

Energy Affordability in Rural Communities: Rural energy burdens, efficiency challenges and paths forward

NEUAC Conference
Tuesday, June 26, 3:15-4:30pm

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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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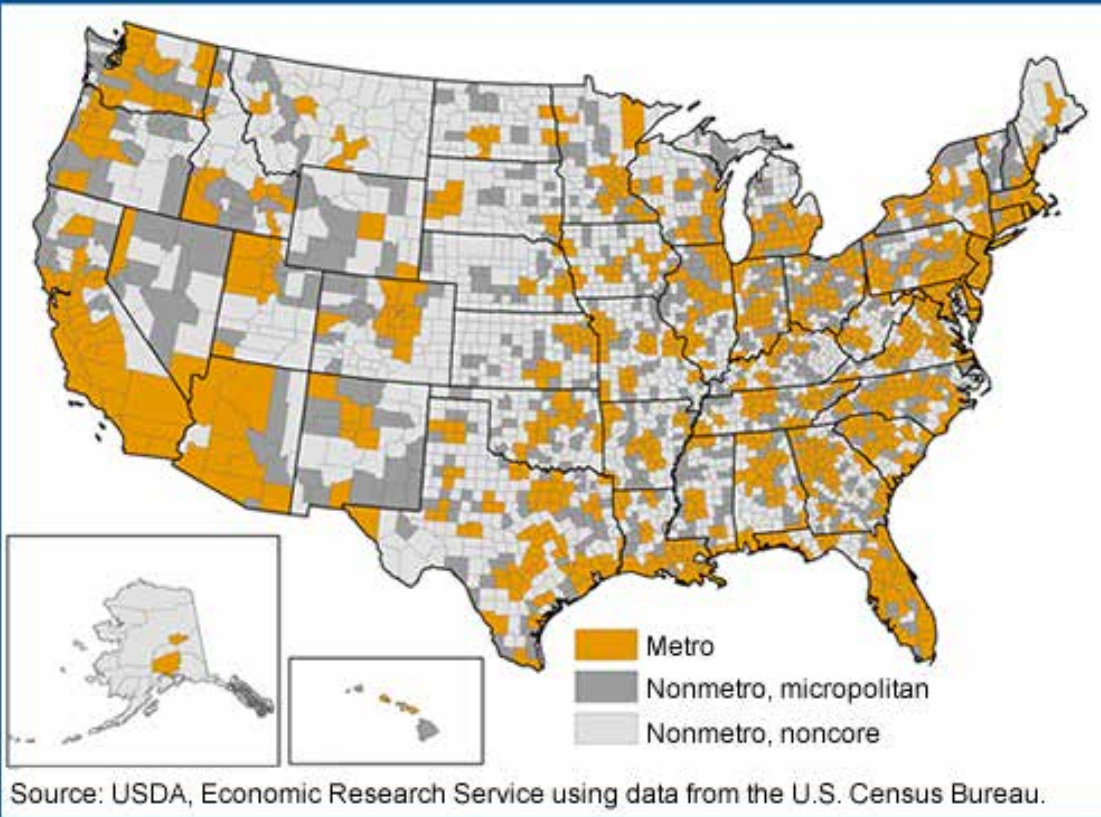


Energy Efficiency for All (EEFA)

Ensure housing and energy policies provide sufficient resources to advance investments in energy efficiency in affordable multi-family housing, which will combat climate change, improve public health, increase energy affordability and support environmental justice.



Metro, nonmetro micropolitan, and nonmetro noncore counties, 2013*



Rural and Small Town America

Common characteristics:

- Household income
- Population & density
- Housing age and type
- Heating fuel
- Electricity/utilities provider

* Nonmetro counties include urban areas with populations <50,000 and small towns

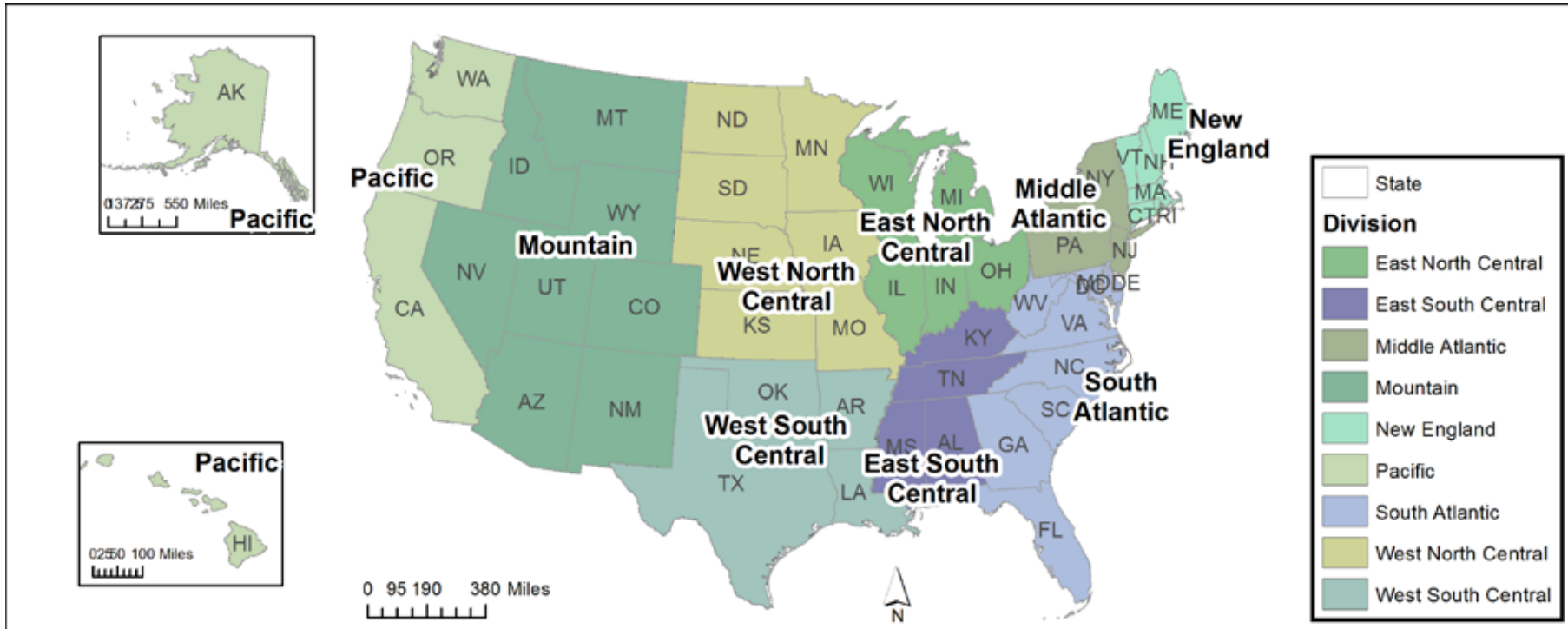
Snapshot of rural communities

Rural household characteristics	
Total rural homes	18,918,000
% of rural in the US	16%
% of single family	74%
% manufactured housing	13%
% multifamily	12%
% low-income	41%
Natural gas fuel	31%
Propane fuel	11%
Median unit age	45 years

Source: 2015. U.S. Census Bureau, American Housing Survey. Households outside metro areas (including micropolitan and micropolitan)



Residential Rural Energy Burdens Analysis: Study and Results

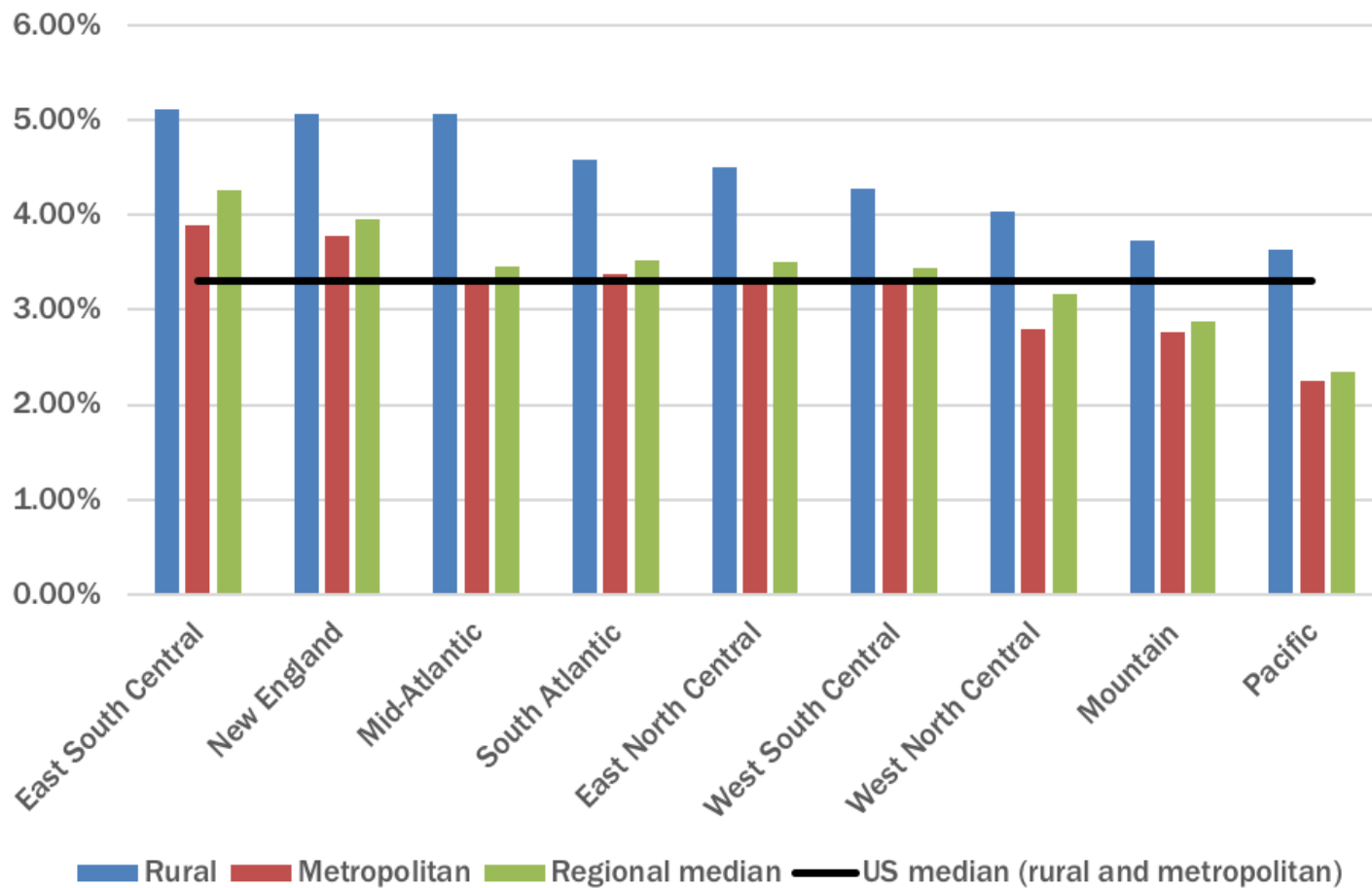


Regional Study

Methods

- Definition of energy burden
 - Annual household energy spending/annual household income
 - *Excludes transportation and water*
- Definition of rural household
 - Rural Census tracts (RUCA Codes 4 through 10): micropolitan areas, small towns, and rural areas
- Subgroups for analysis
 - Housing type, tenure status, ethnicity, age, income
- Data source for analysis
 - American Housing Survey, 2015
 - Self-reported data



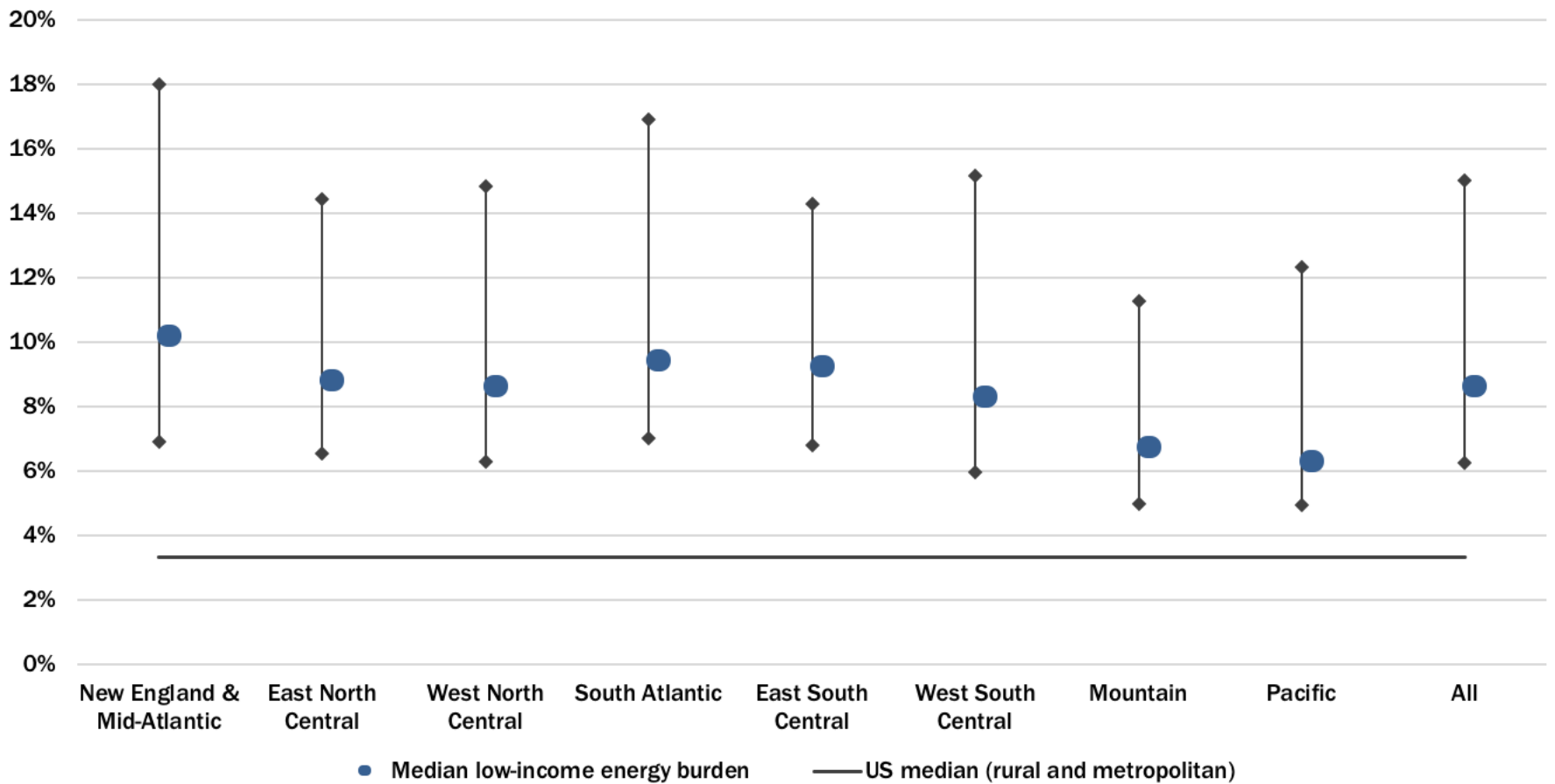


Preliminary findings: Regional burdens



Preliminary Findings: Rural median demographic group comparisons

- Low-income **three times greater** than non-low-income households (9% vs. 3.1%)
- Quarter of low-income **greater than 15%**
- Manufactured housing **42% higher** than single-family and 32% higher than rural median
- Multifamily 2-4 unit residents **20% higher** than single family
- Elderly **44% higher** than non-elderly
- Renters **29% higher** than owners
- Nonwhite **19% higher** than white households



Preliminary Finding: Low-income energy burden quartiles

Key data takeaways

- Rural experience higher energy burdens than non-rural households
- Rural low-income households disproportionately impacted (One quarter > 15%)
- Rural manufactured housing are especially inefficient
- Nonwhite, elderly, and multifamily (2-4 units) also experienced higher burdens than counterparts



How does EE fit in?

- **Long-term solution:** Compliment bill assistance programs and achieve affordability by permanently reducing high energy burdens
- **Bill savings:** DOE estimates WAP saves an average single family home \$283/year
- **Additional benefits:** Health and environment, jobs and economic development, reduced utility costs, etc.

Programs for Improving Energy Affordability in Rural Communities

Rural Affordability Program Types

- Bill assistance
 - e.g. LIHEAP, modified rate design
- Energy efficiency and weatherization
 - e.g. DOE-WAP, other federal programs, utility-led ratepayer funded EE, on-bill tariffs
- On-bill financing
 - e.g. on-bill loans



Rural Program Challenges and Ways Forward

- Serving rural low-income customers, renters, and manufactured homes
- Broadband access
- Propane and fuel oil
- Managing program resources
- Rural EE workforce development
- Program marketing
- Program evaluations and data



Rural
energy
burden
report to
be released
in **mid-July!**

July 2018

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Upcoming ACEEE Conference on Energy Efficiency in Rural America

October 29, 2018

Atlanta, Georgia

This one-day, multi-track conference will precede the two-day annual meeting of the Southeast Energy Efficiency Alliance (SEEA). It will explore the role of energy efficiency in rural communities, the energy burden of low-income customers, and the delivery of effective programs to rural communities.

For more info, visit

aceee.org/conferences/2018/rural



Thank you for your attention!

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Upcoming ACEEE Conferences

International Symposium on Energy Efficiency	June 26	Washington, DC
Summer Study on Energy Efficiency in Buildings	Aug 12-17	Pacific Grove, CA
Behavior, Energy, and Climate Change Conference	Oct 7-10	Washington, DC
Rural Energy Conference	Oct 22	Atlanta, GA
Conference on Health, Environment and Energy	Dec 3-5	New Orleans, LA

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