



AUGUST 21-23, 2018 • CLEVELAND, OHIO

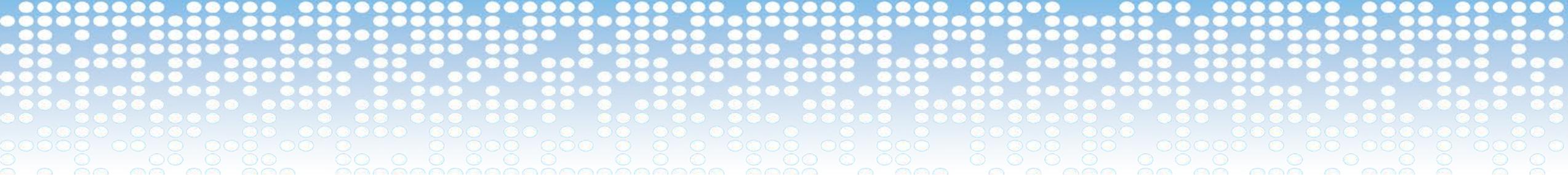
More Affordable Energy Upgrades for America's Families

Thursday, August 23rd
4:00 – 5:30 PM



Panelists:

- Stefen Samarripas, ACEEE
- Deborah Philbrick, Elevate Energy
- Daniel Ticona, Freddie Mac



Addressing Urban and Rural Energy Burdens

Stefen Samarripas
Senior Research Analyst

Better Buildings Summit
August 23, 2018



The American Council for an Energy-Efficient Economy is a nonprofit 501(c)(3) founded in 1980. We act as a catalyst to advance energy efficiency policies, programs, technologies, investments, & behaviors.

Our research explores economic impacts, financing options, behavior changes, program design, and utility planning, as well as US national, state, & local policy. Our work is made possible by foundation funding, contracts, government grants, and conference revenue.

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ACEEE
American Council for an Energy-Efficient Economy

APRIL 2016

Lifting the High Energy Burden in America's Largest Cities: How Energy Efficiency Can Improve Low Income and Underserved Communities

Ariel Dreihobl and Lauren Ross



JULY 2018

The High Cost of Energy in Rural America: Household Energy Burdens and Opportunities for Energy Efficiency

Lauren Ross, Ariel Dreihobl, and Brian Stickles



Urban Analysis (2016): [aceee.org/research-report/u1602](https://www.aceee.org/research-report/u1602)

Rural Analysis (2018): [aceee.org/research-report/u1806](https://www.aceee.org/research-report/u1806)

What are Energy Burdens?

Energy burden % =
Annual energy costs/Annual household income
E.g. (\$200/month) x 12 months/\$60,000 = 4%

Median energy burdens:

Rural burden: 4.4%

Metropolitan burden: 3.1%

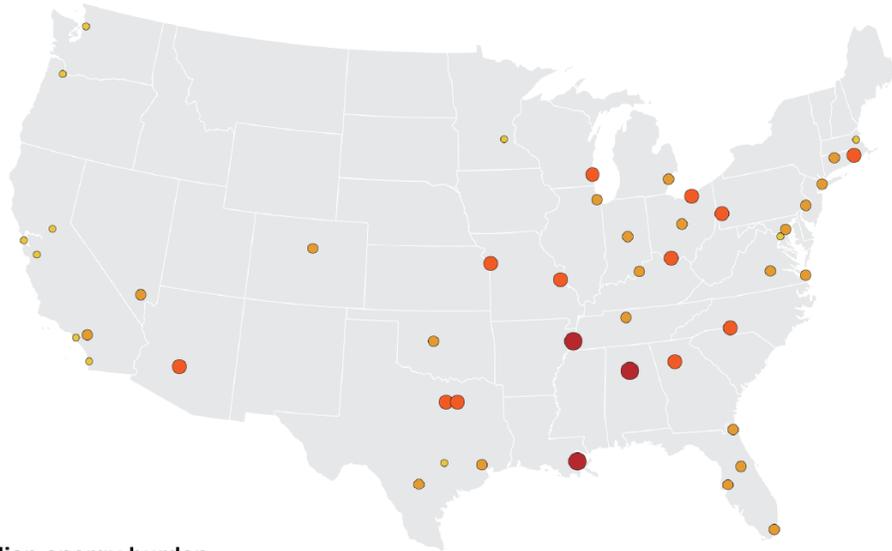
National burden: 3.3%

(Source: 2015 American Housing Survey)

Drivers: physical, economic, policy, behavioral

Low energy prices do not equate to affordable bills!

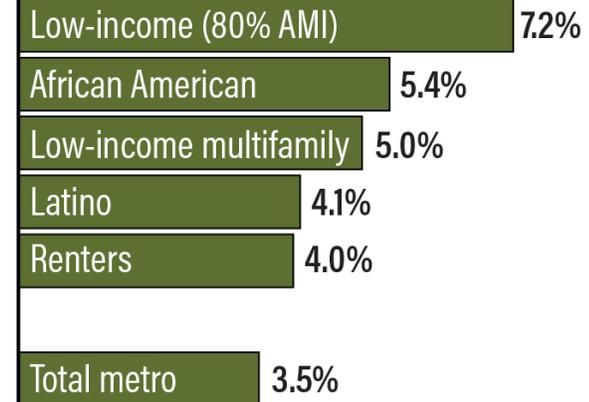
Energy burden in largest metro areas



Median energy burden
● 5+% ● 4-5% ● 3-4% ● 1-3%

Energy burden: percent of income spent on energy bills

Metro energy burden by demographic*



*Based on median across selected cities.

Urban Energy Burdens

Energy Efficiency: A Long-Term Solution

- Energy efficiency provides long-term bill savings for households
 - Can lower burdens by 25% and save households up to \$400/year
 - Reduces utility disconnections
- Additional benefits:
 - Positive health and wellbeing outcomes
 - Increased school performance for children (Denson and Hayes 2019)
 - Improved household financial security
- With these benefits in mind, some states and cities are setting goals to reduce high burdens and creating targeted energy efficiency initiatives



Policy Recommendations

1. States should set low-income spending/savings targets for energy efficiency programs and/or modify cost-effectiveness requirements
2. States and cities should expand energy efficiency programs for low-income households
3. Support financing options for affordable multifamily building owners and low-income households
4. Expand education and training opportunities for energy efficiency contractors



Program Recommendations

1. Provide adequate funding to make home health and safety repairs
2. Partner with local community, nonprofit, and religious organizations
3. Leverage other utility or weatherization programs
4. Target property owners to reach renters
5. Collect and track demographic data to better target and reach customers



Contact Information

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Features of Successful Low-Income Energy Efficiency Programs

August 2018

Deborah Philbrick

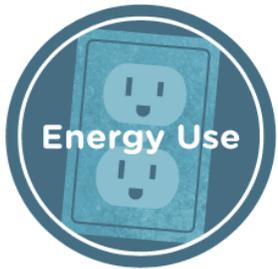
Better Buildings Summit



Our Mission: Smarter Energy Use for All



We give people the resources they need to make informed energy choices.



Getting energy use right saves money, increases comfort, creates jobs, and protects the environment.



We ensure the benefits of clean and energy efficient energy use reach those who need them most.



Barriers for LMI Households to Access Clean Energy Programs

What are the key elements to the program design?

Does it remove obstacles to participation?



Considerations for a Successful LMI Program



Conduct a baseline analysis



Target audience: Do you know who you're serving?



Jobs & Training: Impact beyond the upgrade



Barrier Spotlight: Income Qualifications & Verification

What does low-income mean to your program?

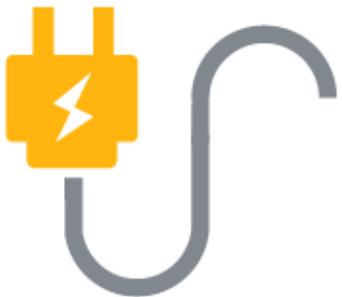
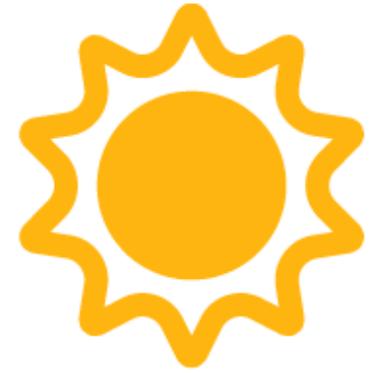
- 200% FPL, 150% FPL, 80% AMI
- Streamline with other programs
- Geographic eligibility



Promising Practice: Integrate Efficiency & Renewables

Colorado couples WAP & LIHEAP \$\$ to install rooftop solar

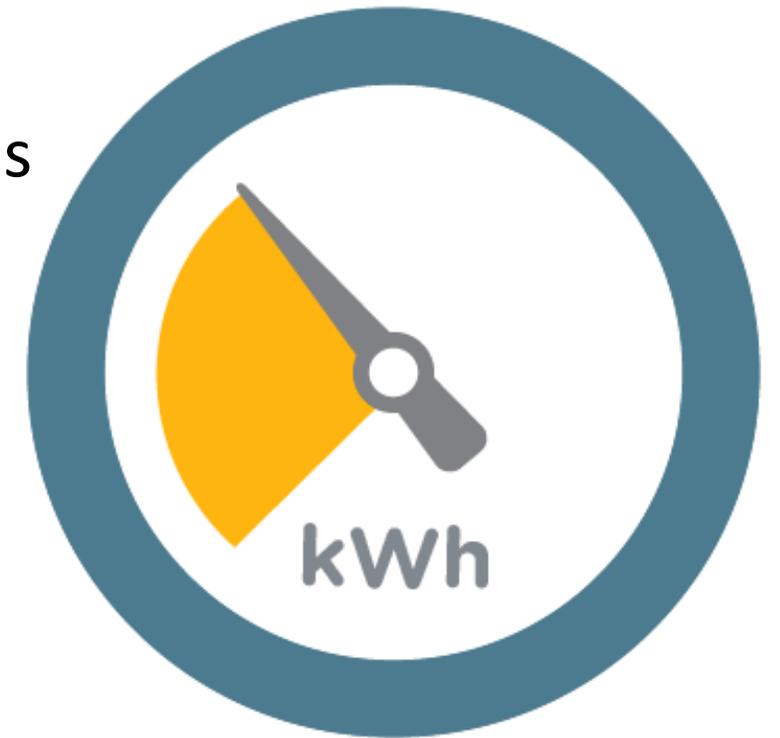
- Anticipated \$400 savings/year
- Made possible by the 2005 Energy Policy Act (SIR>1)



Promising Practice: Accessibility of Broadband in Rural Communities

Tennessee's “Broadband Accessibility Grant Program”

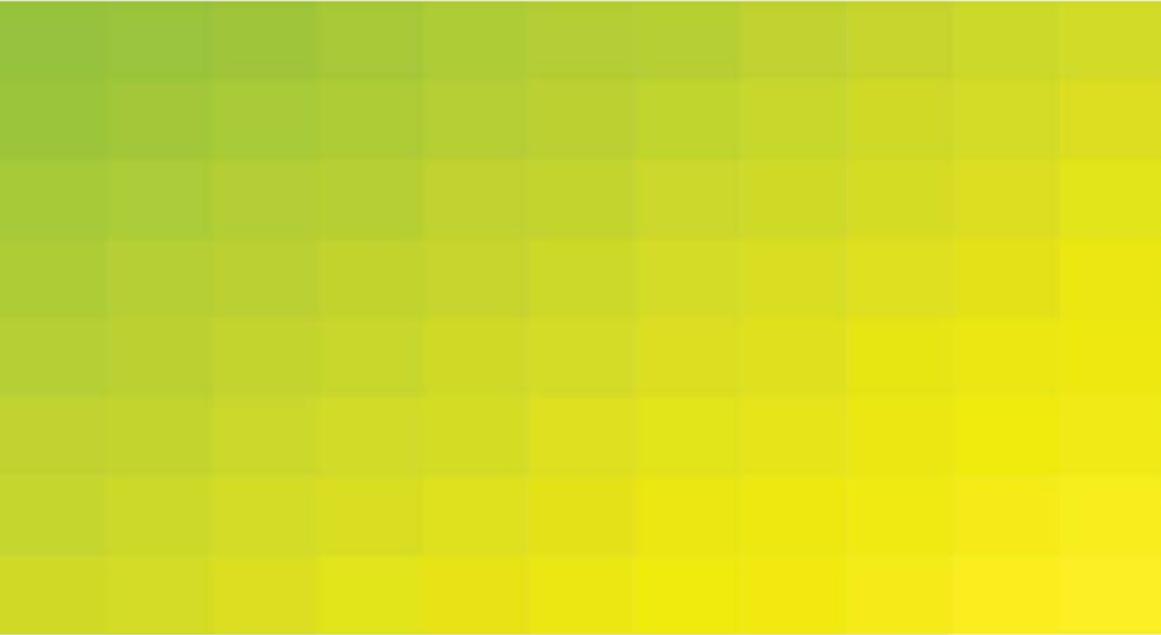
- \$30M over three years
- Smart homes require reliable internet connections



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Activities to Support Financing of Energy Efficient Homes

Daniel Ticona

Manager, Single-Family Affordable Lending



Freddie Mac's Mission

A *better* Freddie Mac

...and a *better* housing finance system

For families

...innovating to improve the liquidity, stability and affordability of mortgage markets

For customers

...competing to earn their business

For taxpayers

...reducing their exposure to mortgage risks

Duty to Serve Overview

The Housing and Economic Recovery Act of 2008 established for the GSEs a duty to serve very low-, low- and moderate-income families in three historically underserved markets:



Manufactured Housing

Titled as

- **Real property** -- resident finances the unit structure and the land together
- **Personal property** -- resident finances the unit structure without owning the land



Rural Housing

Regions

- Middle Appalachia
- Lower Mississippi Delta,
- Colonias – located in Arizona, California, New Mexico and Texas

Populations

- Members of a federally recognized Native American tribes
- Agricultural workers



Affordable Housing Preservation

- Financing of single-family **energy efficiency** improvements on first lien mortgages.
- Affordable homeownership preservation through **shared equity** programs administered by nonprofits, or state or local governments.



Each year, the Federal Housing Finance Agency is required to evaluate and rate each Enterprise's performance in each underserved market and report the results to Congress.

Affordable Housing Preservation

Energy Efficiency – Strong Focus Now

- Low- to mid-income markets face a disproportionate energy burden
- Many challenges prevent communities from taking advantage of energy efficiency
- Low- to mid-income assistance funds shrinking while the needs are growing
- Serving low-income populations with effective programs/initiatives is critical



Energy Efficiency Financing

Financing of Energy or Water Efficiency Improvements on Single-Family Properties in Support of Affordable Housing

Affordable Housing Preservation

Energy Efficiency

- Freddie Mac supports the energy efficiency market as a way to preserve home affordability
- We currently support this market by
 - Purchasing mortgages on properties with energy efficiency features
 - Allowing lenders to use energy efficiency to compensate for higher debt-to-income ratios
 - Permitting cash-out refinance transactions that allow borrowers to
 - make energy efficiency improvements
 - pay off existing unsecured debt obligations
 - pay off property assessed clean energy (PACE) loans
- Our focus is to support financing of single-family energy efficiency improvements on first lien mortgages that support
 - Reduction of energy or water consumption by <15%
 - Utility savings over the improvement's expected life exceeding the cost of installation

Single-Family Energy Efficiency

Energy or water efficiency improvements on first-lien, single-family homes

Freddie Mac
will:

- Conduct research on the impact of energy efficiency improvements on property values and loan mortgage performance; publish white paper
- Design new or improved product flexibilities
- Develop valuation guidance and data collection mechanisms to account for energy-efficient features

Challenges:

- Lack of property-level data
- Difficult to assess value of energy-efficient properties
- Limited awareness about energy efficiency benefits and financing products available



Thank You

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Questions?

