Energy Efficiency and Assisting COVID-Impacted Communities

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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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The problem



Pre-COVID ACEEE Energy Burden Analysis

Energy Burden =

Annual energy bills/Annual income

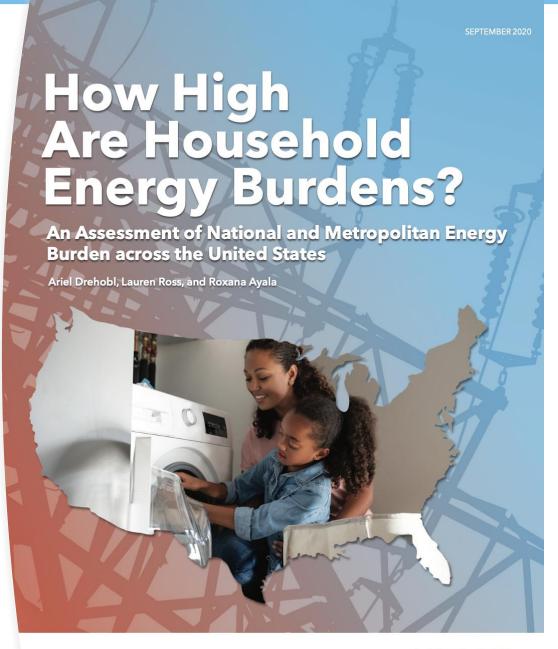
• E.g., \$2,000/\$50,000 = 4% energy burden

Annual energy bills include electricity, natural gas, and other heating fuels.

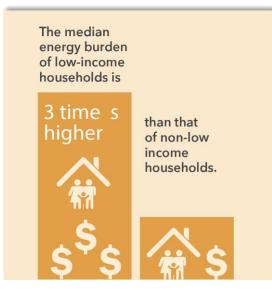
Builds from previous ACEEE research

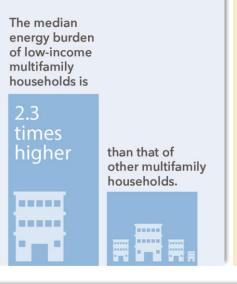
- 2016 Report: <u>aceee.org/research-report/u1602</u>
- 2018 Report: <u>aceee.org/research-report/u1806</u>

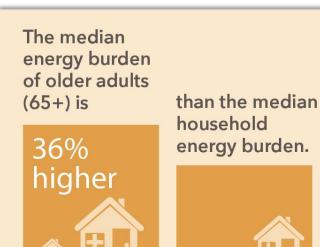


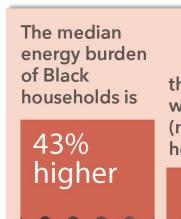














The median energy burden of Hispanic households is



than that of white (non-Hispanic) households.



The median energy burden of Native American households is



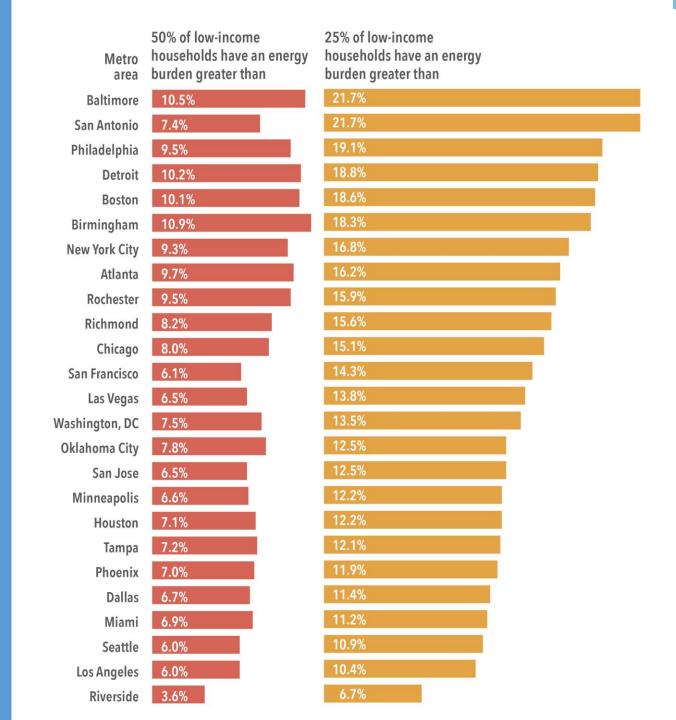
than that of white (non-Hispanic) households.





Low-Income Metro Energy Burdens

Median burdens and upper quartile burdens for low-income households in 25 metro areas





What causes high energy burdens?

Causes: physical, economic, policy, and behavioral factors

IMPORTANT: Low utility rates ≠ affordable energy!











Impacts and Correlations of High Energy Burdens

High burdens correlated with:

- Poorer indoor air quality
- Increased respiratory diseases (e.g., asthma, COPD)
- Increased stress and negative mental health impacts
- Negative impacts on school success
- Perpetuates cycles of poverty
- Increased utility disconnections
- Increased reliance on payday lending





COVID and energy insecurity - a new urgency



Energy efficiency efforts are shutting down due to COVID-19, threatening jobs and savings

By Robert Walton Published April 6, 2020

Utility customers owe up to \$40B in COVID-19 debt, but who will pay it?

Shutoff moratoria have provided a reprieve for some on 2020 power bills, but still-

As temperature drops and virus cases climb, groups file for new Missouri utility disconnection moratorium

Mississippians need COVID-19 utility

relief with national shutoffs moratorium

Justice

A Pandemic and Surging Summer Heat Leave Thousands Struggling to Pay **Utility Bills**

High unemployment, stay at home orders and rising temperatures due to climate change are fueling energy insecurity and furthering the need for assistance.



- **CORONAVIRUS PANDEMIC**
- Hundreds of thousands of people face utility
- shutoffs as pandemic surges



Utilities shutoffs during the pandemic are a nightmare Pa. should end | Opinion

Posted: November 16, 2020 - 1:12 PM



Energy efficiency as an environmental justice strategy

"I'm convinced that the best and most equitable way to address climate change is to push energy efficiency into every corner of our economy....I would challenge anyone to find an energy solution that answers so many of our challenges. Doubling down on energy efficiency for everyone isn't just the right thing to do, it's the smart thing to do."



Paula Glover, President, Alliance to Save Energy



How does energy efficiency fit in?

 Long-term solution to high burdens and more affordable housing

 Can help address energy and health equity

Provide bill savings for households

 Can lower burdens by 25% and save households up to \$400/year

 Additional benefits such as health and job creation

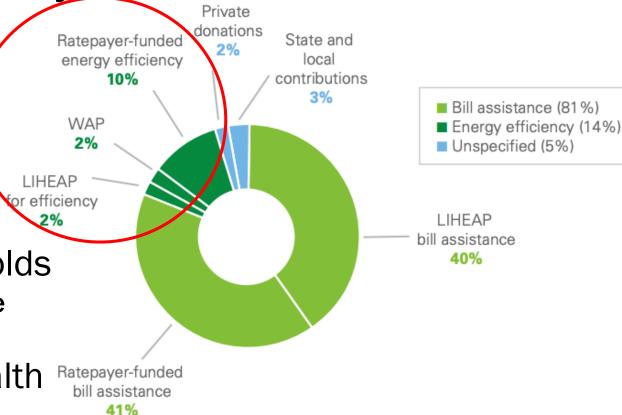


Image from Drehobl and Ross (2016) aceee.org/research-report/u1602



Common health stressors in homes include... V Formaldehyde

Formaldehyde Carbon Monoxide Other VOCs

Chemical

Physical

Biological

Particulates Radon

Humidity Condensation Extreme Heat Extreme Cold

Dust & Allergens Mold

Pests Bacterial agents Weatherization measures help to... Filter and Circulate Air **Regulate Indoor Moisture** and Temperature Strengthen Barriers to **Outdoor Triggers**

This reduces or prevents health issues like...

Asthma attacks COPD **Bronchitis** Nasal allergies Colds, rhinitis **Headaches** Heart disease Hypertension Sinusitis Fatigue Anxiety & stress Other mental illness Lung cancer

And leads to...

Reduced financial burden and stress from energy and medical bills

Fewer ER trips, physician visits, and premature deaths

Fewer days of school or work lost

Improved comfort and safety

National policy solutions



Energy efficiency as an economic recovery and climate strategy

- *Near- and long-term benefits*
- Creates jobs now
- Reduces greenhouse gas emissions for years to come
- Immediate savings for consumers and businesses and promotes long-term affordability
- Supports energy and housing justice
- Improves public health





Opportunities for federal action

- Federal aid bill(s) should include funding for energy efficiency investments, targeted at indebted, overburdened households and inclusive workforce training
- Bill assistance/utility debt relief should be paired with energy efficiency and weatherization
- State and utilities need better data and should be encouraged to identify and provide opportunities to increase access to energy efficiency, bill assistance, and other support for indebted customers who are at-risk of shutoffs



Opportunities for federal action

- Increase support for the Weatherization Assistance Program
- HOPE4HOMES: Implement new U.S. Department of Energy (DOE) and state rebate programs for home energy upgrades and also contractor training/workforce development
 - Incentives doubled households with income less than 80% of area medians
- Multifamily programs: Fund energy upgrades to low- and moderateincome multifamily housing
- Support affordable financing to help households pay costs not covered by grant; include consumer protections
- Tax incentives for manufactures of heat pumps and heat pump water heaters to make them more accessible

