

2022 Energy Efficiency Forum

October 31st & November 1st

VIRGINIA ENERGY EFFICIENCY COUNCIL



Preparing for Impact: New Funding Opportunities to Accelerate EE

November 1, 2022

ENERGY EFFICIENCY FORUM



Preparing for Impact

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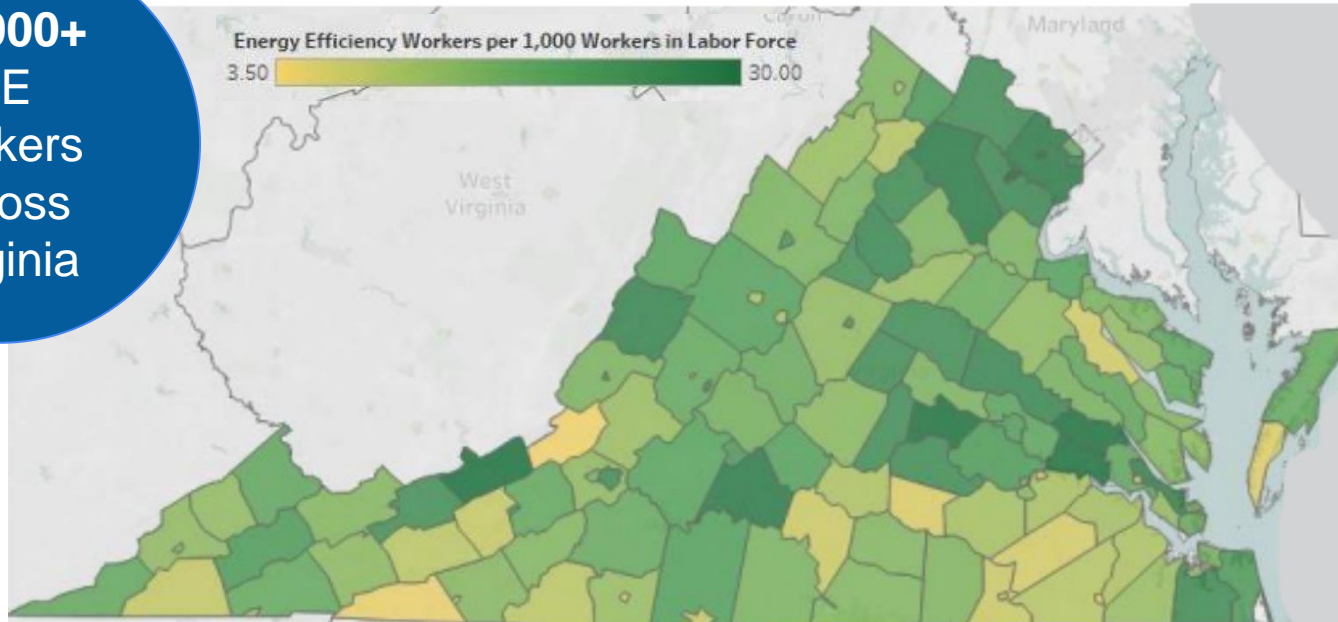
Sabine Rogers, *AnnDyl*



Energy Efficiency Workforce Development Initiative

The Importance of an Energy Efficiency Workforce

73,000+
EE
workers
across
Virginia



Source: [2021 E4TheFuture Jobs Report](#)

Opportunities for Growth

Historic Federal Funding means more opportunities than ever before for expanding energy efficiency in Virginia.

- Heat Pump Rebates and Tax Credits
- Energy Infrastructure Investment
- Weatherization
- Building Code Enforcement
- Building Performance Standards

Federal Support

Federal Funding Opportunities

- \$200M from Inflation Reduction Act to Energy Efficiency Workforce Development
- \$225M Nationwide to Building Code Enforcement
- \$40M from Bipartisan Infrastructure Law for Energy Auditor Training

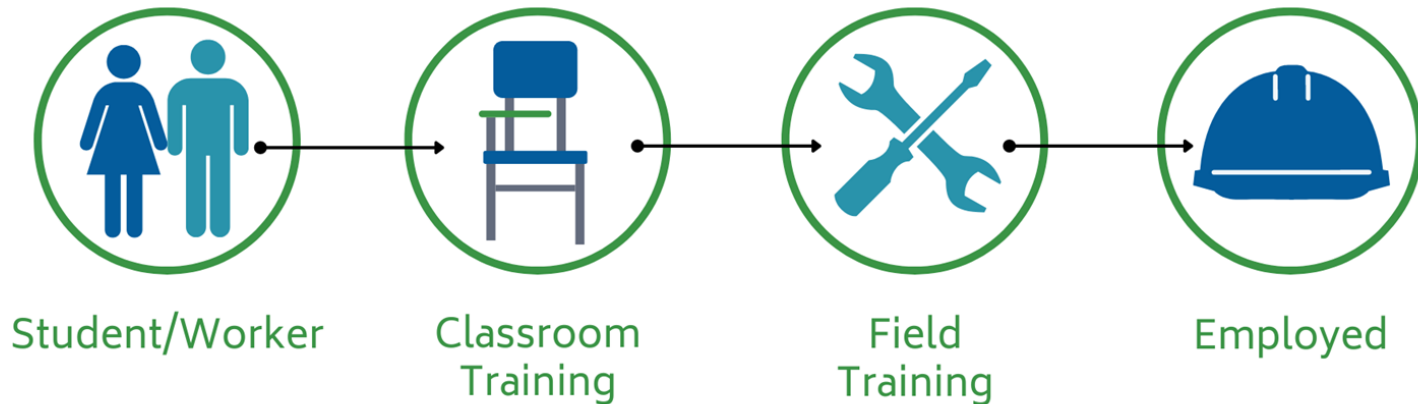
In Virginia:

- \$9.5M to Virginia State Energy Office, potentially to include Workforce Development Funding
- \$11M for Training and Technical Assistance via Weatherization Assistance Funding through Department of Housing and Community Development

Where will we find people to do this work?

Virginia Energy Efficiency Workforce Initiative

Work Force Development Pipeline



Virginia Energy Efficiency Workforce Initiative

Work Force Development Pipeline Phases

IDENTIFY

Targeting
Justice40 and
Historically
Economically
Disadvantaged
Communities



RECRUIT

Connecting
People with
Existing
Programs and
Opportunities



TRAIN

Classroom and
Work-Based
Learning to
Prepare for
Success in the
Field



RETAIN

Placement in
Well-Paying
Jobs That Can't
Be Outsourced
and Benefit the
Community



Thank You

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Preparing for Impact

New Federal Funding Opportunities to Accelerate Energy Efficiency

November 1, 2022

Sabine Rogers
AnnDyl Policy Group



Washington, DC-based policy strategy firm that focuses on Federal and State legislative, regulatory, and administrative energy and environmental policy.

Our team brings together extensive knowledge, experience, and expertise to take a substantive approach on policy and advocacy.

We specialize in advanced residential energy efficiency, smart technology, demand response, clean energy financing, renewable energy, carbon and climate policy, and much more.



Infrastructure Investment and Jobs Act

- ▶ The Infrastructure Investment and Jobs Act (IIJA) was signed into law **November 15, 2021**.
- ▶ \$1 trillion for transportation, water, and energy infrastructure, with \$550 billion in new spending.
- ▶ Agencies are currently in early phases of implementation.



IIJA: Overview of Key Programs

Program	Funding	Timeline
Weatherization Assistance Program (WAP)	\$3.5B	FY22 until expended
State Energy Program (SEP)	\$500M	FY22-26
Energy Efficiency and Conservation Block Grant Program (EECBG)	\$550M	FY22 until expended
Energy Auditor Training Grant Program	\$40M	FY22 until expended
EE Revolving Loan Fund (RLF) Capitalization Grants	\$250M	FY22 until expended
Smart Grid Investment Grant (SGIG) Program	\$3B	FY22-26
Building Codes Implementation	\$225M	FY22 until expended

IJA: Implementation Updates

WAP

- State Plans were due Oct 1 to DOE for approval.

SEP

- State allocation amounts released in August. Applications due November 4.

EECBG

- Allocation formulas released in June. Applications anticipated to open in Q4.

SGIG

- DOE Grid Deployment Office closed an RFI and Draft FOA on October 14. Final FOA is anticipated later this year.

Building Codes

- Applications for funding anticipated to open in Q4.

Inflation Reduction Act

- ▶ Signed into law on **August 16**.
- ▶ Nearly **\$370 billion** in support of clean energy and energy efficiency.
- ▶ President Biden held an event at the White House on September 13 touting IRA.



IRA: Overview of Key Programs

Program	IRA Funding Level	Timeline
HOMES Rebates	\$4.3B	Available through 2031
State-Based Home Energy Efficiency Contractor Training Grants	\$200M	Available through 2031
High-Efficiency Electric Home Rebate Program	\$4.5B	Available through 2031
Greenhouse Gas Reduction Fund	\$27B	Available through 2024
25C Energy Efficient Home Improvement Tax Credit	CBO Estimate: \$12.4 billion over 10 years	Available through 2032
45L New Energy Efficient Home Tax Credit	CBO Estimate: \$2 billion over 10 years	Available through 2032
179D Commercial Building Energy Efficiency Tax Credit	CBO Estimate: \$362 million over 10 years	Available through 2032
25D Residential Clean Energy Tax Credit	CBO Estimate: \$22 billion over 10 years	Available through 2034
Building Codes	\$1B	Available through 2029

IRA: Home Owner Managing Energy Savings (HOMES) Rebates

- ▶ IRA provides **\$4.3 billion in formula funding for HOMES rebates.**
- ▶ Provides direct rebates for home energy efficiency retrofits via either **measured** or **modeled** energy savings pathways.
- ▶ Rebates **double** for low- and moderate-income households (**up to \$8,000**, capped at 80% of project cost).
- ▶ Includes a "prohibition of combining rebates" provision to prevent double-dipping with other federal grants or rebates, including the High-Efficiency Electric Home Rebate Program (for the same measure).
 - ▶ IRA does not include any provision prohibiting combining federal rebates with state rebates, nor does it prohibit combining rebates with energy efficiency tax credits like 25C.


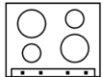




IRA: State-Based Home Energy Efficiency Contractor Training Grants

- ▶ IRA provides **\$200 million for State-Based Home Energy Efficiency Contractor Training Grants.**
 - ▶ Grants to states through the State Energy Program to **support energy efficiency and electrification contractor training.**
- ▶ Specifications will be left up to DOE in implementation.



IRA: High-Efficiency Electric Home Rebate Program

- ▶ IRA provides **\$4.5 billion** in grants to states via the State Energy Program for a **High-Efficiency Electric Home Rebate Program**.
- ▶ LMI households are eligible for rebates **up to a total of \$14,000** for electric systems/appliances.
- ▶ Includes a "prohibition of combining rebates" section to prevent double-dipping with HOMES.

	Appliance	Rebate Amount (Maximum)
	Heat Pump (for space heating and cooling)	\$8,000
	Electric Stove, Cooktop, Range, or Oven, or Clothes Dryer	\$840
	Heat Pump Water Heater	\$1,750
	Electric Wiring	\$2,500
	Electric Load Service Center (Breaker Box)	\$4,000
	Insulation, Air Sealing, and Ventilation	\$1,600

IRA: Tax Credits

- ▶ IRA extends and expands energy efficiency tax credits including:
 - ▶ **Section 25C Energy Efficient Home Improvement Tax Credit** through September 2032.
 - ▶ **Section 25D Residential Clean Energy Credit** through December 2034.
 - ▶ **The Section 45L New Energy Efficient Home Tax Credit** through September 2032.
 - ▶ **The 179D Energy Efficient Commercial Building Deduction Tax Credit** permanently.

Implementation Update

- On October 5, the IRS issued six notices asking for comments on different aspects of extensions and enhancements of energy tax benefits in the Inflation Reduction Act. **Comments are due November 4.**

IRA: Greenhouse Gas Reduction Fund

- ▶ IRA provides **\$27 billion for the Greenhouse Gas Reduction Fund** through EPA, including:
 - ▶ **\$7 billion** for competitive grants to nonprofit, state, and local financing institutions to deploy zero-emission technologies in low-income and disadvantaged communities.
 - ▶ **\$11.97 billion** in competitive grants for projects, activities, and technologies that reduce emissions or other air pollution.
 - ▶ **\$8 billion** for competitive grants for financial and technical assistance in low-income and disadvantaged communities.
- ▶ **55 percent (\$15B)** of the total GHG fund is explicitly directed towards low-income and disadvantaged communities.

Implementation Update

- On October 21, EPA released an RFI on the GHGRF program design and implementation. **Comments are due December 5.**

IRA: Building Codes

- ▶ IRA provides **\$1 billion to implement energy efficient building codes** in residential and commercial buildings
- ▶ **\$330 million** to state and local governments to adopt residential building codes that meet or exceed the 2021 International Energy Conservation Code (IECC).
- ▶ **\$670 million** to assist state and local governments to adopt building energy codes for residential and commercial buildings that meet or exceed the zero energy provisions in the 2021 IECC, or an equivalent stretch code.
- ▶ Note: Paired with \$225 million in IIJA to create a grant program within the **Building Technologies Office (BTO)** to update and adopt building energy codes in new residential and commercial buildings across the States.

Thank you!

Sabine Rogers

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Appendix

|HOMES Rebates – Two Pathways

Modeled Energy Savings

Projects must achieve modeled energy savings of at least **20 percent** to qualify for rebates.

Larger rebates are available for projects achieving modeled energy savings of at least **35 percent**.

Rebates **double** for low- and moderate-income individuals.

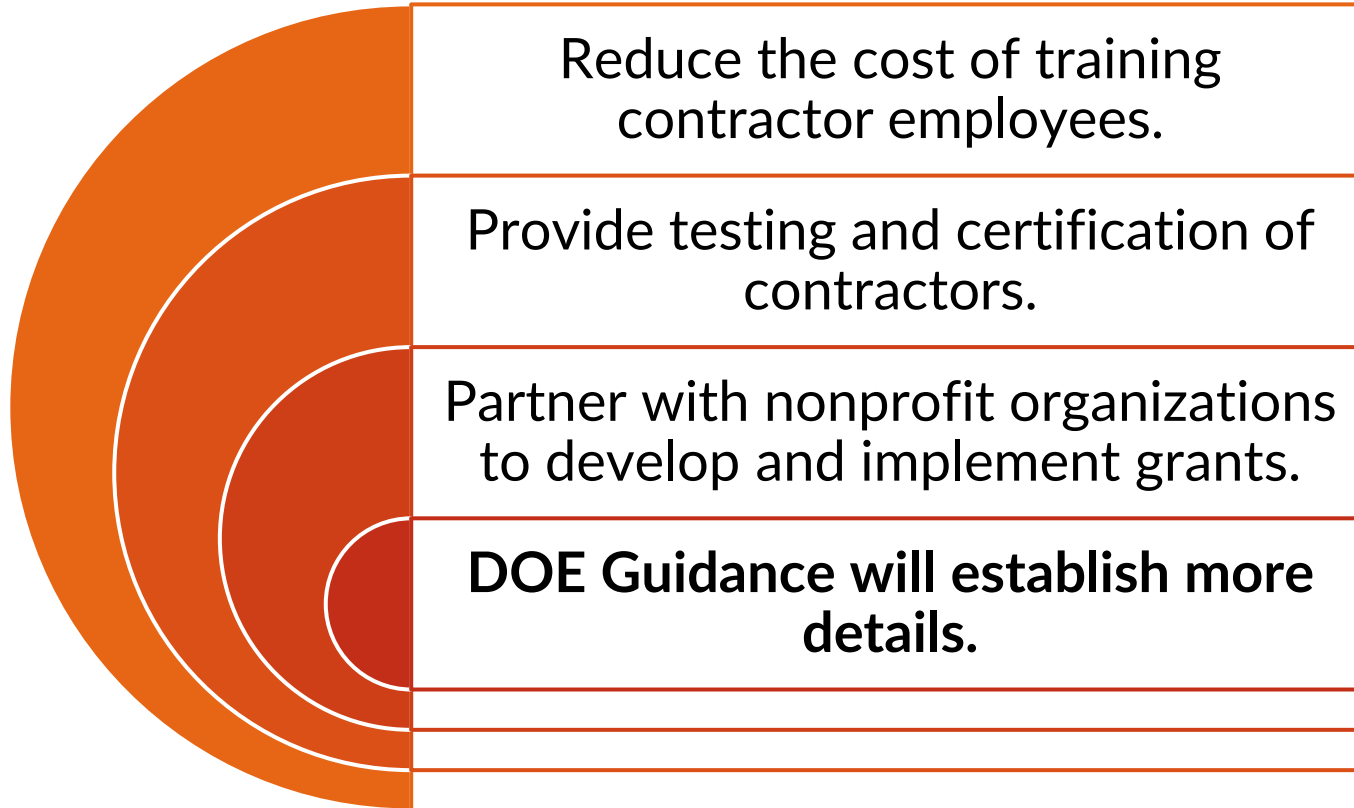
Measured Energy Savings

Projects must achieve measured energy savings of **15 percent** to qualify for rebates.

Energy baselines are based on average energy use of single-family homes or multifamily buildings in each State.

Rebates **double** for low- and moderate-income individuals.

| Contractor Training – Eligible Uses of Funding



IRA – 25C Energy Efficient Home Improvement Credit

- ▶ **IRA extends and expands the Section 25C Energy Efficient Home Improvement Tax Credit through September 2032.**
 - ▶ Beginning January 1, 2023, 25C provides homeowners with a tax credit up to 30% for the costs of residential energy efficiency upgrades (up to \$1,200 per year).
 - ▶ Eligible energy upgrades include insulation, central air conditioners, natural gas, propane, or oil water heaters, furnaces or hot water boilers, electric panels, window and door sealing, and lights.
 - ▶ Increased tax credit up to \$2,000 per year (or 30%) for the costs to purchase Electric heat pump water heaters and electric heat pumps.
 - ▶ \$600 annual cap per homeowner for efficient gas HVAC and for windows.
 - ▶ A 30% credit is also available for home energy audits up to \$150.

IRA – 25D Energy Efficient Home Improvement Credit

Timeframe	Credit Details	Eligible Measures	Max. Credit Amount	Requirements for Measure
Current incentive: Effective immediately through December 31, 2034	2022-2032: 30% tax credit to homeowner 2033: 26% credit 2034: 22% credit	Solar panels	None	N/A
		Solar water heater	None	Certified by ICC-SRCC or comparable entity
		Small wind turbine	None	N/A
		Geothermal heat pump	None	ENERGY STAR Program requirements
		Fuel cell property	\$500 per 0.5 kW	Minimum capacity of 0.5 kW
New Incentive: Effective January 1, 2023 through December 31, 2034	2023-2032: 30% tax credit to homeowner 2033: 26% credit 2034: 22% credit	<u>Added:</u> Standalone battery storage system	None	Minimum capacity of 3 kWh

IRA – 45L New Energy Efficient Home Tax Credit

Timeframe	Credit Details	Eligible Measures	Max. Credit Amount	Requirements for Measure
Current incentive: Before December 31, 2022	Credit to homebuilder for construction of energy efficient home	Single-family or multifamily properties below three stories	\$2,000	Must demonstrate energy consumption at least 50% lower than the 2006 IECC Cannot combine with Low Income Housing Tax Credit
		Manufactured Home	\$1,000	
New incentive: January 1, 2023- December 31, 2032	Credit to homebuilder for construction of ENERGY STAR-certified New Home	Single Family or Manufactured Home	\$2,500	Requirements outlined by ENERGY STAR New Homes National Program and DOE Zero Energy Ready Home Program Can be combined with Low Income Housing Tax Credit
		Multi-Family Unit	\$500	
		Multi-Family Unit <i>if prevailing wage rates are met</i>	\$2,500	
	Credit to homebuilder for construction of DOE-Certified Zero Energy Ready home	Single Family or Manufactured Home	\$5,000	
		Multi-Family Unit	\$1,000	
		Multi-Family Unit <i>if prevailing wage rates are met</i>	\$5,000	

IRA 179D Energy Efficient Commercial Building Deduction

- ▶ IRA extends and expands the **Section 179D Energy Efficient Commercial Building Deduction**; the credit has **no sunset date**.
 - The lifetime maximum available under the deduction is **lifted** and changed to **three years**. The total energy and power reduction percentage required for the deduction is **reduced from 50% to 25%**.
 - Larger deductions available for projects which **conform to prevailing wage and apprenticeship requirements**.
 - There is a base deduction of \$.50 per sq. ft. up to \$1.00 per sq ft., with a **bonus deduction** of \$2.50 - \$5.00 for projects which conform to prevailing wage and apprenticeship requirements.
 - An alternative deduction is available for retrofitting costs associated with a qualified retrofit plan based on energy usage intensity (EUI) when EUI is reduced by at least 25%, with a value equaling the base and bonus deduction allowance.

Planning for Federal Funding: Energy Efficiency

2022 Energy Efficiency Fall Forum

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1. What funding is available?



IRA Rebates to be deployed via Virginia Energy

Provision Name and Section Number	Eligible Uses	Estimated total	Estimated timing
Home Energy Performance-Based, Whole House Rebates (IRA 50121)	Comprehensive home energy retrofits in single-family homes and multifamily buildings. Typically \$2K to \$4K, doubled for households below 80% of AMI. Available through Sept 2031.	\$93M	Q2 2023
High-Efficiency Electric Homes and Rebates Act (IRA 50122)	Energy efficiency and electrification rebates for households with up to 150% AMI. 50% of project cost (100% for households below 80% of AMI) up to \$14K total, with measure subcaps. Available through Sept 2031.	\$93M	Q2 2023

Infrastructure Act formula funding to Virginia Energy

Provision Name and Section Number	Eligible Uses	Estimated total	Estimated timing
EE Revolving Loan Fund Capitalization Grant (IIJA 40502)	Establish revolving loan funds for residential and commercial EE audits and retrofits. Can be used for credit enhancement. VA is high priority state.	\$7M	Application expected Nov 15, 2022
State-based Home Energy Efficiency Contractor Training Grants (IRA 50123)	Energy efficiency and electrification contractor training.	\$4M (if formula)	Q1 2023
Energy Efficiency and Conservation Block Grant Program (IIJA 40552)	Develop, promote, implement, and manage energy efficiency projects. State and larger localities get direct allocations; VE to be conduit for smaller localities.	\$3.25M to Virginia Energy; various amounts to larger localities	Q1 2023

Competitive Opportunities for VE

Provision Name and Section Number	Eligible Uses	Total funding	<i>Estimated timing</i>
Energy Auditors Training Grant Program (IIJA 40503)	Training individuals to conduct audits in commercial and residential buildings.	\$40M	Q1 2023
Energy Improvement in Rural or Remote Areas (IIJA 40103c)	Improve energy infrastructure in rural or remote areas, including via energy efficiency.	\$1B	Q4 2022
Greenhouse Gas Reduction Fund – EPA administered (IRA 60103)	Financial and technical assistance for GHG-reducing projects in disadvantaged communities. TBD if focused solely on solar or if EE will be an eligible tech.	\$7B	Q1 2023

2. What will we do with it?



Building the solution set: General approach

1. Identify uses for narrow formula funding, including to complement existing landscape
2. Identify opportunities to fill gaps with flexible federal funding
3. Identify which competitive sources would be useful to fill remaining gaps

Existing resources (including formula funding)

- ▶ Incentives to buy down project cost (utility rebates across market segments, local incentives, new IRA rebates and tax credits)
 - ▶ Whole-home rebate requires third party certification
- ▶ EE retrofit financing (can be resi and/or comm)
 - ▶ Requires audit, third party certification
- ▶ EE contractor training (hopefully - if formula)

What's missing?*

- ▶ Lots of outreach / education, and data to target that outreach
- ▶ Low cost audits
- ▶ Guidance in undergoing retrofits / electrification recommended by audit report, including assistance in identifying/accessing incentives (utility, EE tax credit)
- ▶ Affordable and accessing financing to cover remaining costs
 - ▶ Especially for emergency replacement situations
 - ▶ Especially for renters, credit/income-constrained
- ▶ Supply chain readiness
- ▶ Workforce readiness - skills and communication
- ▶ Valuation of energy performance in the real estate market (realtors/appraisers in owned; landlords/tenants in rental)

**Focus on retrofits of existing buildings*



Next steps

- ▶ Continue discussing existing landscape / needs with partners
- ▶ Match needs with flexible formula funding, as possible
- ▶ Determine which competitive funding VE (or others) should apply for

Not so fast!! Important decision-making factors

Federal requirements

- ▶ Justice 40
- ▶ Davis Bacon
- ▶ Buy America
- ▶ NEPA
- ▶ Historic Preservation

State policy alignment (see: VA Energy Plan)

- ▶ **Reliability, affordability, innovation, competition, enviro stewardship**
- ▶ **Need to articulate with data EE's contribution to access competitive resources**



Closing / Reflections from VA Clean Energy Summit

- ▶ “At least we can all agree on efficiency”
- ▶ But it remains underappreciated
- ▶ Investment + education should unlock greater appreciation

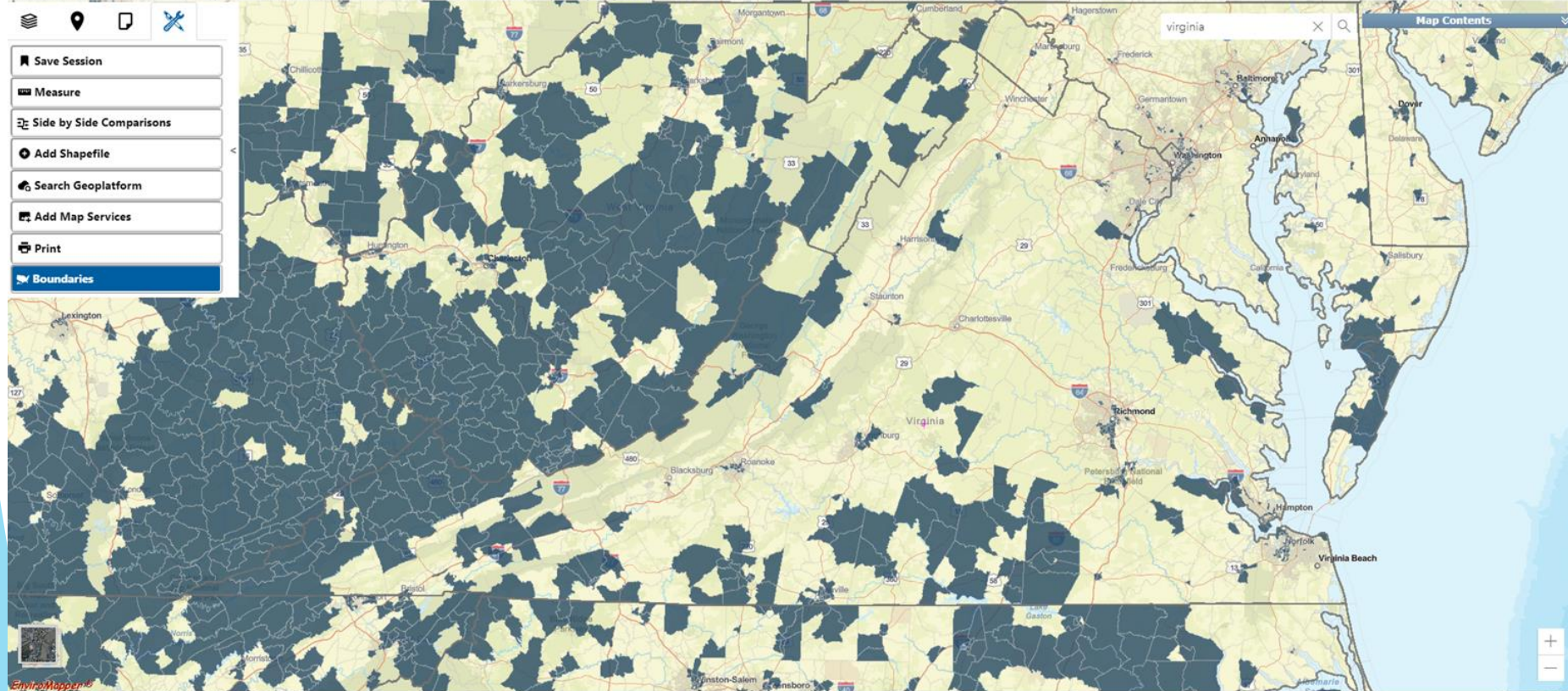


THANK YOU IN ADVANCE
FOR YOUR PARTNERSHIP!



Back up

Please note: Territory data (except Puerto Rico) is not available as comparable to the US. It is only comparable to the territory itself by using the 'Compare to State' functionality. Likewise, some of the indicators may not be available for territories.



Other key provisions for VE as partner, coordinator

Provision Name and Section Number	Eligible Uses	Total funding	Eligible Recipients	<i>Estimated timing</i>
Deployment of Technologies to Enhance Grid Flexibility (IIJA 40107)	Competitive funding to increase deployment of smart grid investments that allow buildings to engage in demand flexibility.	\$3B	Utilities	Q4 2022
Grants for EE and RE improvements at public school facilities (IIJA 40541)	Competitive funding for EE and RE improvements at public school facilities.	\$500M	Consortium of One Local Education Agency and one or more Schools, Non-Profits, For-Profits, and Community Partners	Q4 2022
Greenhouse Gas Reduction Fund – “National Green Bank” (IRA 60103)	Financial and technical assistance for GHG-reducing projects.	\$20B	Nonprofit financial institutions	Q1 2023

John Morrill

VAEEC Board Chair
Fairfax County Office of Energy and
Environmental Coordination

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Maximize your opportunities:

How to navigate federal and state infrastructure funding

Abby Campbell Singer
Head of Climate and Infrastructure Policy
Siemens Corporation USA

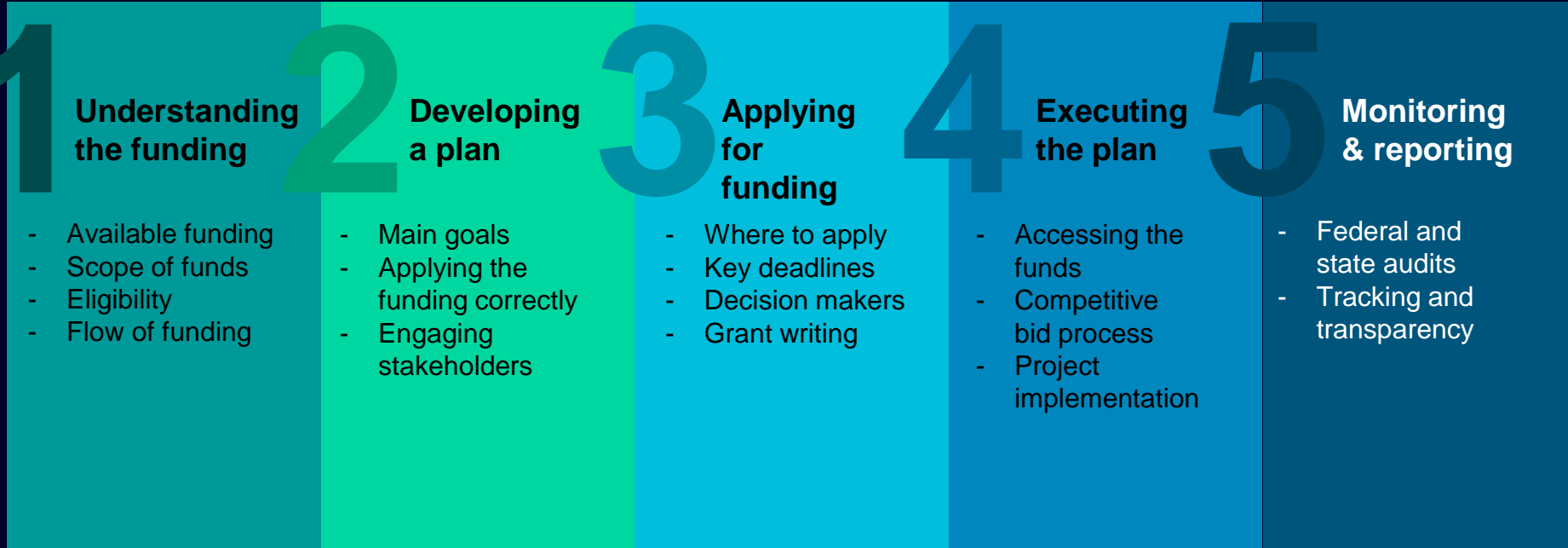
Industrial & Community Energy Efficiency Policies

Industrial & Community Policies Across BIL, CHIPS, IRA

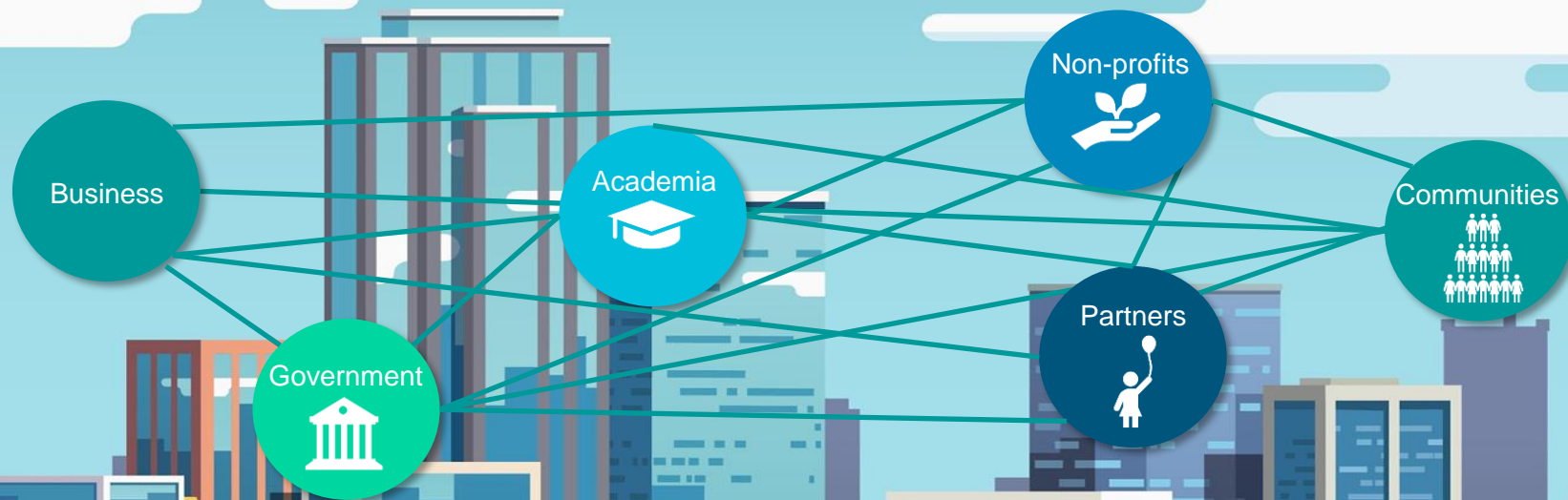
- Manufacturing Credits
- Discretionary Grants
- Formula Funding




5 “simple” steps to securing the funding...



Rely on the ecosystem – 5 + 1





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