



# BREAKOUT SESSIONS

*Inclusive Decarbonization*

Inclusive Decarbonization

## Speakers

**McKenna Dunbar**, Sierra Club (moderator)

**Jamal Lewis**, Rewiring America

**Erin Cosgrove**, NEEP

**Maggie Kelley Riggins**, SEEA





# Energy Efficiency Forum: Inclusive Decarbonization

Virginia Energy Efficiency Council

10.2.24



## Outline

### Session Outline



How does electrification impact energy bills?



What does it mean to decarb equitably?



Why prioritize low- to moderate-income households?



Decarb and equity trends across the country

DID YOU KNOW?

- ⚡ Burning gas in the home is akin to **living with a smoker**.
- ⚡ The average American household would save on average **\$1800** a year by going electric!
- ⚡ **42%** of our energy-related emissions come from decisions about driving and home appliances that are made around the kitchen table.



# 1 billion

machines to electrify across our  
121 million households.

**This includes:**



The cars we drive.



How we heat our homes and water.



How we cook our food.



How we dry our clothes.



Where our electricity comes from.

When it dies



electrify



BACKGROUND

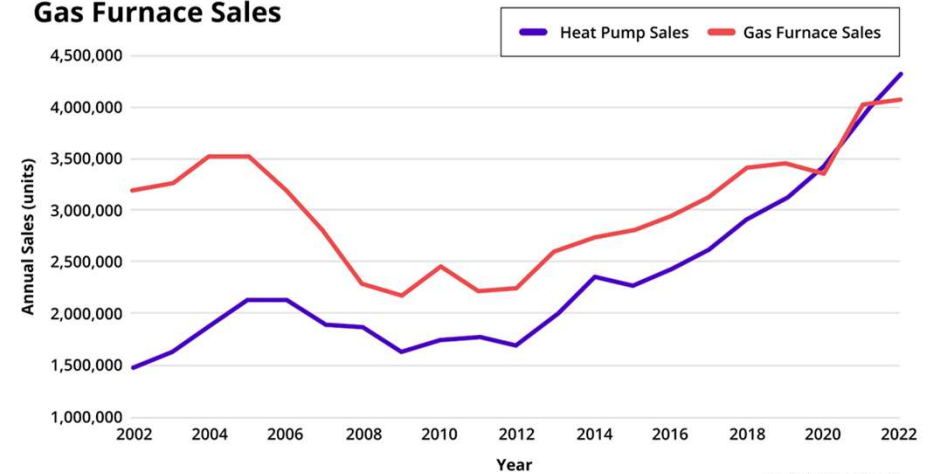


# Electrification trends

Heat pumps are winning in the market vs. gas furnaces.

But the rate of adoption needs to increase considerably.

### Heat Pump Sales Exceed Gas Furnace Sales



2022 annual sales are projected from available October year-to-date data.

Source: <https://www.ahrinet.org/analytics/research/historical-data/central-air-conditioners-and-air-source-heat-pumps>,  
<https://www.ahrinet.org/analytics/research/historical-data/furnaces-historical-data>

REWIRING  
AMERICA



**\$858**

~~**\$100**~~

**billion**

The potential in the Inflation Reduction Act for residential electrification.



# Why prioritize LMI households?

**Vulnerable populations are more exposed to climate risks.**

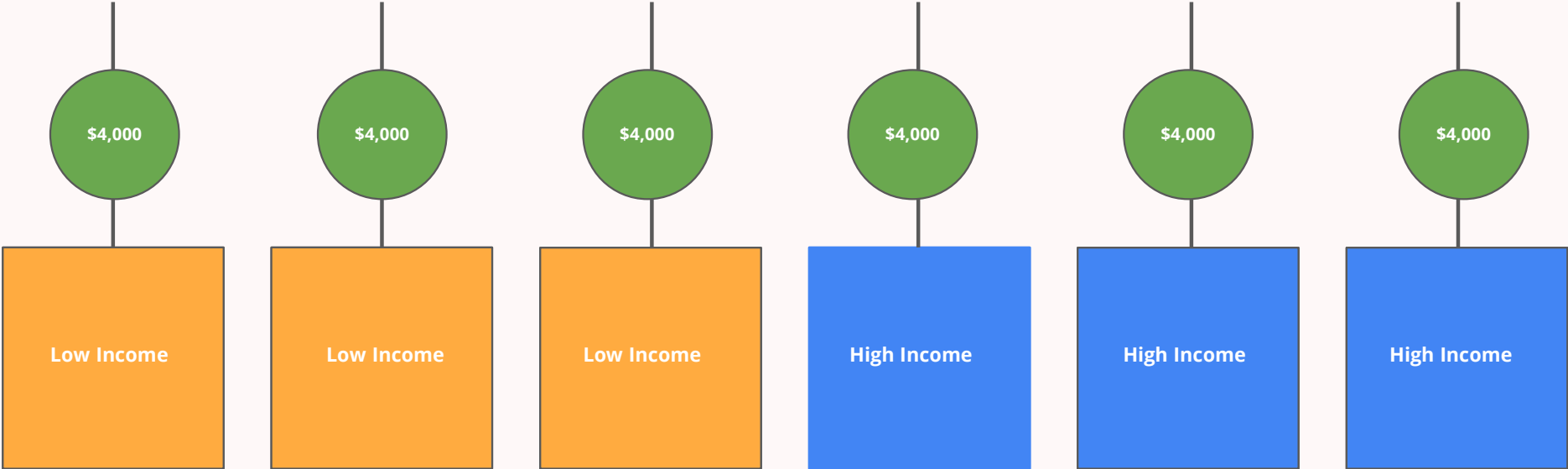


**Some households and communities have more to gain from electrification than others — and more to lose from the lack thereof.**

**Everyone enters the electrification conversation from different points, including marginalized communities.**

# Fixed Gas Infrastructure

(think: poles, pipelines, wires)



**Low Income**

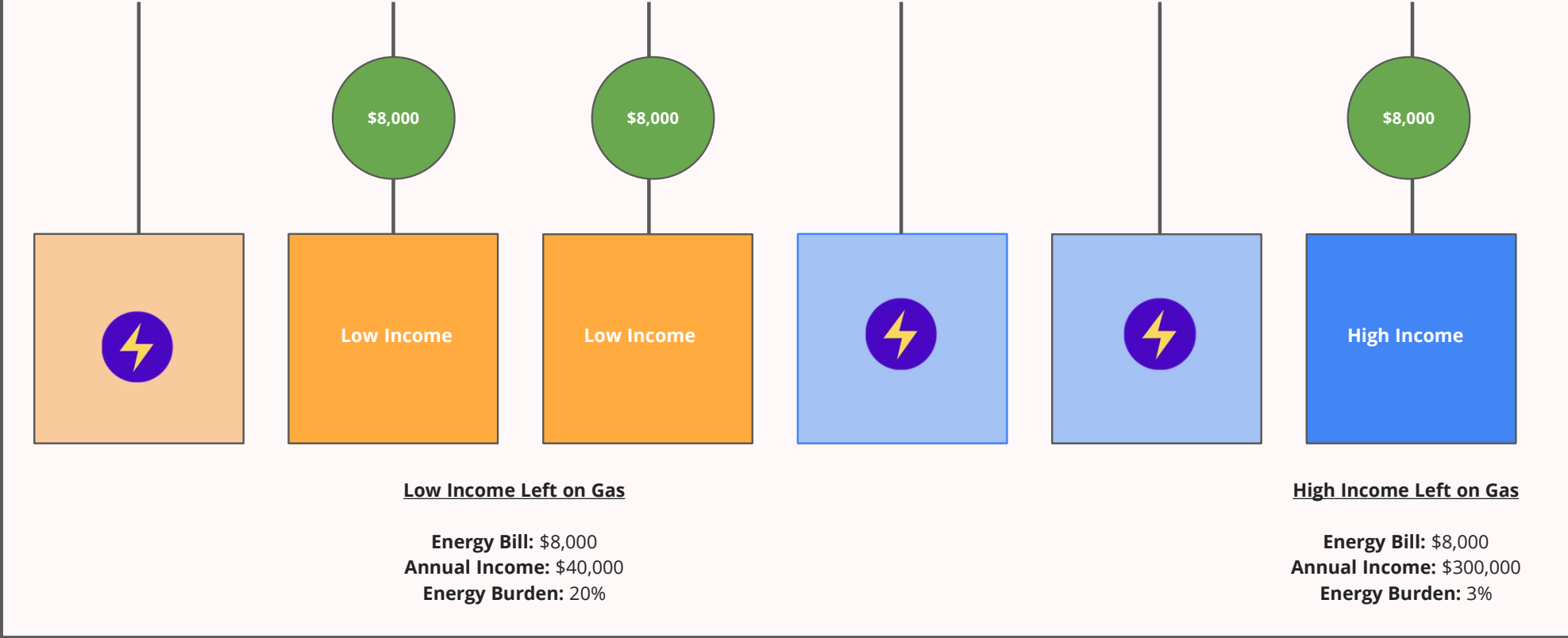
**Energy Bill:** \$4,000  
**Annual Income:** \$40,000  
**Energy Burden:** 10%

**High Income**

**Energy Bill:** \$4,000  
**Annual Income:** \$300,000  
**Energy Burden:** 1%

# Fixed Gas Infrastructure

(think: poles, pipelines, wires)

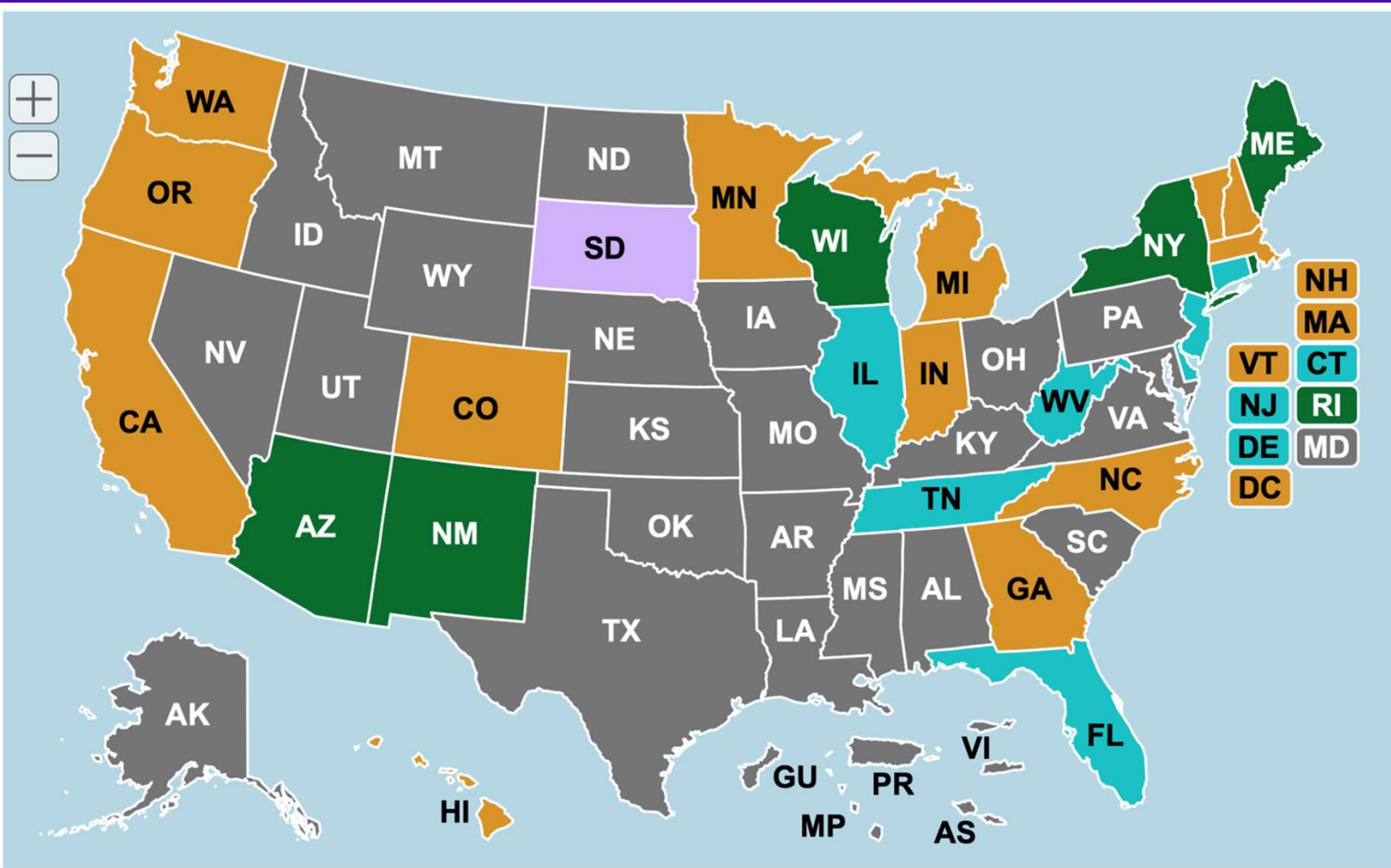


BACKGROUND



# Equitable electrification trends





■ Not Participating  
 ■ Preparing Applications  
 ■ Application Submitted  
 ■ Application Approved  
 ■ Rebates Available

Last Updated on September 30, 2024

BACKGROUND



# Personal electrification plan

## Personal Electrification Plan

### Customized electric planning tools.

- **Personal electrification planning tool** based on household needs.
- **Specific impact metrics** such as utility bill savings.
- **All available incentives** at federal, state, municipal and utility levels.
- **Marketplace** of vetted contractors.
- Community-based resources and service providers.

**Upgrade your home, save money.**

Rewiring America can help upgrade energy-intensive appliances in your home. Homeowners like you can save on average \$1,800 per year with little money down.

NAME  
Christopher Smith

EMAIL ADDRESS  
chris@gmail.com

ADDRESS  
1734 Norsen Dr, Pittsburgh, PA 15243

Get your personalized plan!

**CLIMATE POSITIVE**  
New electric equipment is 3X more efficient.

**NEW INCENTIVES**  
You may be eligible for up to \$12,000 of federal discounts and tax credits.

**YOU CAN SAVE MONEY**  
This will save you money on your energy bills each month.

Upgrades that matter the most for your bottom line.

**ROOFTOP SOLAR**  
This will save you money on your energy bills each month.

**EV CHARGER**  
This will save you money on your energy bills each month.

Upgrades that matter the most for your bottom line.

The results are in!

**We estimate you can save \$850 per year on your energy bills if you go all-electric.**

Going solar at the same time could increase your cost savings from electric appliances.

Recommendations

REPLACEMENT RECOMMENDED  
Heat Pump Space Heater

**EMISSIONS SAVINGS**

Equal to 5 cross country trips in a minivan!

**4.9**  
TONS CO2/Year  
See details



# Inclusive Decarbonization in the Northeast

Erin Cosgrove  
October 2, 2024  
Virginia Energy Efficiency Alliance, 2024 Energy Efficiency Forum

# Northeast Energy Efficiency Partnerships



- **Vision**

- We envision the region’s homes, buildings, and communities transformed into efficient, affordable, low-carbon, and resilient places to live, work, and play.

- **Mission**

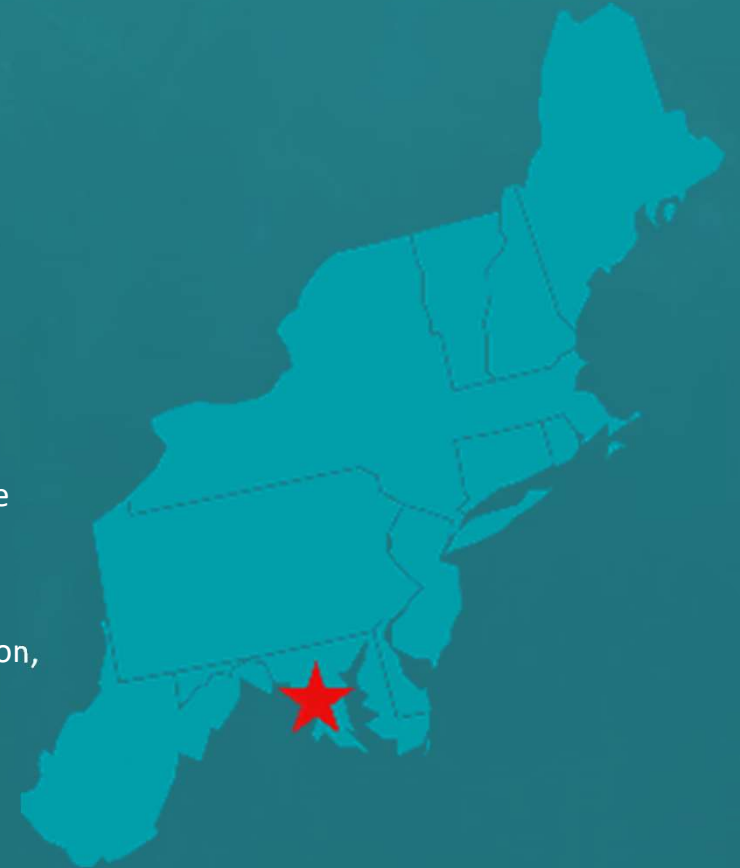
- NEEP drives regional collaboration so that the Northeast and Mid-Atlantic can equitably and affordably reduce building sector greenhouse gas emissions through energy efficiency, electrification, and grid integration.

- **Goal**

- Assist the Northeast and Mid-Atlantic states to equitably and affordably reduce building-sector greenhouse gas emissions in alignment with their goals.

- **Approach**

- Drive market transformation regionally by fostering collaboration and innovation, developing research and tools, and disseminating knowledge.





# Inclusive Decarbonization Policies in the Northeast



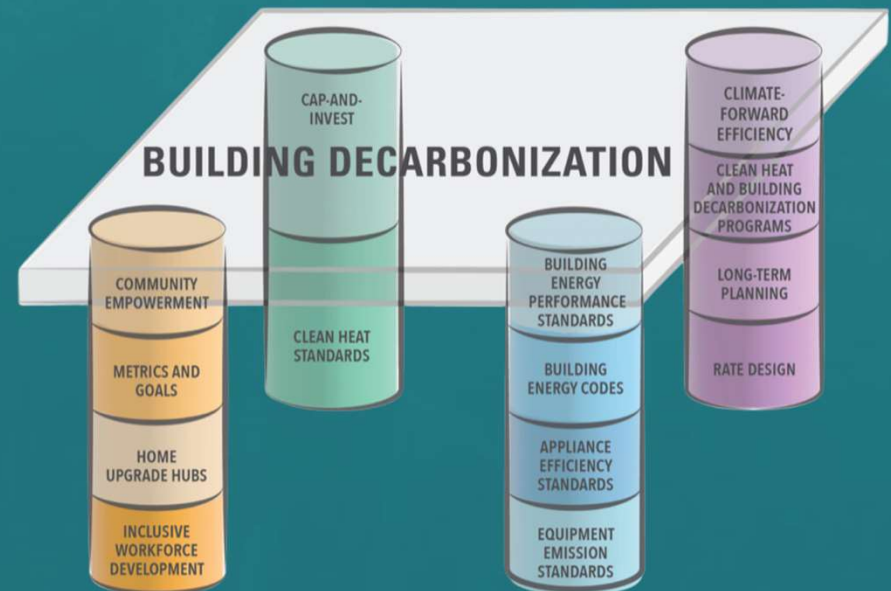
**Erin Cosgrove**  
Senior Manager,  
Policy and Programs

# Decarbonizing Buildings: How States Can Set the Table for Success



To Decarbonize Buildings, a whole suite of policies will be required to encourage action in across the supply chain.

- **Equity and Workforce** address housing and workforce inequities by empowering historically marginalized communities and ensure that the energy transition is just and inclusive. .
- **Carbon Reduction Obligations** set performance requirements for obligated parties, such as energy providers, to reduce carbon emissions or install clean heating systems.
- **Codes and Standards** establish a clear timetable for improving the energy performance of buildings and equipment, spurring changes in technologies and building practices.
- **Utility Planning and Regulation** sets mandates and frameworks to ensure that utility investment, rates, and programs align with building decarbonization goals.



## Decarbonizing Buildings Report



# Inclusive Decarbonization Policies

## *Equity and Workforce Leg*



- **Community Empowerment**
  - Inclusive and accessible stakeholder engagement that empowers community members to have a meaningful impact on programs
- **Metrics and Goals**
  - Benchmarks to ensure equitable distribution of benefits and hold parties accountable to ensure benefits flow to communities
- **Home Upgrade Hubs**
  - Stacking of programs, funding, and other resources together to maximize incentives and provide guidance and technical assistance
- **Inclusive Workforce Development**
  - Programs that support trainees with workforce development, wrap around services, and targeted outreach in underserved communities



# Inclusive Decarbonization Policies in the Northeast



## Community Empowerment

- Massachusetts: Community First Partnership Program and providing program materials in multiple languages
- Connecticut: Equitable Energy Efficiency Proceeding
- Vermont: Clean Heat Standards Equity Advisory Group
- Maine: Clean Energy Partnerships Program



## Metrics and Goals

- Massachusetts: Equity Performance Incentive
- Maine: Tracking distribution of benefits across the state
- Vermont: Clean Heat Standard mandate to deliver 32% of benefits to low- and moderate-income residents



# Inclusive Decarbonization Policies in the Northeast

## Home Upgrade Hubs

- Massachusetts: LEAN Single and Multi-Family Program
- Washington DC: Affordable Housing Retrofit Accelerator



## Inclusive Workforce Development

- Washington DC: Energy Efficiency Workforce Development Program
- Massachusetts: Clean Energy Pathways Program
- New York: Clean Energy Businesses Program





Thank you!

Erin Cosgrove, Senior Manager Policy and Programs

[ecosgrove@neep.org](mailto:ecosgrove@neep.org)



**SEE EA**  
SOUTHEAST ENERGY EFFICIENCY ALLIANCE

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# Inclusive Decarbonization: Scale and Successes in the Southeast

Maggie Kelley Riggins

October 2, 2024

Virginia Energy Efficiency Council Fall Forum

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## OUR MISSION

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To optimize the use and impact of energy to enhance the quality of life in the Southeast.

## OUR VISION

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All people in the Southeast live and work in healthy and resilient buildings, utilize clean and affordable transportation, and thrive in a robust and equitable economy.

## OUR VALUES

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### Take Initiative

We take responsibility for realizing a better quality of life in the Southeast.



### Earn Trust

We pursue our work with benevolence, competence, and reliability.



### Value Others

We seek, respect, and promote diverse perspectives.

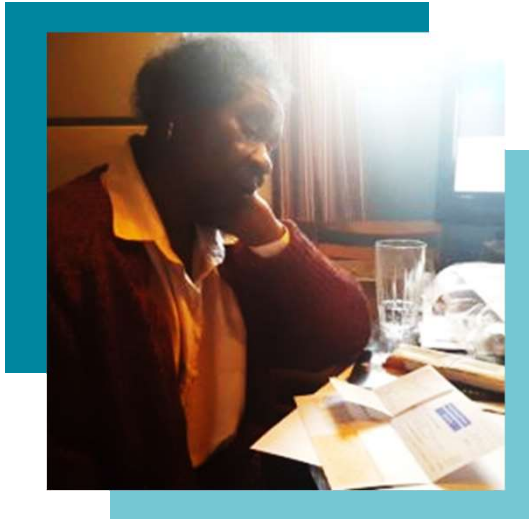


### Pursue Equitable Solutions

We recognize, acknowledge, and account for a history of prejudice and inequality in Southeastern communities.

# Pursuing Equitable Solutions

WE RECOGNIZE, ACKNOWLEDGE, AND ACCOUNT FOR A HISTORY OF PREJUDICE AND INEQUALITY IN SOUTHEASTERN COMMUNITIES AND THE ROLE IT PLAYS IN THE ISSUES WE ADDRESS.



*Nashville grandmother and retired librarian  
Annie Pearl Patton considers her NES electric bill.  
Source: Southern Alliance for Clean Energy*

01

## Procedural Equity

All affected communities have a voice in the decision-making process

02

## Distributional Equity

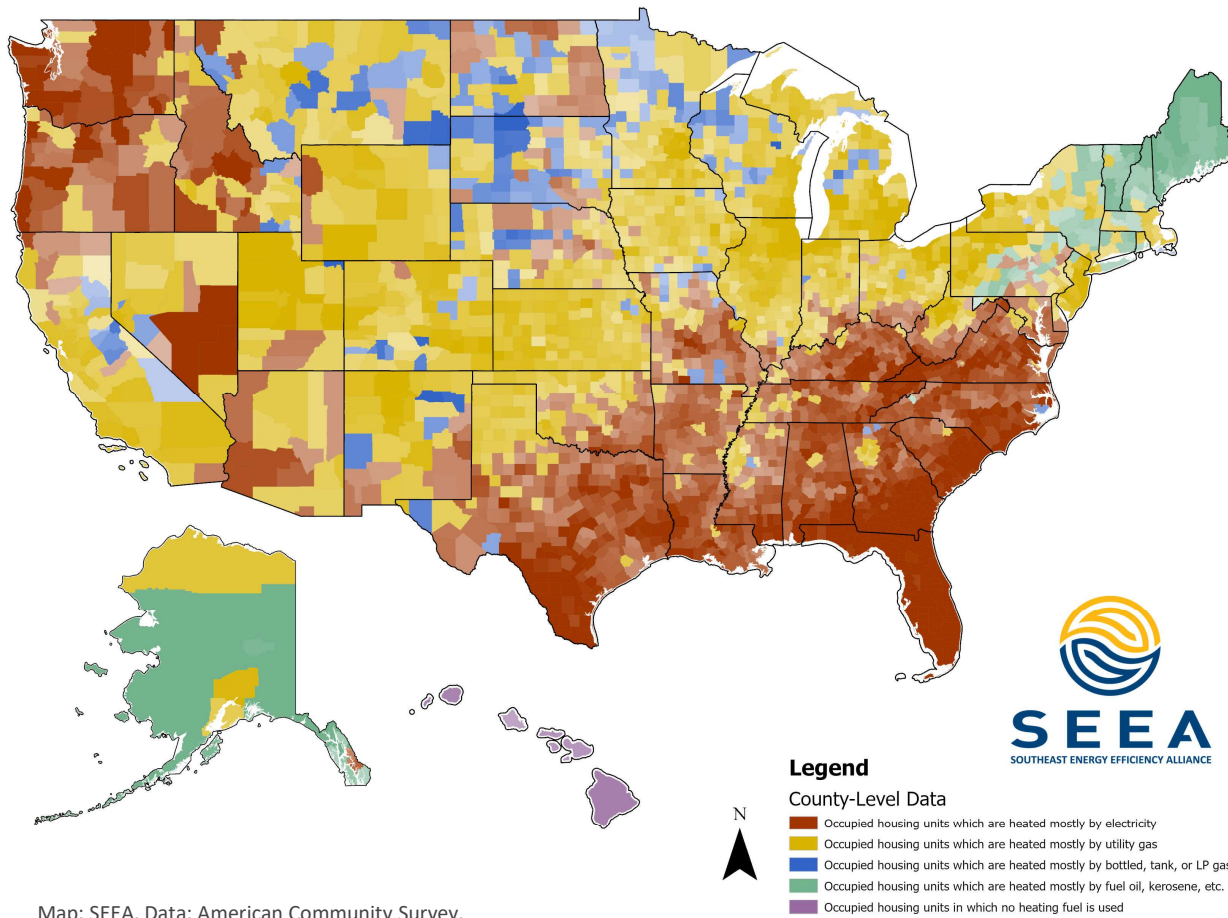
Programs and policies are designed to equally distribute its benefits and burdens to the entire community

03

## Intergenerational Equity

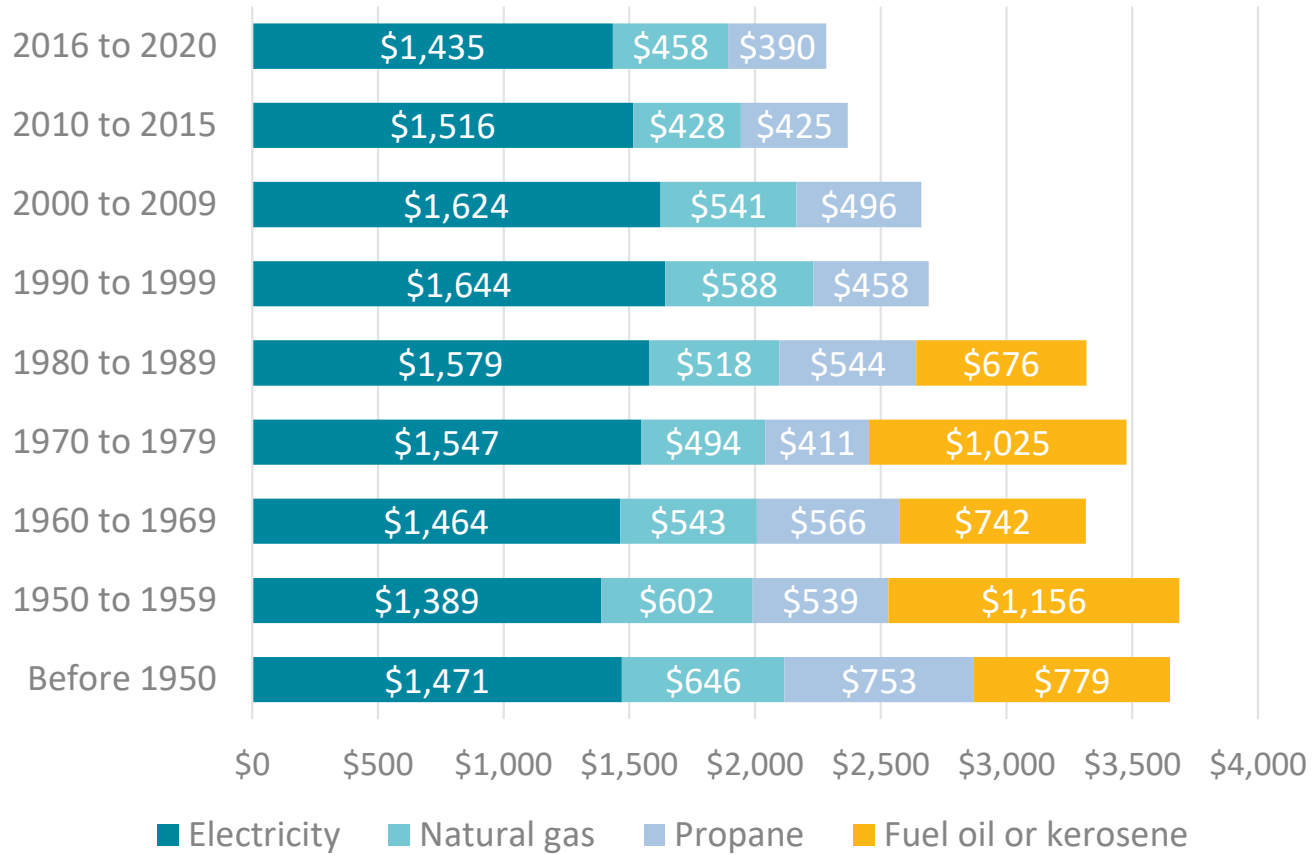
Programs and policies consider how future generations will be impacted by the decisions being made today

# The Southeast is more electrified than much of the United States



Map: SEEA. Data: American Community Survey.

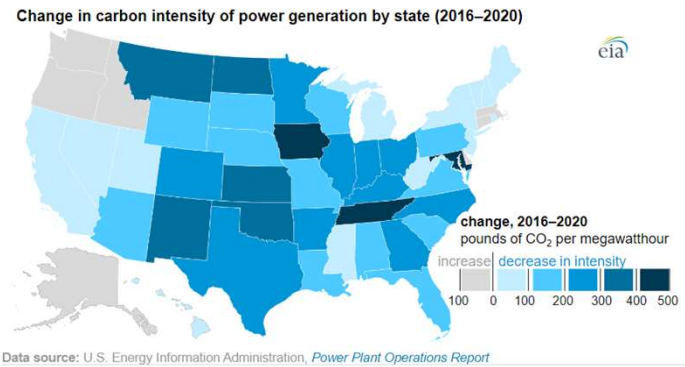
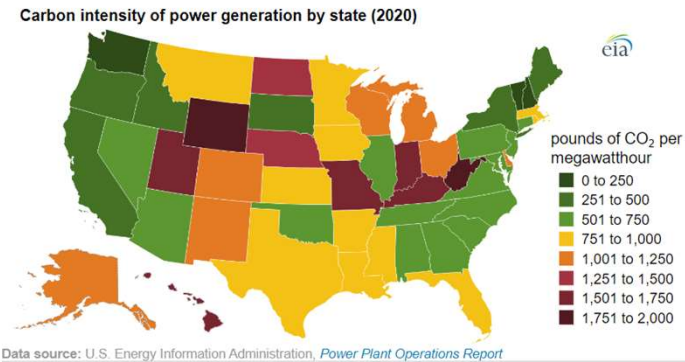
## The region's aging homes can strain affordability.





# System Goal Is Decarbonization

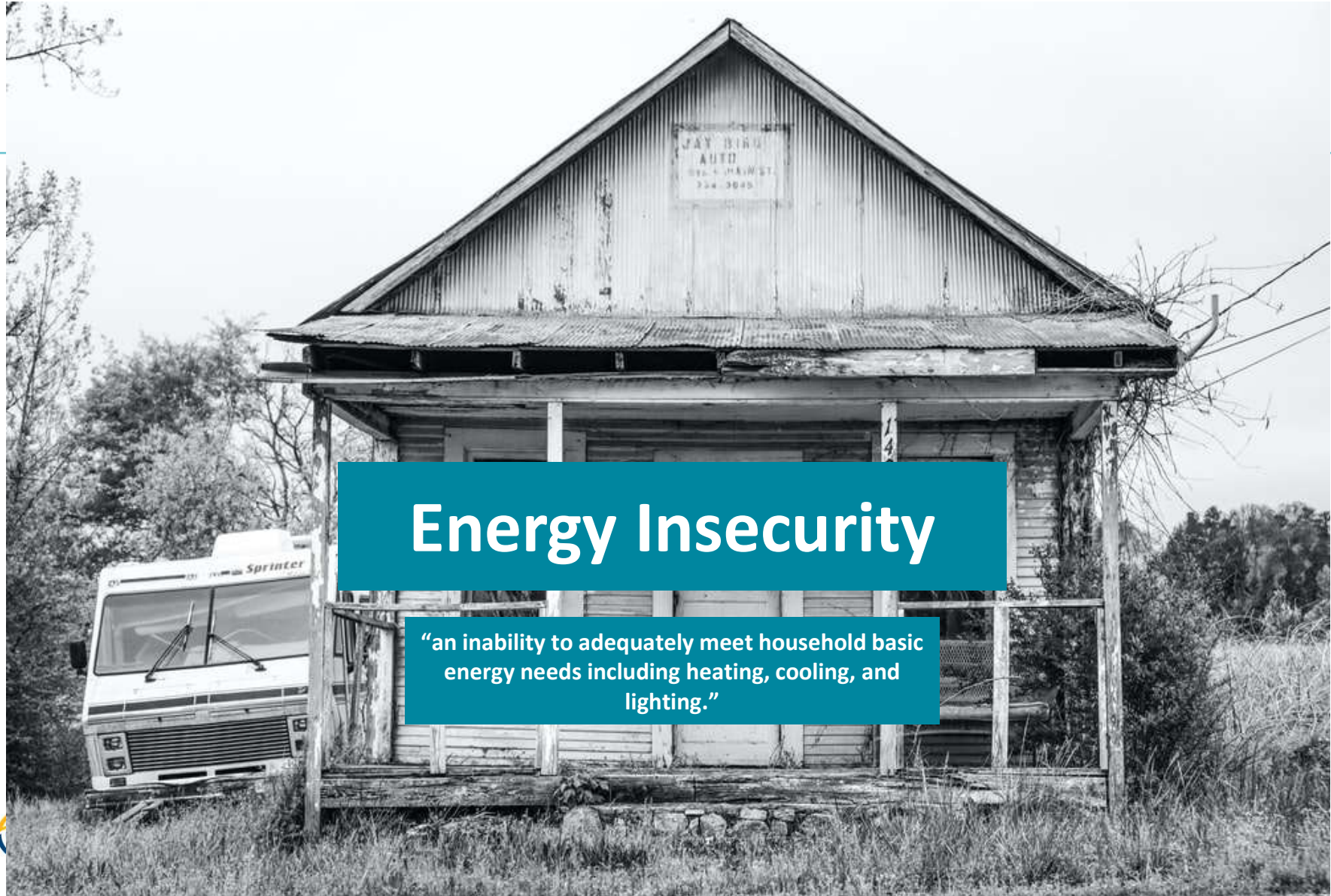
- GHG emissions vary by location and by time
- The Southeast is doing about average, on average
- We are improving – everywhere.
  - Mostly due to the retirement of coal generation



[U.S. Energy Information Administration](https://www.eia.gov/)

$$\frac{\text{Average Household Energy Costs (electric + gas)}}{\text{Average Household Income}} = \text{Energy Burden}$$

A measure of the percentage of household income required to cover utility bills.



# Energy Insecurity

“an inability to adequately meet household basic energy needs including heating, cooling, and lighting.”

# LMI Households Are Squeezed By High Costs

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**15.4 Million**

Households experience energy insecurity in Southeast

\*Highest percentage in the U.S.



**42%**

of households at an unhealthy temperature are in the South



**39%**

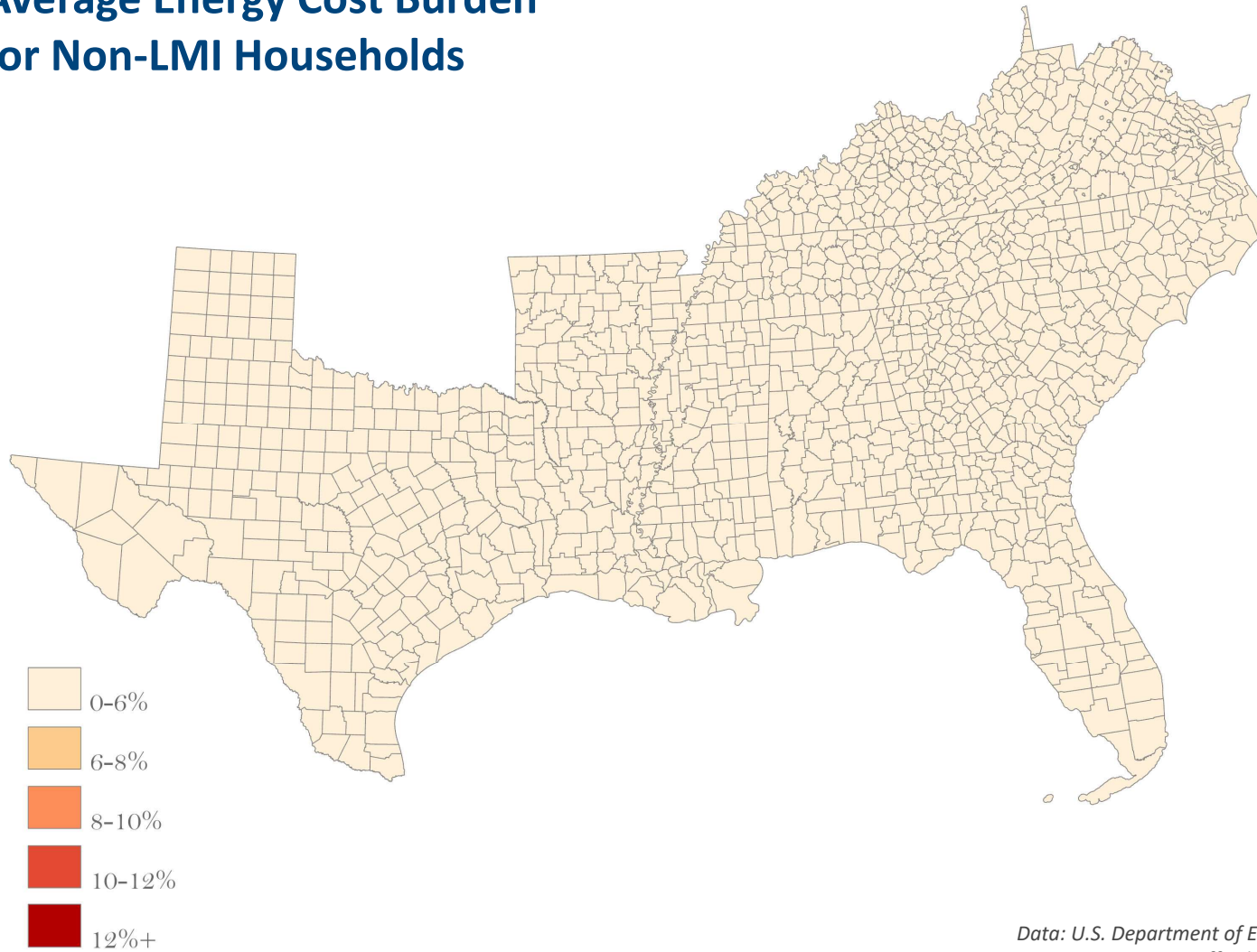
of households receiving disconnect notices are in the South



**44%**

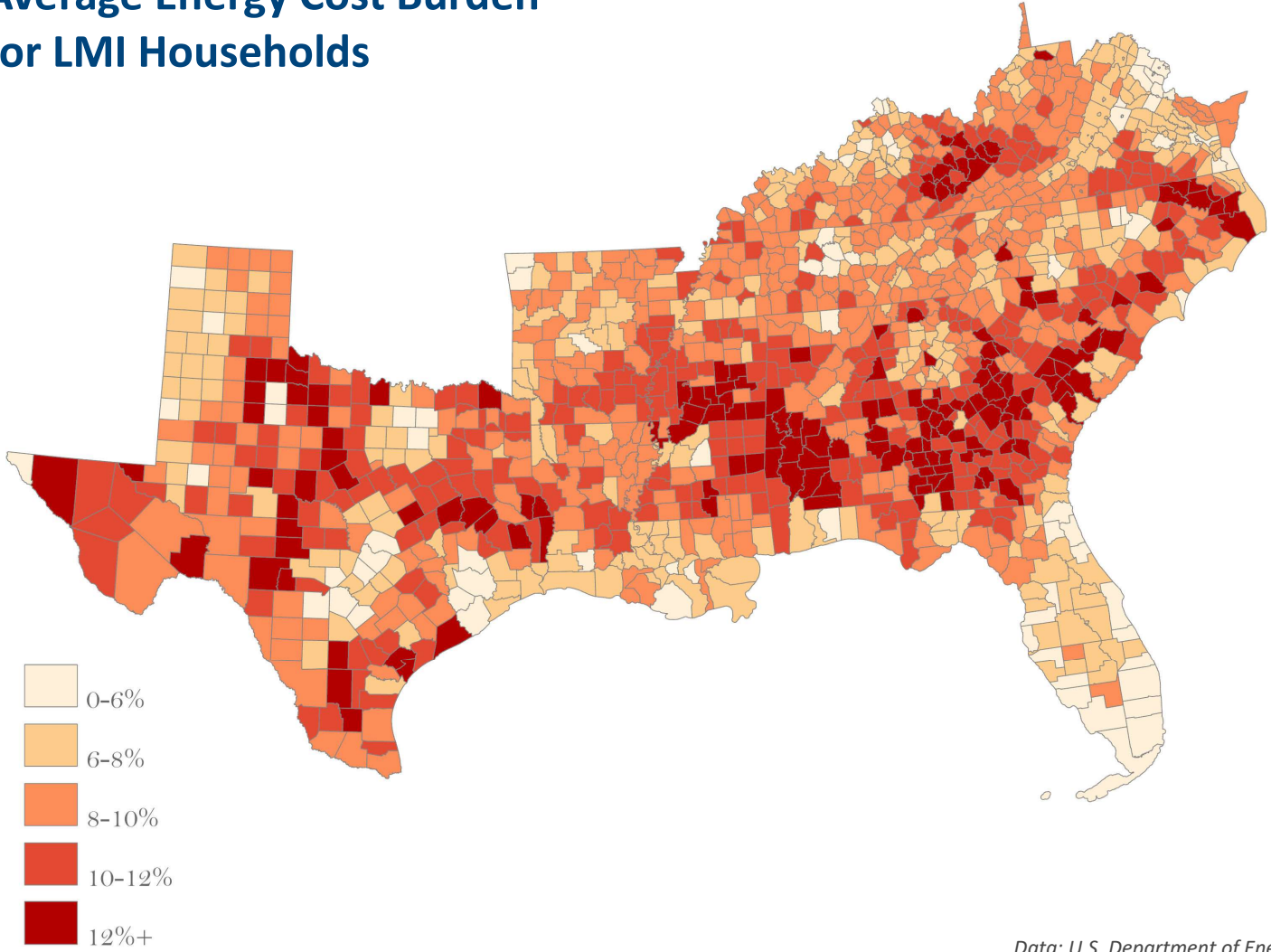
of households reducing consumption of food or medicine to pay for energy

## Average Energy Cost Burden for Non-LMI Households



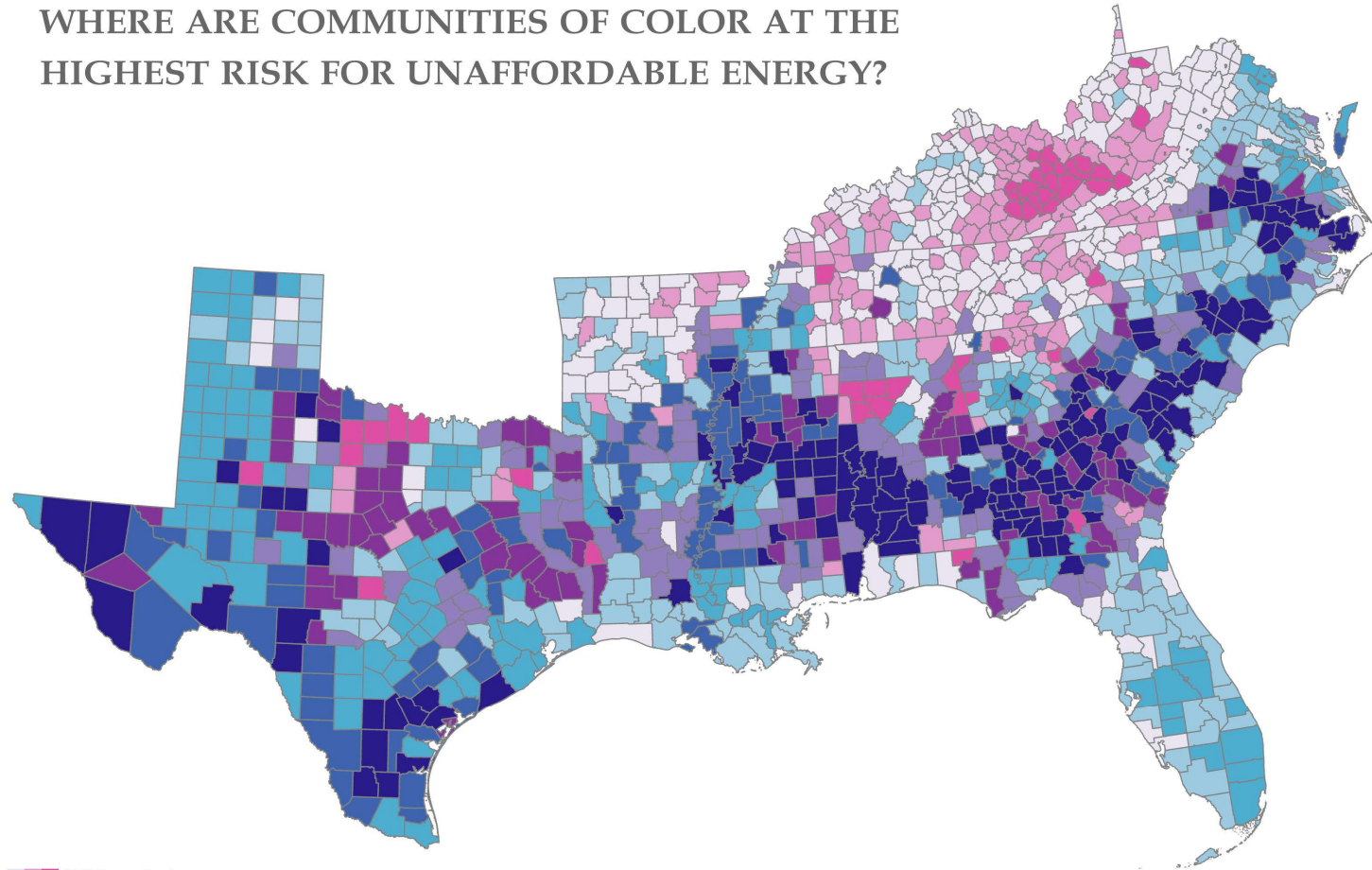
*Data: U.S. Department of Energy,  
Low Income Energy Affordability  
Data (LEAD) Tool. Map: Will  
Bryan.*

# Average Energy Cost Burden for LMI Households



Data: U.S. Department of Energy,  
Low Income Energy Affordability  
Data (LEAD) Tool. Map: Will

# WHERE ARE COMMUNITIES OF COLOR AT THE HIGHEST RISK FOR UNAFFORDABLE ENERGY?



LMI Energy Burden  
Proportion of Minority Residents



Data: U.S. Department of Energy, Low Income Energy Affordability Data (LEAD) Tool and U.S. Census Bureau. Map: Will

# What is Beneficial and Equitable Electrification?

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## Beneficial

Regulatory Assistance Project (RAP): For electrification to be considered beneficial, it must meet one or more of the following conditions without adversely affecting the other two:

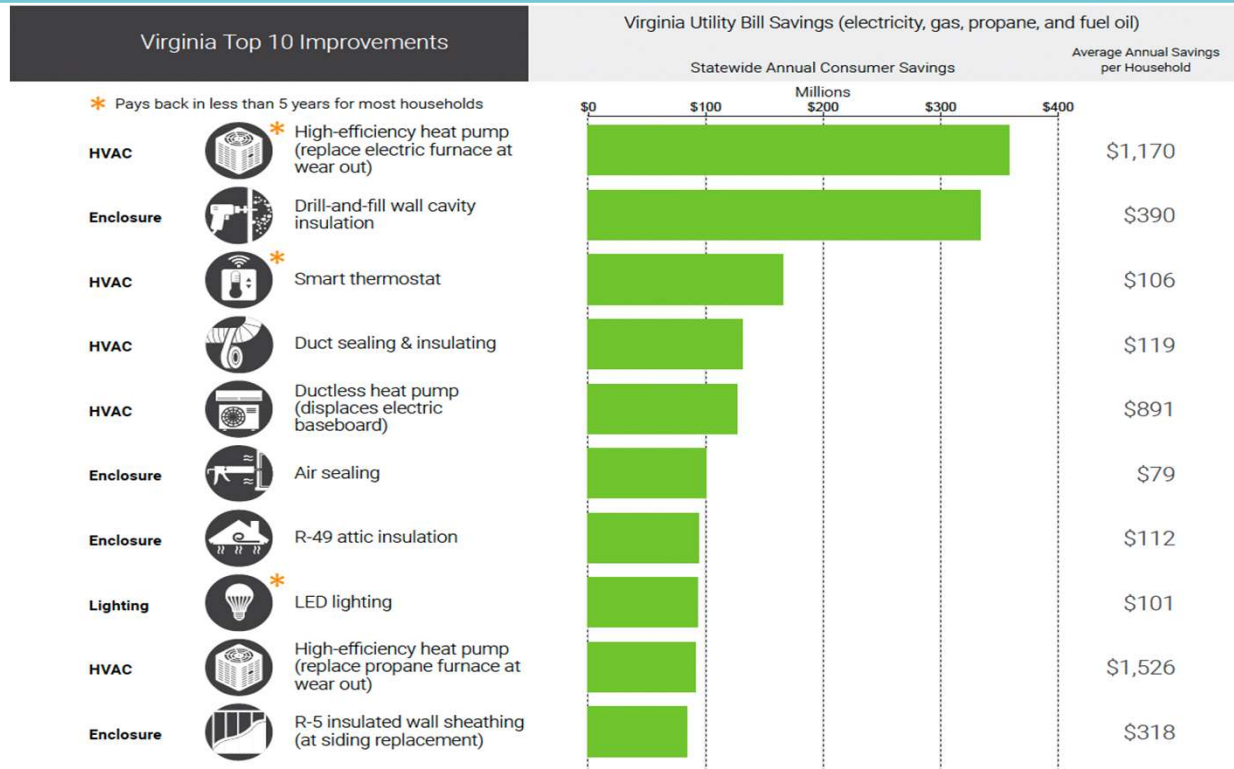
1. Saves consumers money over the long run,
2. Enables better grid management,
3. Reduces negative environmental impacts.

## Equitable

Saves consumers money over the long run without increasing energy costs for low-and moderate-income households in the short run. Electrification must also be accessible and affordable to underrepresented communities, and these communities should be empowered and engaged in decision-making. (aligns with [BPA](#) policy plank)



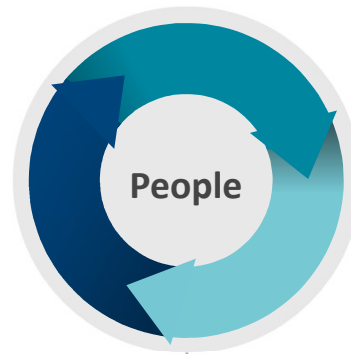
# Cost Effective Measures



<sup>1</sup>U.S. Department of Energy, January 2017. *U.S. Energy and Employment Report*

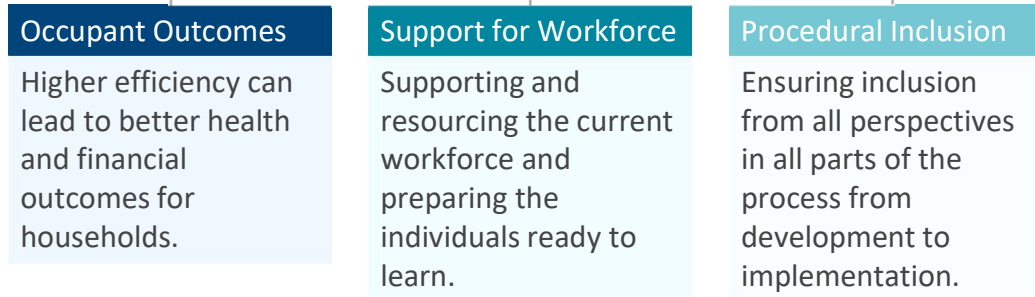
## Shifting the Focus

Traditionally, we think of building energy policies as effective if, and only if, they don't increase the **initial cost** of a building, reduce **kWh** and **CO<sup>2</sup>**, save **jobs**, and are technically **feasible**.



All of those elements are important **and** we must remember the bigger why of buildings.

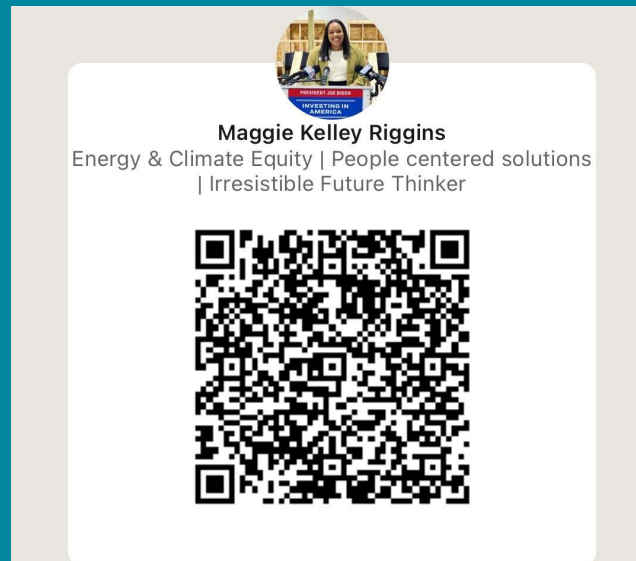
**What are buildings if not for their occupants?**



# Questions?

[Mkelleyriggins@seealliance.org](mailto:Mkelleyriggins@seealliance.org)

LinkedIn QR code



# Thank You

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**SMART ENERGY. STRONG. ECONOMY. FOR ALL.**

**[WWW.SEEALLIANCE.ORG](http://WWW.SEEALLIANCE.ORG)**

Inclusive Decarbonization  
**Audience Q&A**

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Up Next  
**CLOSING REMARKS**

*We hope you will join us tomorrow*