Energy Burdens: Overview of Research and Policy

NASEO Annual Meeting
Tuesday, September 19th, 8:45am–9:45am

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American Council for an Energy-Efficient Economy
What is an energy burden?

• Proportion of a household’s annual income that goes towards home energy bills

• Energy burden can include:
  • Electricity
  • Natural Gas
  • Other heating fuels
  • Transportation fuel (ACEEE excluded)
  • Water (ACEEE excluded)

• The average energy burden is 3.5%
• Researchers estimate 6% as an affordable energy burden
What causes high energy burdens?

1. Physical factors
   - Inefficient HVAC, poor insulation/air sealing, inefficient large-scale appliances, extreme weather events

2. Economic factors
   - Chronic or sudden economic hardship, high up-front costs for efficiency upgrades

3. Policy factors
   - Insufficient or inaccessible bill assistance, weatherization or energy efficiency programs

4. Behavioral factors
   - Lack of information about programs or conservation measures, increased energy use due to age/disability

• NOTE: low utility rates ≠ affordable energy!
Energy burdens in US cities


[aceee.org/research-report/u1602](http://aceee.org/research-report/u1602)
Energy burdens in cities vs. states


[aceee.org/research-report/u1602](http://aceee.org/research-report/u1602)
Low-income energy burdens: quartiles


[ACEEE.org/research-report/u1602](http://aceee.org/research-report/u1602)
Key national findings

• Low-income household energy burdens were 2 times the average and 3 times non-low-income households

• Communities of color experienced higher energy burdens than white households

• Renters experienced higher energy burdens than owners

• Inefficient housing stock contributes to high burdens, and energy efficiency can help reduce high burdens

<table>
<thead>
<tr>
<th>Categories</th>
<th>Median national energy burden</th>
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</thead>
<tbody>
<tr>
<td>Low-income</td>
<td>7.2%</td>
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<tr>
<td>African American</td>
<td>5.4%</td>
</tr>
<tr>
<td>Latino</td>
<td>4.1%</td>
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<tr>
<td>Renter</td>
<td>4.0%</td>
</tr>
<tr>
<td>All households</td>
<td>3.5%</td>
</tr>
<tr>
<td>Owners</td>
<td>3.3%</td>
</tr>
<tr>
<td>White</td>
<td>2.3%</td>
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<tr>
<td>Non-low-income</td>
<td>2.3%</td>
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Multiple benefits of energy efficiency for low-income households

• **Lower monthly bills** (residents)
  • Examples: more disposable income, reduced stress, more money spent in the local economy

• **Improved housing** (residents)
  • Examples: better health and safety, increased property value, lower maintenance costs, greater housing satisfaction

• **Local economic development** (community)
  • Examples: More local jobs, improved quality of life, increased property value

• **Less power used** (utilities and community)
  • Examples. Reduced environmental pollutants, improved public health, avoided excess costs of increased power generation, capacity, and transmission investments
Rural energy burdens

- Report coming in Q1 2018
What can State Energy Offices do?

1. Include energy affordability in state energy planning processes
2. Act as convener of stakeholders involved in reducing high energy burdens
3. Support the improvement and expansion of low-income energy efficiency programs
ACEEE Resources

• Reports and Webpages
  • Low-income webpage: aceee.org/topics/low-income-programs
  • Low-Income Energy Efficiency Programs: A Baseline Assessment of Programs Serving the 51 Largest Cities: aceee.org/white-paper/low-income-ee-baseline
  • Lifting the High Energy Burden in America’s Largest Cities: aceee.org/research-report/u1602
  • Building Better Energy Efficiency Programs for Low-Income Households: aceee.org/research-report/u1601

• Working Groups
  • Low-Income Utility Working Group
  • Multifamily Utility Working Group

• Technical Assistance
## Upcoming ACEEE Conferences

<table>
<thead>
<tr>
<th>Conference</th>
<th>Date</th>
<th>Location</th>
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<tbody>
<tr>
<td>Behavior, Energy, and Climate Change Conference</td>
<td>October 15-18</td>
<td>Sacramento, CA</td>
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<tr>
<td>ACEEE National Conference on Energy Efficiency as a Resource</td>
<td>October 30- Nov 1</td>
<td>Litchfield Park, AZ</td>
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<tr>
<td>ACEEE Hot Water Forum</td>
<td>March 20</td>
<td>Portland, OR</td>
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The top convener in energy efficiency.
[aceee.org/conferences](http://aceee.org/conferences)