomville buys a large electric garbage truck for municipal waste collection.	Through direct pay, the city can get up to 30% or \$40,000 , whichever is lower, of the cost of the truck back by using the Commercial Clean Vehicle Credit .
Rural Energy Cooperative	 The Geothermica Co-op is finishing construction of a geothermal well to provide electricity to a rural community.	Through direct pay, Geothermica can earn up to 2.75 cents per kilowatt-hour of electricity produced from the geothermal well using the Production Tax Credit . Because Geothermica Co-op is located in an energy community, it is also eligible for an additional 10% increase through the Energy Communities Bonus Tax Credit .
Nonprofit	 EcoRun, a 501(c)(3) nonprofit, has a large roof on its headquarters, and wants to install solar panels to supply electricity to the building.	Through direct pay, EcoRun can get up to 30% of the installation cost back under the Investment Tax Credit —or more if it is eligible for bonus credits.

Source: [White House](#)

Key Provisions for Grant & Loan Programs

Many of the IRA's grant and loan programs require applicants to **submit community benefits plans and/or meet cost share (matching funds) percentages**. These provisions create opportunities and challenges for Pennsylvania communities seeking to access IRA funds.



Community Benefits Plans

The Department of Energy (DOE) **requires Community Benefits Plans as part of applications** to all of the agency's IRA-funded programs.

A Community Benefits Plan is “**an agreement signed by community groups or coalitions and a project developer**, identifying the community or labor benefits a developer agrees to deliver in return for community support or workforce availability for a project” (DOE). Plans must show how the project will implement **Justice40** initiative goals.

Community coalitions include stakeholder groups that would be impacted by a project, including neighborhood associations, faith-based organizations, environmental groups, and labor unions.



Cost Share & Matching Funds

Most grant and loan programs **require non-federal funding sources** for a certain percentage of a project's total cost. This is known as a Cost Share or Matching Funds requirement.

Cost share requirements vary by program, but usually fall between **20-50%**. Often, applicants can meet cost share requirements through both cash and in-kind donations (e.g., volunteer time, equipment, supplies).

Cost share funds can come from project participants, philanthropy, state or local governments, or other sources of third-party financing.

Labor Protections

The IRA includes labor and workforce development standards. Some states are passing laws to go even further.

IRA's Labor & Workforce Training Provisions



The IRA contains important provisions to ensure the transition to a clean energy economy is built with **good-paying union jobs** for a growing number of Americans.

To obtain most of the IRA's enhanced tax benefits for clean energy projects, **companies must hire registered apprentices and pay workers prevailing wages.**

- For example, the investment tax credit is worth 30% of the cost of a clean energy project that meets labor standards. The credit drops to 6% if the project doesn't meet the standards.

State Actions to Ensure Clean Energy Job Quality



In recent years, states like **California, Connecticut, Illinois,** and **New York** have **passed laws that pair renewable-energy goals with wage requirements and labor standards.**

Since the passage of the IRA, some states have been **working closely with unions and environmental groups to pass laws that will build on and enhance the IRA's workforce provisions.**

- For example, in September 2023, **Maine's Governor Mills signed into law legislation mandating a suite of labor standards for offshore wind development** that 1) requires that all work happen at collectively bargained rates, 2) bans the use of independent contractors and temp staffing agencies, and 3) prioritizes jobs for residents of Maine and the region.









Considerations for Pennsylvania

The IRA's Potential for Pennsylvania

With ~\$400 billion in new federal spending nationwide, the IRA can bring transformative outcomes for Pennsylvanians across the Commonwealth.

The IRA:

 <p>Economic Investment</p>	<ul style="list-style-type: none">• Could invest up to \$28 billion in Pennsylvania – ~\$2,100 per capita – by 2030 and provides extra incentives for projects utilizing American steel and iron, located in energy communities, or serving low-income communities• Will fund energy efficient building improvements to help renovate Pennsylvania's old housing stock
 <p>Job Creation</p>	<ul style="list-style-type: none">• Could create up to 21,240 new jobs annually in Pennsylvania and includes extra incentives for projects that pay a prevailing wage• Can help Pennsylvania's 1.1M small businesses save money through tax credits that promote energy efficiency
 <p>Workforce Development</p>	<ul style="list-style-type: none">• Includes extra incentives for projects utilizing registered apprenticeships• Led Pennsylvania to create the Commonwealth Workforce Transformation Program – the first of its kind in the nation – which provides up to \$40,000/worker trained for IRA-funded projects
 <p>Consumer Savings</p>	<ul style="list-style-type: none">• Provides \$259.2M in rebates to help Pennsylvania households afford energy efficient retrofits and appliances and tax credits covering 30% of the cost of solar panels, heating and cooling upgrades, and more• Could help up to 610,000 households install rooftop solar panels due to the IRA's new tax credits
 <p>Pollution Reduction</p>	<ul style="list-style-type: none">• Provides at least \$33.7M in grants to help Pennsylvania reduce methane emissions from oil and gas wells• Makes environmental justice investments that can reduce pollution exposure for the 26% of Black Americans and 29% of Hispanic Americans who live within three miles of significant pollution in Pennsylvania
 <p>Health</p>	<ul style="list-style-type: none">• Could help avoid up to 97,000 negative health outcomes in Pennsylvania – including death – by 2030• Will aid Pennsylvania's transition to zero emissions, which could result in public health benefits valued at \$86.8 billion, avoid 7,940 deaths, and avoid 148,000 asthma attacks

An Opportunity for Pennsylvania's Priority Communities

Beyond investments that can benefit Pennsylvania as a whole, the **IRA is designed to drive investment and opportunities for Pennsylvania's rural, low-income, and energy communities in particular.**



Rural Communities

Highlights:

The **Empowering Rural America Program (ERA)** can help rural PA transition to clean energy through a combination of grants and loans available to rural electric cooperatives.

The **Powering Affordable Clean Energy (PACE)** Program provides loans to renewable energy developers and electric service providers to finance and support renewable energy systems in rural communities.



Low-Income Communities

Highlights:

A **10-20% bonus tax credit for small-scale solar and wind projects** benefitting low-income communities can help drive investments to PA's historically disadvantaged places.

Clean energy financing from the **Greenhouse Gas Reduction Fund** can help deliver lower energy costs and economic revitalization for low-income communities.



Energy Communities

Highlights:

A **10% bonus tax credit for clean energy production and investment in energy communities** can help drive investment to places impacted by the fossil fuel transition.

The **Advanced Energy Project Credit** includes a \$4 billion set-aside for industrial and manufacturing investments in energy communities.

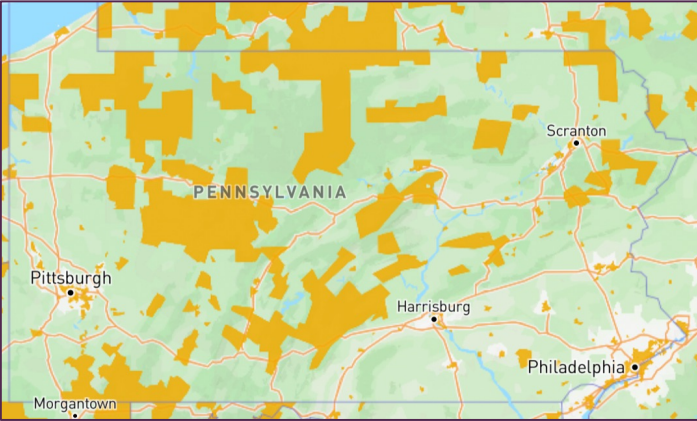


Many IRA programs are also covered by the White House's **Justice40 initiative**, which sets a goal that **40 percent of the benefits of certain federal investments – including clean energy, energy efficiency, and more – to flow to disadvantaged communities.** These disadvantaged places include many of Pennsylvania's rural, low-income, and energy communities.

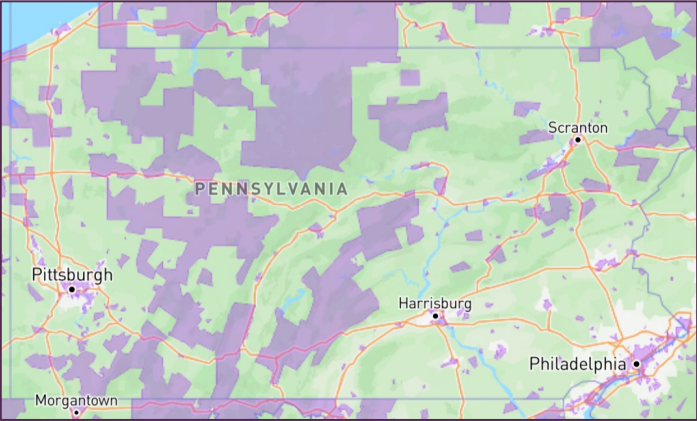
Priority Communities in Pennsylvania

Many places in Pennsylvania qualify for IRA provisions and White House initiatives designed to help disadvantaged, low-income, and energy communities benefit from IRA investments.

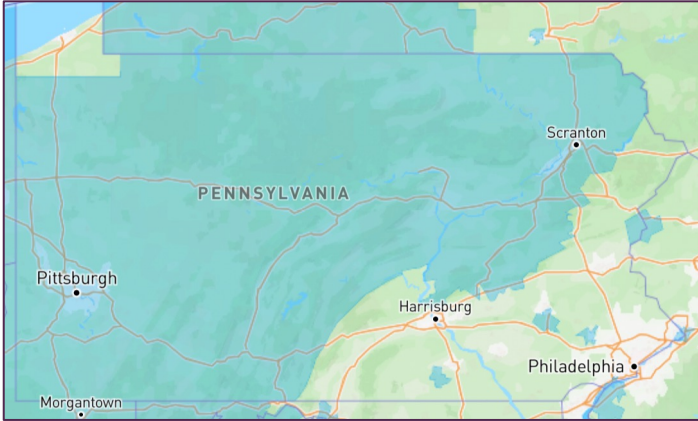
Justice40 Communities*
Receive 40% of benefits



Low-Income Communities
Eligible for IRA bonus credit



Energy Communities
Eligible for IRA bonus credit



*Communities shown are defined as disadvantaged by the [Climate and Economic Justice Screening Tool](#), which helps agencies define “disadvantaged communities” for purposes of Justice40. However, agencies may define “disadvantaged communities” in their own way.
Source: [IRA Bonus Mapper \(Beta\)](#)

Overview of Key Funding Streams for Pennsylvania

The IRA includes dozens of programs that can potentially benefit Pennsylvania. The following list outlines programs that might be most of interest for elected officials interested in priority areas identified during the development of this resource. Programs are often relevant to multiple priority areas.

PA Priority Area	Program (bold = additional details below)	Relevance
Buildings & Households	Home Energy Rebate Program*	Rebates for household energy efficiency and electrification upgrades through formula funds implemented by PA's Department of Environmental Protection
	Green and Resilient Retrofit Program	Funds for energy efficiency, electrification, and more at HUD-assisted multifamily properties
	Energy Efficient Home Improvement Credit	Tax credit available to households for energy efficiency upgrades
	Residential Clean Energy Credit	Tax credit available to households for clean energy projects
Energy Communities	Methane Emissions Reduction Program*	Grants, including formula funds, to reduce emissions from oil and gas wells, with job creation and environmental justice benefits for PA's energy communities
	Advanced Energy Project Credit	Funds for energy manufacturing projects, with 40% set-aside for energy communities
	Energy Infrastructure Reinvestment Financing Program	Funds for repurposing energy infrastructure, including fossil fuel facilities
Rural Communities	Powering Affordable Clean Energy (PACE)*	Financing for clean energy projects, where 50% of each project serves rural communities
	Empowering Rural America	Financing for clean energy projects at rural electric cooperatives
	Rural Energy for America Program	Financing for clean energy projects in rural small businesses and agricultural producers
General Clean Energy and Job Creation (including for Low-Income Communities)	Climate Pollution Reduction Grants*	Grants for broad clean energy planning and implementation – including use of other IRA funds – by PA (state-level) and its major metropolitan areas
	Investment Tax Credit for Energy Property	Tax credit available to local entities for renewable energy investments, with bonus credits
	Production Tax Credit for Electricity from Renewables	Tax credit available to local entities for renewable energy production, with bonus credits
	Greenhouse Gas Reduction Fund	Funds for green bank financing for clean energy projects in low-income and disadvantaged places

*Program highlighted due to its alignment with PA priority area(s); implementation timeline; potential needs and barriers; and opportunities for engagement by elected officials.

Illustrative Funding Stream: Home Energy Rebate Program

The IRA's \$8.8B Home Energy Rebate Program helps households purchase home energy efficiency and electrification projects. **Nationwide, it will save households up to \$1B on energy bills per year and support over 50K jobs.** The program is allocating \$259.2M in non-competitive funds to Pennsylvania, which will administer the rebates through self-designed programs. **The Home Energy Rebate Program has the potential to dramatically expand efficiency in Pennsylvania – but requires state capacity to maximize impact.**

Program Details

The **Home Energy Rebate Program** includes *two separate rebates* for households' eligible projects:

Home Efficiency Rebates

- Projects: Heating, cooling, and water heating products that are Energy Star certified
- Recipients: all households, with higher rebates for low-income households

Home Electrification and Appliance Rebates

- Projects: Electric heat pump water heaters and clothes dryers, electric heat pumps for space heating and cooling, and electric stoves, cooktops, ranges, or ovens
- Recipients: Low- or moderate-income households

Though households will ultimately receive the rebates, states are responsible for designing and implementing programs to distribute funds.

Home Energy Rebate Program Allocations

Rebate	Lead Entity	PA Allocation
Home Efficiency Rebates	Energy Programs Office, Pennsylvania Department of Environmental Protection	\$129,980,360
Home Electrification and Appliance Rebates		\$129,226,380

How it Works

1. U.S. Department of Energy (DOE) opens **non-competitive application process** for rebate programs and announces **formula allocations** for each state (July 2023).
2. States **submit applications** describing plans for their proposed rebate programs (no later than January 2025). Applications must include a range of details on program design and implementation.
3. DOE **reviews states' applications and provides funds to states.**
4. States submit **State Implementation Blueprints** within 60 days of receiving funds. Key Blueprint requirements include (not comprehensive)
 - A Community Benefits Plan outlining how federal investment will advance the goals of 1) **community & labor engagement**, 2) investing in **job quality & workforce continuity**, 3) advancing **diversity, equity inclusion, and accessibility**, and 4) contributing to the **Justice40** initiative.
 - An education and outreach strategy
 - A consumer protection plan
5. States **make rebate programs available to households.** Pennsylvania's Energy Program Office, which is administering the programs, currently [expects](#) to make the rebates available to residents in mid-2024.
6. **Households apply for rebates** through their state's program. Application process and project eligibility will vary by state.

Illustrative Funding Stream: Methane Emissions Reduction Program

The \$1.6B Methane Emissions Reduction Program provides funding to improve methane monitoring and reduce methane and other greenhouse gas emissions from the oil and gas sector. The program has the potential to **improve the economic competitiveness of small and medium-sized producers, reduce harmful air pollutions, and create new jobs energy communities across Pennsylvania, but will require state capacity to 1) distribute funds and 2) communicate and coordinate efforts with owners/operators.**

Program Details

The Methane Emissions Reduction Program allows financial and technical assistance for activities including preparing/submitted greenhouse gas reports, monitoring methane emissions, improving and development employment equipment to reduce greenhouse gases, and support innovation.

As a first step for the program, **\$350M in state formula funding** has been made available to assist industry players to voluntarily identify and permanently reduce methane emissions from low-producing **marginal conventional wells (MCW)**. A total of 30 states are eligible for this funding program. **PA has been allocated \$37.3 million (3rd most across all states) for projects impacting the 57,908 MCWs across the state.** The IRA requires that at least \$700M of the program’s funding support pollution reduction activities at MCWs.

Methane Emission Reduction Program

State	MCW Count	% of US MCW Count	Allocation
TX	175,069	29.29%	\$101,554,542
KS	64,221	10.75%	\$37,332,653
PA	57,908	9.69%	\$28,630,531
WV	49,201	8.23%	\$28,201,219
OK	28,461	8.11%	\$16,614,420

How it Works

1. U.S. Environmental Protection Agency (EPA), U.S. Department of Energy (DOE), and DOE’s National Energy Technology Laboratory (NETL) **announce state allocations for MCWs** based on formula funding.
2. **Eligible states submit applications by October 10, 2023.** Applicants must include a **Community Benefits Plan** that outline how federal investment will advance the goals of 1) **community & labor engagement**, 2) investing in **job quality & workforce continuity**, 3) advancing **diversity, equity inclusion, and accessibility**, and 4) contributing to the **Justice40** initiative.
3. Expected timeframe for **award negotiations is October–November 2023. Awards allocated in December 2023.**
4. After the NETL issues funds to the States, the **States will be responsible for determining how funds are distributed** to most effectively achieve plugging, abandonment, and emissions for screened/prioritized MCWs. States are expected to coordinate with identified **owners/operators (who will voluntarily choose to participate in the program) to determine most appropriate mechanisms for distributing funds and achieving project goals.**
5. Additional funding opportunities are expected for the Methane Emissions Reduction Program’s remaining \$1.2B, including the \$350M for MCWs.

Illustrative Funding Stream: Powering Affordable Clean Energy (PACE)

The \$1B Powering Affordable Clean Energy (PACE) Program provides loans to renewable energy developers and electric service providers to help finance large-scale solar, wind, geothermal, energy storage, and more in rural communities. **PACE will make clean, reliable energy more affordable for rural communities across Pennsylvania and has the potential to create local jobs. Technical assistance, expanded capacity, and implementation support for eligible entities can amplify the program’s impact.**

Program Details

The **PACE Program** is available to applicants that generate electricity for resale to residents in both rural and nonrural areas however, at least 50% of the population served must live in communities with populations fewer than 20,000.

Funding across two applicant categories relevant for PA:

- Category 1: Up to 20% loan forgiveness
- Category 2: Up to 40% loan forgiveness if 50% of population served is in an **energy community or disadvantaged community**

Eligible entities include electric service providers such as municipal utilities, cooperatives, private-sector developers, and investor-owned utilities. Projects must be based on bankable power purchase agreements (PPAs) or through a financial guarantee that ensures the financial feasibility of the project.

PACE Program Terms

Maximum Loan Size per Applicant	Interest Rate	Loan Tenor
\$100M (inclusive of forgivable portion)	USDA’s Rural Utility Services municipal rate at time of advance	Shorter of 35 years, useful life of financed equipment, term of PPA, or term of any leased real property

How it Works

1. U.S Department of Agriculture’s (USDA) Rural Utility Service (RUS) **opens applications process** (July 2023) and reviews application on a **rolling basis**. Only projects where construction began after effective date of IRA (8/16/22) and that have received written environmental clearance from RUS will be eligible for funding under PACE
2. Eligible entities **submit letters of interest (LOI)** describing plans for PACE program **(no later than September 29th, 2023)** including supporting materials.
 - Given the tight deadline, **elected officials can get involved by identifying LOI applicants and engaging in the fuller application process** after LOI review.
3. RUS will review LOIs and **invite eligible projects to proceed with loan application** to be completed within 60 days. If application meets all program requirements, the project will receive funding.
4. For applicants who receive PACE loans, anticipated award dates will be from **September 2023 to December 2025**. Funds will be made available through **9/30/31**. After funds are received, **elected officials can support implementation of projects**, including Community Benefits Plans.

Illustrative Funding Stream: Climate Pollution Reduction Grants

The IRA's \$5B Climate Pollution Reduction Grants (CPRG) program provides grants to Pennsylvania and its major MSAs to develop and implement plans for reducing greenhouse gas (GHG) emissions and other harmful air pollution. **Through CPRG, Pennsylvania can 1) develop effective, coherent strategies for reducing emissions and maximizing the IRA's potential in general and 2) potentially access hundreds of millions in funds. But doing so will require meaningful coordination across various stakeholders.**

Program Details

CPRG is a **two-phase program** with:

- *Non-competitive planning grants* (\$250M total) to each state and the most populous MSAs to create Priority Climate Action Plans and Comprehensive Climate Action Plans
- *Competitive implementation grants* (\$4.3B total) for states, municipalities, and coalitions to support measures included in the Priority Climate Action Plans

Implementation funds will support measures that **significantly reduce cumulative GHG emissions and accelerate decarbonization** across one or more major sectors responsible for GHG emissions.

CPRG Planning Grant Allocations to Pennsylvania

Geography	Lead Entity	Grant Amount
Pennsylvania (statewide)	Pennsylvania Department of Environmental Protection	\$3 million
Philadelphia-Camden-Wilmington MSA	Delaware Valley Regional Planning Commission	\$1 million
Pittsburgh MSA	Southwestern Pennsylvania Commission	\$1 million
Allentown-Bethlehem-Easton MSA	Lehigh Valley Planning Commission	\$1 million

How it Works

Phase 1: Planning Grants

1. EPA provides grants to states and MSAs (June-July 2023).
2. States and MSAs use grants to create **Priority Climate Action Plans** and **Comprehensive Community Action Plans**. In developing plans, states and MSAs can update existing climate, energy, or sustainability plans or develop new plans. Key plan elements include:
 - A GHG inventory and quantified GHG reduction measures
 - Benefits analyses, including for **low-income and disadvantaged communities (Justice40)**, and workforce planning analyses
 - A plan for leveraging other federal funding
3. State and MSAs submit their Priority Climate Action Plans to EPA by **March 1, 2024**, and their Comprehensive Community Action Plans by **June/July 2025**.

Phase 2: Implementation Grants

1. EPA opens competition for **grants between \$2M-\$500M** to implement measures outlined in Priority Climate Action Plans (September 2023).
2. Applicants submit notice of intent to apply by **February 1, 2024**, and grant proposals by **April 1, 2024**.
3. EPA selects awardees by **July 2024** and provides funds by **October 2024**. EPA may give additional consideration to awards that advance **Justice40**.

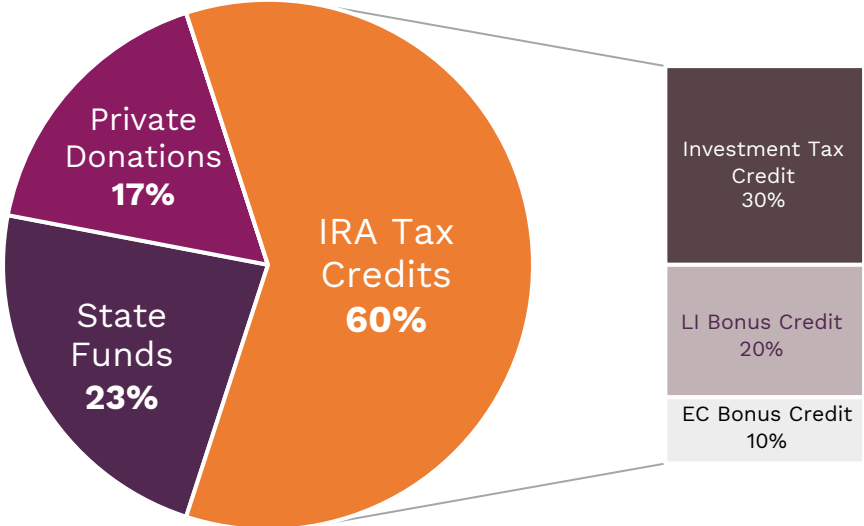
Case Study: Utilizing IRA Tax Credits & Third-Party Financing

In Pittsburgh, **Centre Avenue Housing** (CAH) is a single room occupancy project housing significantly low-income men – many of whom are homeless, have a disability, or are veterans. **Action Housing**, Pittsburgh’s largest nonprofit housing developer, is leveraging the IRA and third-party financing to **install solar panels and create long-term energy savings**.

Process:

- 1 Cost Barriers** In 2021, Housing Action renovated CAH, including weatherization and energy efficiency upgrades. **At the time, solar panels were too expensive.** Without solar panels, CAH pays \$41,000 per year in energy costs.
- 2 IRA Opportunity** With the IRA’s passage, solar panels became more affordable for CAH. CAH is eligible to receive IRA tax credits through **direct pay** (as a nonprofit), as well as **bonus credits** for low-income and energy communities.
- 3 Funding Needs** Eventually, IRA tax credits will help cover ~60% of the installation cost, but not until the project is completed – creating a **need for upfront bridge funding**. Beyond the tax credits, there is a **40% funding gap** to cover the remaining project costs.
- 4 Third-Party Financing** Action Housing is **working with a CDFI for a loan** to act as upfront bridge funding for the solar panel installation until they receive direct payments for the IRA tax credits. To cover the remaining 40% gap, the project is **securing funds from state and private sources**.
- 5 Long-Term Savings** Combined, the IRA tax credits, CDFI loan, state funds, and private donations will help Housing Action begin to **realize energy cost savings as soon as the installation is completed**. Action Housing estimates the solar panels will **save \$5K per year** – allowing CAH to devote more funds to serving its residents.

Capital Stack for CAH Solar Project

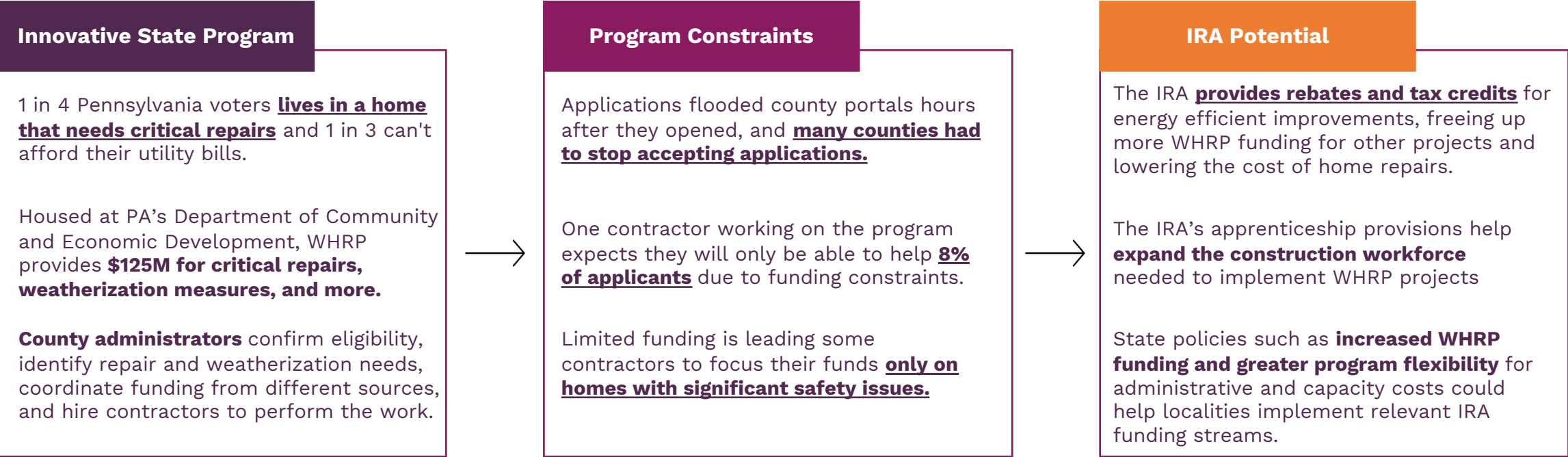


Action Housing is using 1) a CDFI loan to provide upfront bridge funding for IRA tax credits and 2) state grants and rebates to meet the remaining funding gap.

Source: Action Housing

Case Study: Aligning State Programs and IRA Opportunities

Created in 2022, Pennsylvania’s innovative **Whole Home Repair Program (WHRP)** offers **grants and forgivable loans up to \$50,000** for low- and moderate-income homeowners and some landlords to repair, update, and adapt homes. **IRA investments can help maximize WHRP’s impact and overcome program constraints – and with policy changes, WHRP can provide the local capacity needed to maximize the IRA’s impacts.**





- Program Successes**
- **95% of counties** have applied for funding from the Whole Home Repair Program
 - WHRP is a replicable model, with **100 cities around the country** offering a version of the program
 - U.S. Senator John Fetterman is working on creating a **federal version** of the program

Emerging IRA Initiatives and Results in Pennsylvania

Pennsylvania has begun to take action to maximize the impact of federal funding and is already seeing promising results from the IRA. **Despite this progress, significant additional efforts are needed to fully leverage the IRA’s potential before the opportunity passes.**




New Workforce Initiative	 <p>In July 2023, Governor Shapiro signed an Executive Order creating a first-in-the-nation job training program that provides workforce development grants to companies, contractors, unions, and other organizations working on projects funded by IRA and BIL. The program represents the largest single workforce investment in PA history.</p>	 <p>These entities can receive grants up to \$40,000 for each new employee hired and trained and up to a maximum of \$400,000 per contract or award.</p> <p>Under the CWTP, PA will reserve at least 3% of all BIL and IRA funding it receives to fund workforce development and on-the-job training, resulting in as much as \$400M over five years.</p>
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Organizing to Compete	 <p>Organizations across Pennsylvania are coming together to compete for IRA grant opportunities. For example, the Pittsburgh Foundation is working with entities, across the Commonwealth and in neighboring states to apply for the \$7B Solar for All opportunity, which would help prepare the Commonwealth’s low-income and disadvantaged communities for residential solar investment.</p>	 <p>Beyond the opportunity to win historic funds, these types of grant competitions are serving as catalysts for government, labor, philanthropic, nonprofit, academic and advocacy actors to form enduring coalitions – which presents long term benefits for Pennsylvania's civic infrastructure.</p>
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Example IRA Projects	 <p>Goonies Solar Farm: Doral Renewables is investing \$250M to develop a new solar engineering design that will provide 33,000 households in Pennsylvania with energy and electric power.</p>	 <p>Eos Energy Enterprises: On August 31, 2023, the US Department of Energy announced a conditional \$398.6M loan guarantee, through the IRA, for the construction of battery production facilities in Turtle Creek, PA, which is expected to create 700 jobs and spur economic growth in the Monongahela Valley region.</p>
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The Need for Action

While Pennsylvania is already seeing direct results from the IRA, it is significantly lagging other states. **By acting now, Pennsylvania’s leaders can significantly improve the Commonwealth’s trajectory for clean energy investment, jobs, and other IRA benefits.**

 State	 Clean Energy Investments Since IRA*	 Clean Energy Jobs Since IRA*
New York	\$101.6B	13,555
Michigan	\$21.0B	15,856
Georgia	\$18.8B	16,678
South Carolina	\$11.2B	13,543
California	\$11.9B	5,288
Texas	\$11.2B	8,843
North Carolina	\$9.6B	4,145
Arizona	\$8.3B	12,720
Ohio	\$8.3B	5,365
Tennessee	\$5.8B	4,130
Pennsylvania	\$197.1M	457

So far, compared to other states, Pennsylvania has not seen a significant boom in private sector clean energy investments following the IRA’s passage.

But if the Commonwealth acts soon, it can still seize the IRA’s opportunity:

- **Most of the IRA’s tax credits are uncapped**, allowing eligible entities and projects to receive IRA funds without competing with other locations
- **Many IRA grant and loan programs are still open or not yet available**, providing a window for Pennsylvania to organize to win significant IRA funds
- **Pennsylvania is in the early stages of implementing the IRA’s formula funds**, leaving time for Pennsylvania’s leaders to help ensure these programs are implemented effectively

*Data as of July 25, 2023, according to Climate Power’s [Clean Energy Boom Anniversary Report](#)

Needs and Barriers in Pennsylvania

Stakeholders in Pennsylvania cite a range of needs and barriers related to successful implementation of the IRA and the clean energy sectors it advances. Though not comprehensive, the following considerations can help guide elected officials interested in supporting IRA implementation in the Commonwealth. **Many groups in Pennsylvania play key roles across these needs and barriers, but need more resources to address them effectively.**



Capital & Financing

- **Many local entities lack upfront bridge funding for projects eligible for IRA tax credits**, including through direct pay. Because most of the IRA's funding flows through tax credits, lack of bridge funding is in some ways the **largest single barrier** facing Pennsylvania.
- **Other states are implementing additional incentives** for clean energy projects and **state funds to help meet cost share (matching fund) requirements**, potentially making Pennsylvania less competitive for IRA funding.
- **Rising utility costs** may undermine IRA incentives by making clean energy projects less financially attractive.



Capacity & Technical Assistance

- **State agencies lack sufficient staff and resources to administer formula funds** from the IRA (e.g., energy efficiency rebates).
- **Localities and other applicants** need more staff and expertise to identify IRA funding options and requirements and submit applications.
- **The state's technical assistance providers need increased capacity** to help local entities navigate and implement IRA funds.



Coordination & Convening

- Several IRA funding opportunities encourage applications from **coalitions made up of a wide range of partners across sectors, including government, nonprofits, academia, labor, and philanthropy** – occasionally across states. These coalitions must be set up quickly and organized effectively to meet challenging application requirements and deadlines.



Communications & Advocacy

- The IRA presents historic opportunities to create new jobs and expand pipelines into clean energy-related career opportunities, but uncertainties and misconceptions about these industries have created **concerns among some labor advocates**.
- In spite of the historic opportunities for localities, businesses, nonprofits, and individual households presented by the IRA, **7 in 10 Americans say they've heard little or nothing about it**.

Organizations to Help Address Needs and Barriers

National, state, and local organizations are working to address the most pressing needs and barriers facing Pennsylvania as it seeks to maximize to the IRA's potential.

Drawing from the What Works Plus network and insights gathered through interviews with key stakeholders in Pennsylvania, the following is a **short, illustrative list of organizations and resources that elected officials and other Pennsylvania leaders can consider engaging for potential support, knowledge sharing, or partnership.**



Organizations to Help Address Needs and Barriers:

Capital & Financing

A growing number of organizations offer resources to support federal funding implementation in places like Pennsylvania. **The following list offers a (not necessarily comprehensive) snapshot of these resources.**

Bridgeway Capital	Bridgeway Capital is a Community Development Financial Institution (CDFI) that provides capital and education opportunities for small businesses, nonprofits, and other organizations to expand economic and job growth in western Pennsylvania .
Community Foundations in PA	Several private foundations and community foundations in Pennsylvania are committed to supporting initiatives that maximize IRA funding.
Families & Workers Fund	The Families and Workers Fund is a \$70M pooled fund and platform for collective action in philanthropy that is dedicated to building a more equitable economy that uplifts all. The Fund is committing millions of dollars to support initiatives growing the climate and infrastructure workforce under its Powering Climate and Infrastructure Careers Initiative.
Invest in Our Future	A new \$180M philanthropic pooled fund designed to accelerate emissions reductions and clean technology market growth through successful implementation of IRA, BIL, and CHIPS. The fund's place-based giving will focus on 10 states, including PA, with a special focus on underserved communities including tribal, rural, and environmental justice communities .
Just Transition Fund	The Just Transition Fund provides grants for efforts that create economic opportunity or help advance policy changes that will benefit communities hardest hit by the transition away from coal .

Organizations to Help Address Needs and Barriers:

Capacity & Technical Assistance

A growing number of organizations offer resources to support federal funding implementation in places like Pennsylvania. **The following list offers a (not necessarily comprehensive) snapshot of these resources.**

Community Infrastructure Center	Milken's Community Infrastructure Center invites community-based organizations, utilities, cities, counties, states, and project developers to upload their local community projects to the Community Infrastructure Center platform to access relevant training materials and tools, navigate government and philanthropic funding sources, and connect with interested impact investors and other organizations developing similar projects and challenges.
Federal Access Center	The Just Transition Fund's Federal Access Center is a one-stop resource hub to help the most economically distressed coal communities secure the level of federal investment needed to create and sustain successful economic transition.
Justice40 Accelerator	Through a 12-month cohort experience, the Justice40 Accelerator supports climate and environmental justice organizations in building their capacity, partnerships, and readiness to access government funding to implement community-designed solutions through technical assistance, workshops and more.
Local Infrastructure Hub	Bloomberg Philanthropies, in Partnership with National League of Cities, Results for America, and US Conference of Mayors, runs the Local Infrastructure Hub - a national program featuring a grant opportunity finder, online resources and virtual convenings with experts to help guide cities through accessing IRA and BIL funding opportunities.
State Funding Readiness Project	Hua Nani's State Funding Readiness Project provides free technical assistance and capacity to subnational jurisdictions —primarily states, but also cities, counties, and Tribal governments—to help unlock and direct federal funding to ambitious, equitable climate projects.
U.S. Climate Alliance	The U.S Climate Alliance supports state government capacity through: 1) The Climate Leadership Grant Program , which fills critical staffing constraints within states to deliver on their governors' climate priorities and maximize new federal resources, and 2) The Technical Assistance Fund , which helps states overcome obstacles to advancing climate priorities by providing demand-driven, state-specific technical and policy support to drive transformative climate action.

Organizations to Help Address Needs and Barriers:

Coordination & Convening

A growing number of organizations offer resources to support federal funding implementation in places like Pennsylvania. **The following list offers a (not necessarily comprehensive) snapshot of these resources.**

Accelerator for America	Accelerator for America convenes Mayors across the country and provides them with coaching, toolkits and more to maximize federal funding opportunities , in addition to helping Mayors convene cross-sector and multi-industry leaders in their area to work together to harness the full power of federal funding.
Community Foundation Climate Collaborative	A collaborative of community foundations (including the Pittsburgh Foundation) across the country designed to promote coordinated learning, innovation and problem-solving on IRA implementation -related challenges and opportunities, and facilitate joint action and advocacy including federal lobbying.
Community Infrastructure Center	Through their Community Infrastructure Center platform, Milken provides channels to support coalition leads (states, territories, Tribal governments, municipalities, and nonprofits) applying for IRA funding identify partners and learn from other coalition leads . The platform also enables communities with projects to find coalitions .
Congress of Neighboring Communities (CONNECT)	CONNECT brings together municipalities in Southwestern Pennsylvania , across sectors and political boundaries, to identify common public-policy challenges. CONNECT provides resources, research, relationships, and the trust for over 43 neighboring municipalities, including the City of Pittsburgh, to act together.

Organizations to Help Address Needs and Barriers:

Communications & Advocacy

A growing number of organizations offer resources to support federal funding implementation in places like Pennsylvania. **The following list offers a (not necessarily comprehensive) snapshot of these resources.**

Biden Administration Investment Tracker	The Center for American Progress launched the Biden Administration Investment Tracker tool, which tracks more than 35,000 public and private sector investments generated or supported by BIL, IRA, and CHIPS , and allows users to learn how these laws are being put to work in their counties, states, and across the country . CAP also invites users to submit additional context or information they may have about specific investments.
Civic Nation	Civic Nation is leading a multi-year effort to make Americans aware of new federal programs and benefits they may be eligible for - including the IRA's tax credits for individual households - via deliberate field organizing and communication through trusted messengers.
Climate Jobs National Resource Center	The Climate Jobs National Resource Center (CJNRC) is a labor-led organization that works to educate workers about and advocate for climate policies that will build a clean energy economy at the scale science demands, create good union careers, and reverse racial and economic inequality.
Rewiring America	Rewiring America created a free, online, easy-to-use savings calculator that allows individuals to determine the financial benefits available to them thanks to the IRA , based on the location, size, and income of their household.

Promising Models in Other States

Outside of Pennsylvania, a growing number of states are launching initiatives to provide the capacity, technical assistance, funding, and incentives needed to effectively access and implement federal funds. The following efforts, though not comprehensive, serve as promising models for Pennsylvania.

Oregon passed a **\$90M Climate Resilience Package** that includes funds to help marginalized communities, local governments, and organizations apply for federal grants and **increased its state Department of Energy’s budget by \$3M to hire staff** needed for IRA implementation

Colorado complemented the IRA’s tax credits by **adding state-level incentives** for heating systems, electric vehicles, e-bikes, and more

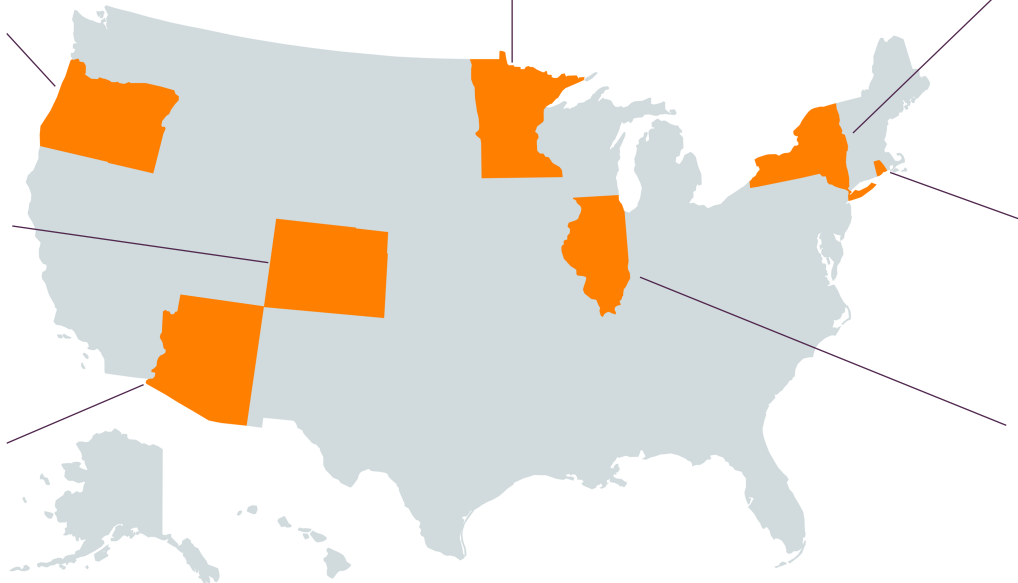
Arizona created a **BIL task force** to help state and local entities search for grant opportunities, understand grant criteria, assist with grant writing and data collection, and more

Minnesota launched a **\$190M State Competitiveness Fund** to provide match funds, technical assistance, and grantwriting support to help rural, Tribal, and disadvantaged communities access IRA and BIL funds for new energy infrastructure

New York offers households **additional state-level incentives for renewable projects**, including a Renewable Energy Tax Credit Bridge Loan program to help finance IRA and other tax credits

Rhode Island launched **CompeteRI**, a public-private partnership providing high-level professional and technical support to help entities across the state write best-in-class grants to compete for BIL funds

Illinois created the **Justice40 Oversight Committee** to help track the benefits of federal funding and ensure compliance with Justice40



What Elected Officials Can Do

Pennsylvania's state and local elected officials have a range of essential roles to play in helping maximize the IRA's opportunities across the Commonwealth. Stakeholders cited the following actions as high-leverage ways for elected officials to engage.

Legislate

- **Consider policies such as:**
 - **Increased funding for state and local agencies** responsible for implementing key IRA funding streams
 - **Additional state-level incentives and funds** for clean energy projects
 - **Increased flexibility for the Whole Home Repair program** to cover administrative and capacity costs

Coordinate & Convene

- **Bring key stakeholders together** – including local businesses, governments, and nonprofits – to discuss IRA opportunities, barriers, and needs
- Help Pennsylvania's implementing organizations and philanthropies **work across regions**
- **Engage in application and implementation processes** for key IRA funding streams, especially those with a direct role for states and localities (e.g., Climate Pollution Reduction Grants, Home Energy Rebates Program)
- **Help expand partnerships with and ensure coordination among philanthropic collaboratives** working on IRA implementation in Pennsylvania (providing staffing support as necessary) and **connect national-level philanthropies to key organizations and individuals** who can help them support IRA investments in Pennsylvania

Educate

- **Help federal officials create more accessible funding processes** (e.g., IRS process for approving credit applications)
- **Share examples of IRA-supported projects and initiatives**, especially success stories, with other elected officials
- **Inform local businesses, nonprofits, individuals, and others about available IRA programs and how to access them** through outreach to constituents and other mechanisms
- **Advise entities on how to be most competitive when applying for federal funds**, leveraging information and insights gained from your state- and/or national-level conversations



Appendix: Details on IRA Funding Streams

Prioritizing IRA Funding Streams

The following table shows which IRA funding streams are generally included and excluded from this appendix, based on the programs most likely to be of interest to the primer’s users. Note that a program whose sector is included may be excluded due to its funding mechanism or entity eligibility.

Filter	Included / Emphasized	Excluded / Deemphasized
Funding Mechanisms	<ul style="list-style-type: none"> ▪ Tax Credits ▪ Grants ▪ Loans ▪ Rebates ▪ Contracts and/or Cooperative Agreements 	<ul style="list-style-type: none"> ▪ Direct Federal Spending
Eligible Entities	<ul style="list-style-type: none"> ▪ States ▪ Local governments ▪ Nonprofits ▪ Businesses ▪ Consumers ▪ Households 	<ul style="list-style-type: none"> ▪ Tribal governments (if only entities eligible) ▪ Higher education (if only entities eligible)
Sectors + Subtopics*	<ul style="list-style-type: none"> ▪ Buildings: Energy Efficiency & Electrification, HUD-Assisted Properties ▪ Electricity: Technology/Infrastructure Investment, Nuclear, Rural Areas, Transmission, Tribal Nations & Indigenous Communities ▪ Industry: Supply Chains, Carbon, Alternative Fuels, Oil & Gas, Technology/Infrastructure Investment ▪ Transportation: Vehicles, Alternative Fuels, Air Quality, Aviation, Low-Carbon Materials, Ports/Waterways, Public Transit, Technology/Infrastructure Investment ▪ Cross-cutting [general]: Environmental Justice, Planning and Implementation, Refrigerants, Rural Areas, Technology/Infrastructure Investment, Tribal Nations & Indigenous Communities ▪ Cross-cutting – Alternative Fuels: Alternative Fuels, Aviation, Biofuels ▪ Water: Conservation of Nature, Covering Canals with Solar Panels, Resiliency, Tribal Nations & Indigenous Communities, Water Quality 	<ul style="list-style-type: none"> ▪ Agriculture, Forestry, and Other Land Use: Conservation of Nature, Environmental Justice, Environmental Quality, Equity, Farmers, Resiliency, Schools and Education, Strong Communities, Wildfire Management ▪ Oceans, Coastal Areas, and Fish Hatcheries: Conservation of Nature, Resiliency ▪ Cross-cutting – Data and Research: Air Quality, Alternative Fuels, Climate and Weather, Conservation of Nature, Corporate Climate Action Commitments, Environmental Justice, Environmental Product Declarations, Low-Carbon Materials ▪ Cross-cutting – Government Assets: Conservation of Nature, Department of Homeland Security, Federal Buildings Fund, National Laboratories

*Sectors and subtopics correspond to categories assigned to each program by RMI in [“Breaking Down the Inflation Reduction Act. Program by Program. Incentive by Incentive.”](#)

Tax Credits: Electricity

Bonus Credits
 RA = Registered Apprenticeship
 PW = Prevailing Wage
 DC = Domestic Content
 LI = Low Income or Tribal Communities
 EC = Energy Communities

Credit	Eligible Projects	Eligible Recipients	Period of Availability	Base Credit Amount	Bonus Credits	Direct Pay
Production Tax Credit for Electricity from Renewables	Production of electricity from renewable sources	Facilities generating electricity from wind, biomass, geothermal, solar, small irrigation, landfill and trash, hydropower, and marine and hydrokinetic renewable energy	Projects beginning before 1/1/25	0.3 cents/kW*	RA, PW, DC, EC	Yes
Clean Electricity Production Tax Credit**	Production of clean electricity	Facilities generating electricity with no greenhouse gas emission	12/31/32	0.3 cents/kW*	RA, PW, DC, EC	Yes
Investment Tax Credit for Energy Property	Infrastructure investments in renewable projects	Fuel cell, solar, geothermal, small wind, energy storage, biogas, microgrid controllers, and combined heat and power properties	Projects beginning before 1/1/25	6% of qualified investment	RA, PW, DC, LI, EC	Yes
Clean Electricity Investment Tax Credit**	Infrastructure investments in facilities that generate clean electricity	Facilities generating electricity with no greenhouse gas emission and qualified energy storage tech	12/31/32	6% of qualified investment	PW, LI, EC	Yes
45U: Zero-Emission Nuclear Power Production Credit	Electricity from qualified nuclear power facilities and sold after 2023	Existing nuclear power plants at time of enactment	12/31/23-12/31/32	0.3 cents/kWh, inflation adjusted after 2024	PW	Yes

* Base credit will be inflation adjusted.

** Technology-neutral tax credit. Replaces the preceding tax credit listed for all property placed in service in 2025 and later. Additional tax credits available for facilities related to accelerated depreciation under item 168(e)(3)(B).

Loan & Grant Programs: Electricity

Program	Total Size (\$M)	Max Project Amount (\$M)	Eligible Projects	Eligible Recipients	Funding Mechanism	Funding Requirements	Period of Availability
Empowering Rural America (ERA)	\$9,700	\$970	Construction of electric distribution, transmission, and generation facilities for rural electric cooperatives	Electric Cooperatives (rural areas)	Loans, Debt Relief, Grants	Varies	9/30/31
Powering Affordable Clean Energy (PACE)	\$1,000	\$100	Construction of electric distribution, transmission, and generation facilities to furnish and improve electric service in rural areas	State, Local, Non-Profit, Business	Loans, Debt Relief	Cost Share	9/30/31
Grants to Facilitate the Siting of Interstate Electricity Transmission Lines	\$760	TBD	Various projects to expedite siting and permitting process and providing grants for economic development activities in communities impacted by a transmission project	Siting authorities, State, Local	Grants	Cost Share	9/30/31
Availability of High-Assay Low-Enriched Uranium (HALEU)	\$700	TBD	Various activities to support availability of HALEU domestically	State, Local, Non-Profit, Business, Higher Ed	Grants, Contracts	Cost Share	9/30/26

Tax Credits: Transportation

Bonus Credits
 RA = Registered Apprenticeship
 PW = Prevailing Wage
 DC = Domestic Content
 LI = Low Income or Tribal Communities
 EC = Energy Communities

Credit	Eligible Projects	Eligible Recipients	Period of Availability	Base Credit Amount	Bonus Credits	Direct Pay
Credit for Qualified Commercial Clean Vehicles	Purchases of qualified commercial clean vehicles	Tax exempt businesses or entities that acquire motor vehicles or mobile machinery for use or lease	Vehicles acquired before 1/1/33	Lesser of (a) 15% of vehicles basis cost or 30% for vehicles without internal combustion engines, or (b) the amount the purchase price exceeds price of comparable internal combustion vehicle capped at \$7.5K for vehicles <14k lbs. and \$40k for all others)	None	Yes
Alternative Fuel Vehicle Refueling Property Credit	Alternative fuel vehicle refueling and charging property in low-income and rural areas	Alternative fuel vehicle refueling properties for clean burning fuels located in low-income or rural areas	12/31/32	6% of the cost for businesses, limited to a \$100,000 credit per item of property for businesses. 30% for individuals, limited to \$1,000	RA, PW	Yes

Loan & Grant Programs: Transportation

Program	Total Size (\$M)	Max Project Amount (\$M)	Eligible Projects	Eligible Recipients	Funding Mechanism	Funding Requirements	Period of Availability
Diesel Emissions Reductions	\$60	\$4.5	Identify and reduce diesel emissions resulting from goods movement facilities and vehicles servicing goods movement facilities in low-income and disadvantaged communities	State, Local, Business, Non-Profit	Grants, Rebates, Loans	None	9/30/31
Fueling Aviation's Sustainable Transition-Technology (FAST-Tech)	\$47	TBD	Projects that develop, demonstrate, or apply low-emission aviation technologies	State, Local, Business, Non-Profit, Higher Ed.	Grants	Cost Share	9/30/26
Grants to Reduce Air Pollution at Ports	\$3,000	TBD	Purchase and installation of zero-emission port equipment and technology, planning/permitting, and development of action plans to further address air pollution at ports	State, Local, Business, Non-Profit	Competitive grants, Rebates	None	9/30/27
Neighborhood Access and Equity Grant Program	\$3,205	None	Context-sensitive projects that improve walkability, safety, affordable transportation access; mitigate negative impacts in disadvantaged communities from surface transportation facilities; planning and capacity building activities in disadvantaged or underserved communities	State, Local, Non-Profit, Higher Ed.	Competitive grants	Cost Share	9/30/26
Clean Heavy-Duty Vehicles	\$1,000	TBD	Offset cost of replacing heavy-duty class 5 and 7 commercial vehicles with zero-emission vehicles; deploying infrastructure needed to charge, fuel, and maintain vehicles; develop and train necessary workforce	State, Local	Competitive Grants, Rebates	TBD	9/30/31

Loan & Grant Programs: Buildings

Program	Total Size (\$M)	Max Project Amount (\$M)	Eligible Projects	Eligible Recipients	Funding Mechanism	Funding Requirements	Period of Availability
Home Electrification and Appliance Rebates (Home Energy Rebate Program)	\$4,500	TBD*	High-efficiency electric home rebate program for purchase of home appliances	State Energy Offices	Grants	Cost Share	9/30/31
Home Efficiency Rebate (Home Energy Rebate Program)	\$4,300	TBD*	Whole-house energy savings retrofits program that will provide rebates to homeowners and aggregators	State Energy Offices	Grants	Cost Share	9/30/31
Assistance for Latest and Zero Building Energy Code Adoption	\$1,000	TBD*	Adoption of updated building codes, including zero energy code	State, Local	Grants	No	9/30/29
Green and Resilient Retrofit Program - Grants and Loans	\$838	\$20**	Grants and loans to HUD-assisted properties for various energy and water efficiency, climate resilience, air quality, electrification, and zero-emission projects	HUD-assisted properties	Competitive grants, Loans	TBD	9/30/28
State-Based Home Efficiency Contractor Training Grants	\$200	TBD***	Training and education programs for contractors involved in installation of home energy efficiency and electrification improvements	States	Grants	None	9/30/31
Green and Resilient Retrofit Program	\$103	TBD	Cover expenses of contracts or cooperative agreements and energy and water benchmarking of HUD-assisted properties administered by the Secretary for the purpose of implementing the Green and Resilient Retrofit Program	Local, Business, HUD assisted properties	Contracts, Cooperative Agreements	N/A	9/30/29

*PA is allocated \$129M for each of these programs and will distribute the funding as individual rebates (amount per rebate is TBD).

**The lesser of a) \$80,000 per unit at the property, b) \$20,000,000, or c) the cost of eligible GRRP program investments.

***Program includes both formula and competitive funding streams. PA is allocated ~\$5M for the formula portion; maximum amounts for the project portion are TBD.

Tax Credits: Industry & Manufacturing

Bonus Credits
 RA = Registered Apprenticeship
 PW = Prevailing Wage
 DC = Domestic Content
 LI = Low Income or Tribal Communities
 EC = Energy Communities

Credit	Eligible Projects	Eligible Recipients	Period of Availability	Base Credit Amount	Bonus Credits	Direct Pay
Advanced Energy Project Credit	Investments in advanced energy projects	Projects that, among other things, establish or equip facilities (i) for production or recycling of clean energy equipment, (ii) to reduce greenhouse gases emissions by at least 20% , (iii) for the processing, refining, or recycling of critical materials	Ends when credits are fully allocated	6% of taxpayer's qualifying investment	RA, PW	Yes
Advanced Manufacturing Production Credit	Manufacturing of components for solar wind energy, inverters, battery components, and critical minerals	Domestic manufacturers	Full credit available between '23-'29 and winds down over '30-'32	Varies by technology	None	Yes
Credit for Carbon Oxide Sequestration	Carbon dioxide sequestration coupled with permitted end uses within the US	U.S. facilities (min. volume requirements)	12 years after a facility is placed in service (must put in service before '33)	\$17/MT of CO2 captured and sequestered; \$12/MT for CO2 injected for enhanced oil recovery or utilized. Amounts are \$36 and \$26, respectively, for direct air capture facilities.	RA, PW	Yes
Clean Hydrogen Production Tax Credit	Production of clean hydrogen at a qualified clean hydrogen production facility	Producers of hydrogen in the US	Facilities placed in service before 1/1/33 for their first 10 years of service	\$0.60/kg multiplied by the applicable percentage ranging from 20%-100% depending on greenhouse gas emissions*	RA, PW	Yes

* Base credit will be inflation adjusted.

Loan & Grant Programs: Industry & Manufacturing

Program	Total Size (\$M)	Max Project Amount (\$M)	Eligible Projects	Eligible Recipients	Funding Mechanism	Funding Requirements	Period of Availability
Methane Emissions Reduction Program	\$1,550	\$150 (conventional wells)	Financial and technical assistance to accelerate reduction of methane and other greenhouse gas emissions from petroleum and natural gas systems. Establishes a waste emissions charge for applicable facilities that report 25,000MT of CO2 equivalent per year and exceed waste emissions thresholds.	State, Local, Business, Non-Profit, Higher Ed	Grants, Rebates, Contracts, Other	None	9/30/28

*Base credit will be inflation adjusted.

Loan & Grant Programs: Cross-cutting

Program	Total Size (\$M)	Max Project Amount (\$M)	Eligible Projects	Eligible Recipients	Funding Mechanism	Funding Requirements	Period of Availability
Greenhouse Gas Reduction Fund	\$27,000	Varies by competition*	Clean energy and climate projects that reduce greenhouse gas emissions (emphasis on low-income and disadvantaged communities)	State, Non-Profit (Financial Institutions)	Competitive Grants	None	9/30/24
Energy Infrastructure Reinvestment Financing	\$5,000	None	Projects that revamp energy infrastructure that has ceased operations or that enable operating energy infrastructure mitigate air pollutants and greenhouse gas emissions	State (likely), Local (likely), Business, Non-Profit, Higher Ed	Loan Guarantees	None	9/30/26
Climate Pollution Reduction Grants	\$5,000	\$3 (state planning) \$1 (MSA planning)	Develop and implement plans for reducing greenhouse gas emissions by eligible recipients	State, Local	Grants	None	9/30/31
Funding for Department of Energy Loan Programs Office	\$3,600	None	Support the cost of loans for innovative clean energy technologies	State, Local, Business, Non-Profit, Higher Education	Loan Guarantees	Loan guarantee cannot exceed 80% of eligible project costs	9/30/26
Environmental and Climate Justice Block Grants	\$3,000	TBD	Grants and technical assistance to community-based organizations, alone or in partnerships, to reduce air pollution, monitor for pollution, improve climate resilience, and build capacity to engage with state and federal decision-making processes.	State, Local, Non-Profit, Higher Ed.	Competitive Grants, Non-Competitive Grants (limited)	None	9/30/26
Implementation of the American Innovation and Manufacturing Act	\$39	TBD	Fund EPA's implementation of the American Innovation and Manufacturing (AIM) Act	State, Local, Business, Non-Profit, Higher Education	Competitive Grants	None	9/30/26

*National Clean Investment Fund: \$13.9B among 2-3 entities. Clean Communities Investment Accelerator: \$6B among 2-7 hub nonprofits. Solar for All: \$100-400M depending on program size.

**PA is allocated \$3M for a state planning grant, and the Pittsburgh and Philadelphia MSAs are each allocated \$1M for an MSA planning grant.

Tax Credits: Cross-cutting (Alternative Fuels)

Bonus Credits
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Credit	Eligible Projects	Eligible Recipients	Period of Availability	Base Credit Amount	Bonus Credits	Direct Pay
Clean Fuel Production Credit	Domestic production of clean transportation fuels, including sustainable aviation fuels	Registered producers in the US	12/31/27	\$0.20/gal for non-aviation fuel; \$0.35/gal for aviation fuel, multiplied by the CO2 "emissions factor" of the fuel.*	RA, PW	Yes

* Base credit will be inflation adjusted.

Loan & Grant Programs: Cross-cutting (Alternative Fuels)

Program	Total Size (\$M)	Max Project Amount (\$M)	Eligible Projects	Eligible Recipients	Funding Mechanism	Funding Requirements	Period of Availability
Fueling Aviation's Sustainable Transition through Sustainable Aviation Fuels (FAST-SAF)	\$245	TBD	Production, transportation, blending, or storage of sustainable aviation fuel (SAF)	State, Local, Business, Non-Profit, Higher Education	Grants	Cost Share	9/30/26

Tax Credits: Individuals & Consumers Only

Bonus Credits
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Credit	Sector	Eligible Projects	Eligible Recipients	Period of Availability	Base Credit Amount	Bonus Credits	Direct Pay
Credit for Previously-Owned Clean Vehicles	Transportation	Purchases of pre-owned clean vehicles with a sale price under \$25k	Consumers who have adj. gross incomes under \$150,000 (couples), \$112,500 (heads of household), \$75,000 (singles)	Vehicles placed in service in 2023-2032	Lesser of \$4,000 or 30% of sale price	None	No
Clean Vehicle Credit	Transportation	Purchasers of clean vehicles	Consumers who have adj. gross incomes under \$300,000 (couples), \$225,000 (heads of household), \$150,000 (singles)	Vehicles placed in service in 2023-2032	Up to \$7,500 if vehicle meets critical mineral and battery manufacturing requirements	None	No
Residential Clean Energy Credit	Buildings	Purchase of residential clean energy equipment, including battery storage with capacity of at least 3 kWh	Homeowners	12/31/32	30% of cost of equipment through 2032; 26% in 2033; 22% in 2034.	None	No
Energy Efficient Home Improvement Credit	Buildings	Energy-efficient Improvements of residential homes	Homeowners; renters for certain improvements	12/31/32	30% of cost, with limits for each type of improvement and total per year	None	No

Loan & Grant Programs: Businesses

Program	Sector	Total Size (\$M)	Max Project Amount (\$M)	Eligible Projects	Eligible Recipients	Funding Mechanism	Funding Requirements	Period of Availability
Transmission Facility Financing	Electricity	\$2,000	TBD	Direct loan program for construction or modification of electric transmission facilities	Transmission Developers	Loan	None	9/30/30
Enhanced Use of Defense Production Act of 1950	Industry	\$250	\$50	DPA funding to accelerate domestic production of key energy technologies including heat pump manufacturing	Entities capable of establishing or expanding manufacturing capacity	Grants	Cost Share	9/30/24
Advanced Industrial Facilities Deployment Program	Industry	\$5,812	\$75 (system upgrade) \$500 (facility-level)	Deployment projects that reduce greenhouse gas emissions through installation and implementation of advanced industrial technologies	Facilities engaged in energy intensive industrial processes	Grants, Rebates, Cooperative Agreements	Cost Share	9/30/26
Domestic Manufacturing Conversion Grants	Transportation	\$2,000	\$500	Domestic production of efficient hybrid, plug-in electric hybrid, plug-in electric drive, and hydrogen fuel cell electric vehicles.	Manufacturing for eligible vehicle types incl. businesses, small businesses, & individuals	Grants	Cost Share	9/30/31

Tax Credits: Businesses

Bonus Credits
 RA = Registered Apprenticeship
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 EC = Energy Communities

Credit	Sector	Eligible Projects	Eligible Recipients	Period of Availability	Base Credit Amount	Bonus Credits	Direct Pay
Energy Efficient Commercial Buildings Deduction	Buildings	Energy efficiency improvements for commercial buildings	Owners and long-term lessors of commercial buildings	Permanent	\$0.50-\$1 per sq. ft. (capped at \$1 per sq. ft. over 4-year period)	RA, PW	No
New Energy Efficient Homes Credit	Buildings	Construction of new energy efficient homes	Homebuilders	12/31/32	\$2,500 - \$5,000 & \$500-\$1,000 per unit in multifamily builds (depending on various energy standards)	PW	No
Extension of Second-Generation Biofuel Incentives	Cross Cutting	Second generation biofuel production	Registered producers of second generation biofuel	12/31/24	\$1.01/gallon	None	No
Tax Credits for Biodiesel and Renewable Diesel	Cross Cutting	Biofuel and renewable diesel	Producers of biodiesel, biodiesel mixtures, and renewable diesel	12/31/24	\$1.00/gallon; Add'l \$0.10 credit for small agri-diesel producers; \$1.00/gallon excise tax	None	No
Tax Credits for Alternative Fuels	Cross Cutting	Alternative Fuels	Registered producers	12/31/24	\$0.50/gallon	None	No
Sustainable Aviation Fuel Credit	Cross Cutting – Alt. Fuels	Sale or use of sustainable aviation fuel (SAF) that achieves a lifecycle greenhouse gas emissions reduction of at least 50% as compared with petroleum-based jet fuel	Producers and blenders of SAF-kerosene fuel mixtures for aviation	12/31/24	12/31/24	None	No

Loan & Grant Programs: Businesses (Cont'd)

Program	Sector	Total Size (\$M)	Max Project Amount (\$M)	Eligible Projects	Eligible Recipients	Funding Mechanism	Funding Requirements	Period of Availability
Rural Energy for America Program (REAP)	Cross Cutting	\$1,722	\$0.5 (energy efficiency) \$1 (renewable energy)	Efficiency improvements for renewable energy system, new energy efficient equipment, and new system loans for agricultural production and processing	Rural small businesses, Agricultural Producers	Grants	Cost Share	9/30/31
Rural Energy for America Program (REAP) - Underutilized Renewable Energy Technologies	Cross Cutting	\$304	\$1.5	Underutilized renewable energy technologies.	Rural small businesses, Agricultural Producers	Grants	Cost Share	9/30/31
Advanced Technology Vehicle Manufacturing Loan Program	Cross Cutting	\$3,000	80% of project costs	Manufacture of eligible advanced technology vehicles and components including various vehicles, locomotives, maritime vessels, aviation, and hyperloop	Manufacturers of eligible vehicles, including materials and components	Loans	None	9/30/28
Biofuel Infrastructure and Agriculture Product Market Expansion (Higher Blend Infrastructure Incentive Program)	Cross Cutting – Alt. Fuels	\$500	\$5	Bio-fuel related infrastructure expansion for renewable fuels derived from U.S. agriculture producers to increase the sales and use of higher blends of ethanol and biodiesel	Transportation fueling facilities, Fuel distribution centers,	Grants	Cost Share	9/30/31



Appendix: Additional Resources

Additional Resources

- **White House:** [Inflation Reduction Act Guidebook](#)
- **White House:** [Technical Assistance Guide](#)
- **Rocky Mountain Institute:** [Breaking Down the Inflation Reduction Act. Program by Program. Incentive by Incentive](#)
- **C40 and Climate Mayors:** [Climate Action and the Inflation Reduction Act: A Guide for Local Government Leaders](#)
- **Rewiring America:** [IRA Savings Calculator](#)
- **World Resources Institute:** [IRA Bonus Mapper](#)
- **BlueGreen Alliance:** [Inflation Reduction Act and Bipartisan Infrastructure Law: Investments in Energy Communities](#)
- **National Caucus of Environmental Legislators:** [Inflation Reduction Act: States and Implementation](#)