

# **The Systemic Problem of Energy Affordability: Energy Burdens in the Midwest**

**Midwest Energy Solutions Conference**  
February 18, 2021, 1:30–2:30pm

**Ariel Drehabl**  
Local Policy Manager, Energy Equity  
[adrehabl@aceee.org](mailto:adrehabl@aceee.org)



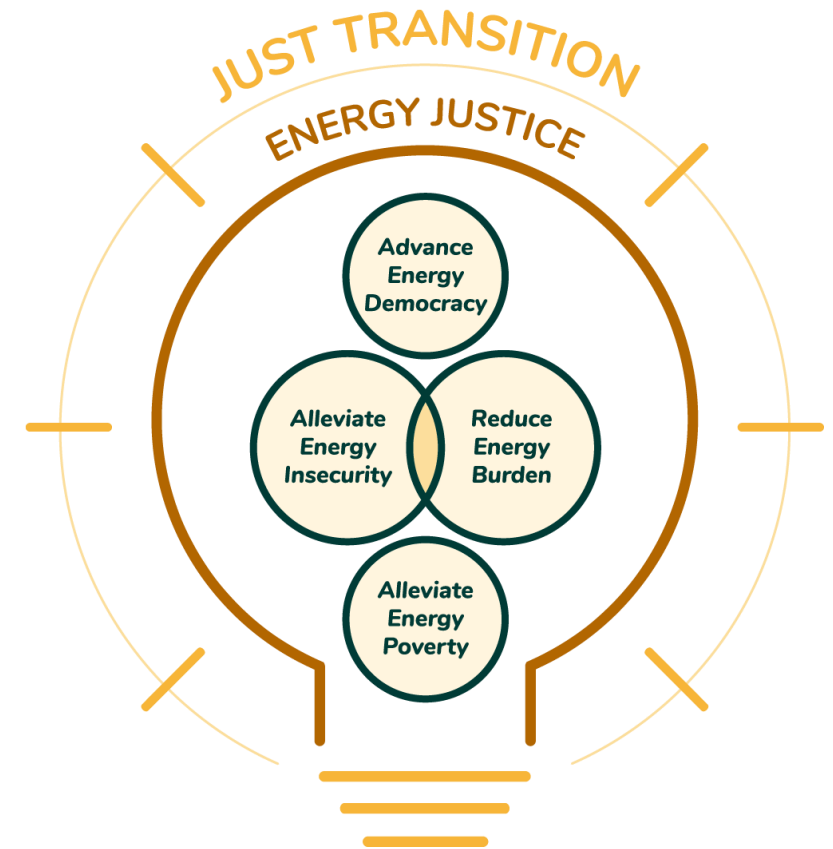
American Council for an Energy-Efficient Economy



- Non-profit research organization
- Founded in 1980
- 58 staff and US \$10 million/year budget
- Act as a catalyst to advance energy efficiency policies, programs, technologies, investments, & behaviors
- Funding comes from foundations, government agencies, contracts, conferences and corporate memberships

# What is Energy Justice?

- **Energy justice** (or energy equity) refers to:
  - *The goal of achieving equity in both the social and economic participation in the energy system, while also remediating social, economic, and health burdens on those historically harmed by the energy system (i.e., frontline communities)*
- Dimensions of energy justice/equity:
  - **Energy insecurity:** the hardships households face when meeting basic household needs
  - **Energy burden:** the expense of energy expenditures relative to overall household income
  - **Energy poverty:** a lack of access to energy itself
  - **Energy democracy:** the vision that communities should have a say and agency in shaping their energy future



Initiative for Energy Justice:  
[iejusa.org/section-1-defining-energy-justice/](https://iejusa.org/section-1-defining-energy-justice/)



# Causes of Energy Insecurity

- Energy insecurity is the result of a system of procedural, distributional, structural, and intergenerational injustices
- Historic and current policies have led to underinvestment and social and economic exclusion in Black, Hispanic, and other communities of color
  - E.g., Redlining (see photo and article), lack of access to mortgages and other loans, mass incarceration, employment discrimination, underfunded schools
- These policies result in energy insecurity and additional economic and social injustices
  - E.g., Racial segregation, high unemployment, high poverty rates, poor housing conditions, high energy bills, high rates of certain health conditions, lower educational opportunity, and barriers to accessing financing

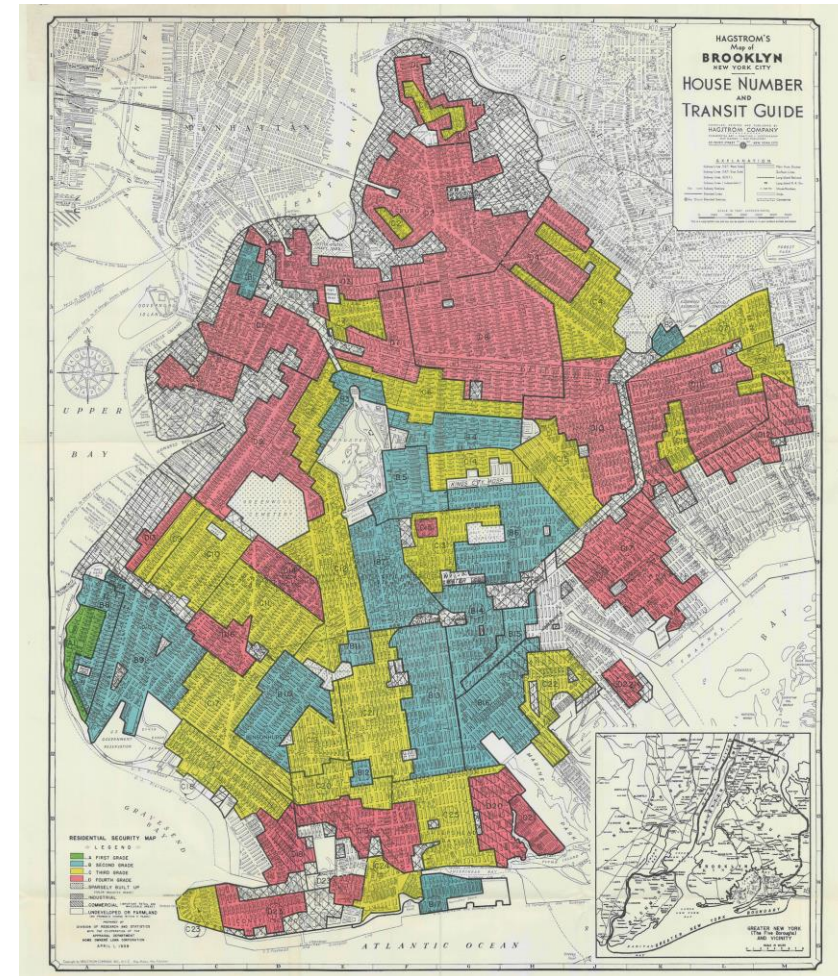


Image from NYT of redlining in NYC:  
<https://www.nytimes.com/2017/08/24/upshot/how-redlinings-racist-effects-last-ed-for-decades.html>

# New ACEEE Research

- Research on energy burdens illustrates inequities in the energy sector by showing who pays disproportionately more for energy
- **Energy Burden =**  
Annual energy bills/Annual income
  - E.g., \$1,500/\$50,000 = 3% energy burden
  - *Annual energy bills include electricity, natural gas, and other heating fuels.*
  - *Does not include households who do not pay for their energy bills directly.*
- Report published in September 2020
  - Analysis uses US Census Bureau's 2017 American Housing Survey Data nationally, regionally, and in 25 metropolitan statistical areas

## How High Are Household Energy Burdens?

An Assessment of National and Metropolitan Energy Burden across the United States

Ariel Drehabl, Lauren Ross, and Roxana Ayala





# Energy Burden Data for Midwestern Cities

- ACEEE uses American Housing Survey (AHS) data for energy burden analysis
  - Includes metropolitan statistical data (MSA) for select metro areas
- 2017 AHS dataset includes
  - **Chicago MSA:** Chicago–Naperville–Elgin, IL-IN-WI
  - **Detroit MSA:** Detroit–Warren–Dearborn, MI
  - **Minneapolis MSA:** Minneapolis–St. Paul–Bloomington, MN-WI
- 2019 AHS dataset includes
  - **Cincinnati MSA:** OH-KY-IN
  - **Cleveland MSA:** Cleveland–Elyria, OH
  - **Kansas City MSA:** MO-KS
  - **Milwaukee MSA:** Milwaukee–Waukesha–West Allis, WI



Images from <https://www.census.gov/programs-surveys/ahs.html>

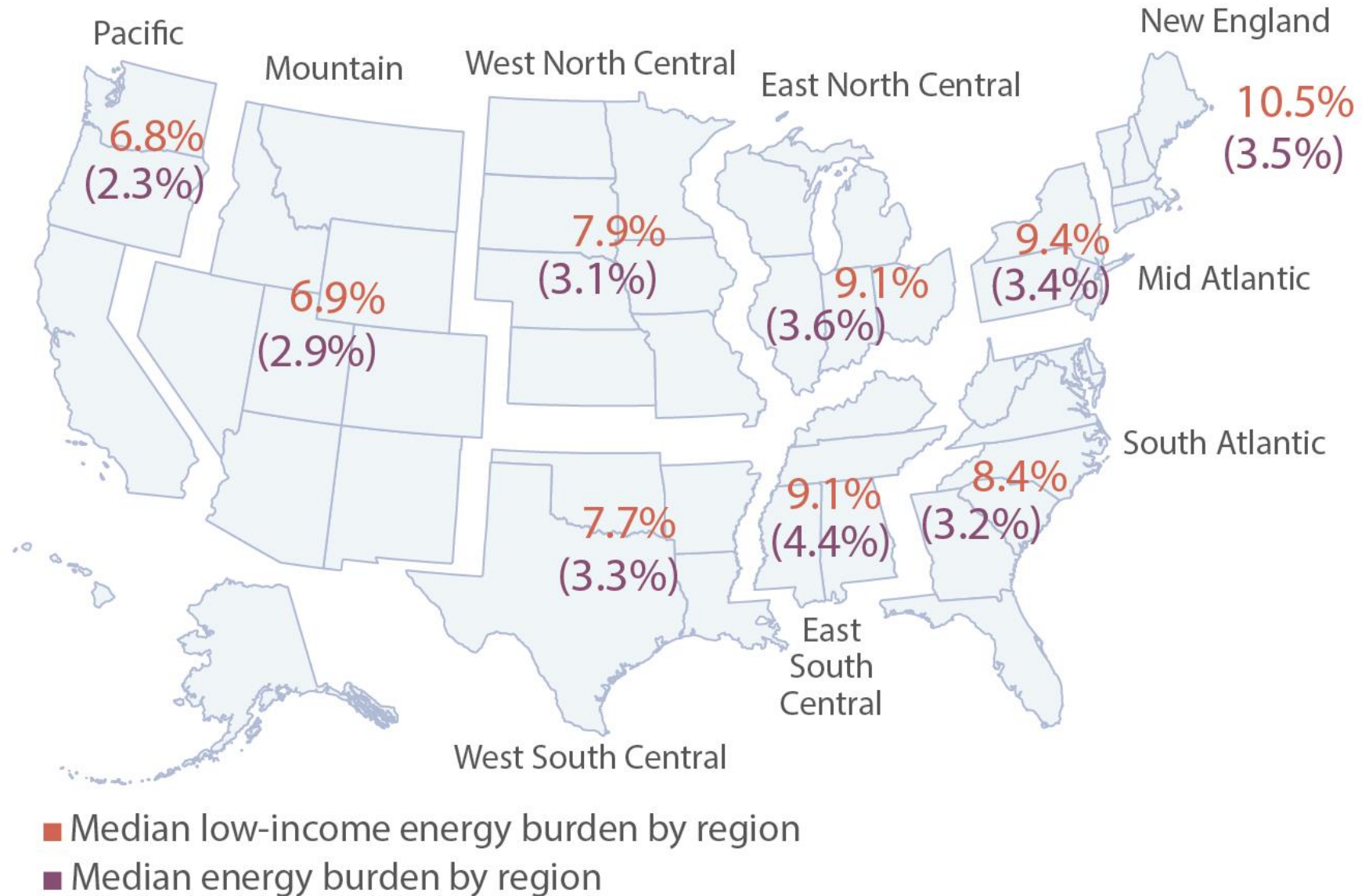
ACEEE will publish an update with 2019 data this year  
(i.e., Cincinnati, Cleveland, Kansas City, and Milwaukee)



# National Findings from ACEEE Energy Burden Study

- **Low-income, Black, Hispanic, Native American, older adults, and renters, experience disproportionately high energy burdens.**
- **Disproportionally high burdens are a universal issue.**
  - One-fourth of all US residents have a high burden (> 6%) and two-thirds of low-income households have a high burden.
  - Energy burden inequities are present nationally, regionally, and across all the metro areas—all cities and states can work to address disproportional burdens.
- **Energy efficiency is a promising long-term solution.**
  - Weatherization can reduce low-income energy burdens by 25%.
  - While we found that energy affordability strategies are becoming more common, more cities and states can create and track progress towards energy burden-related policy goals.

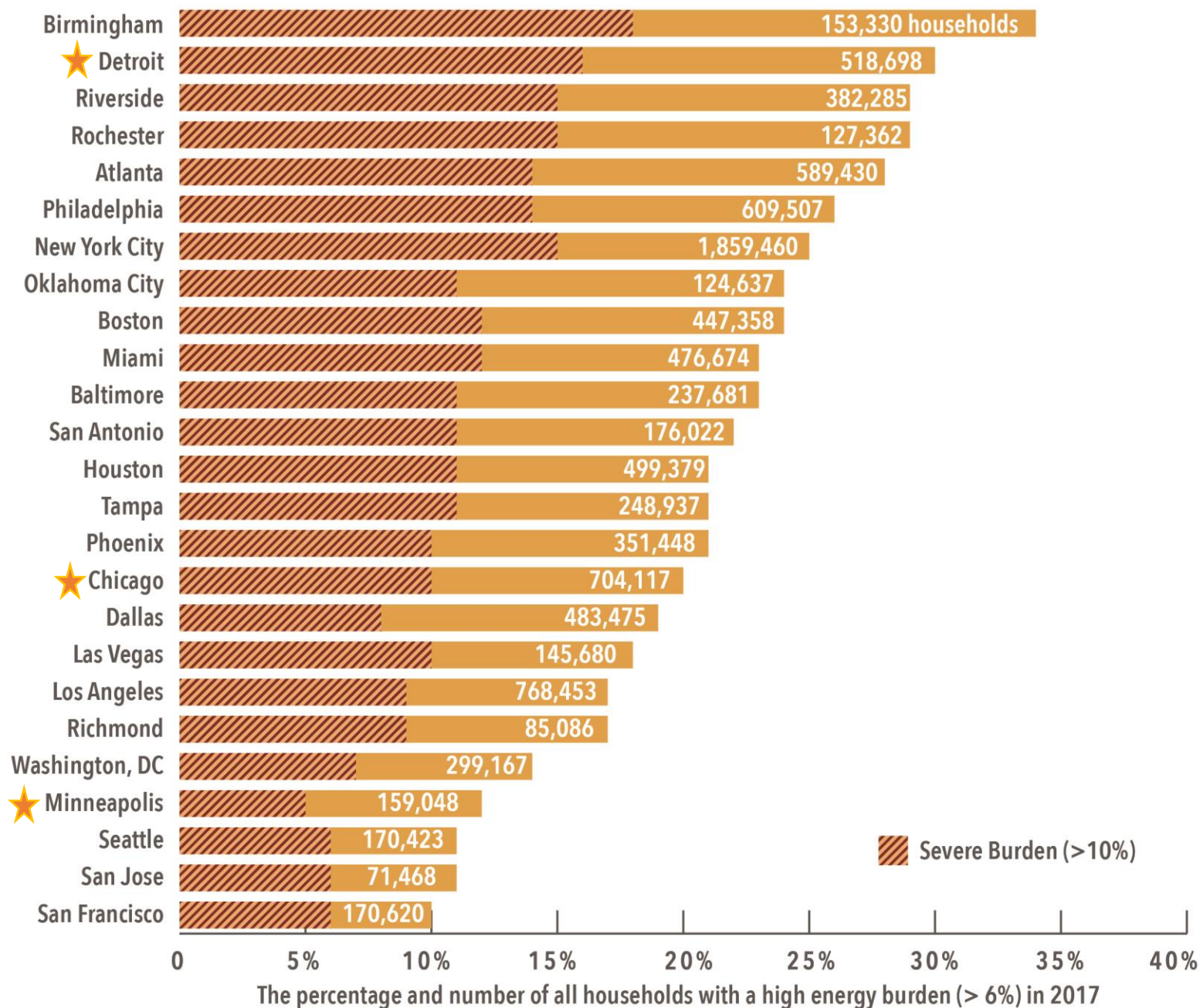
# Regional Energy Burdens





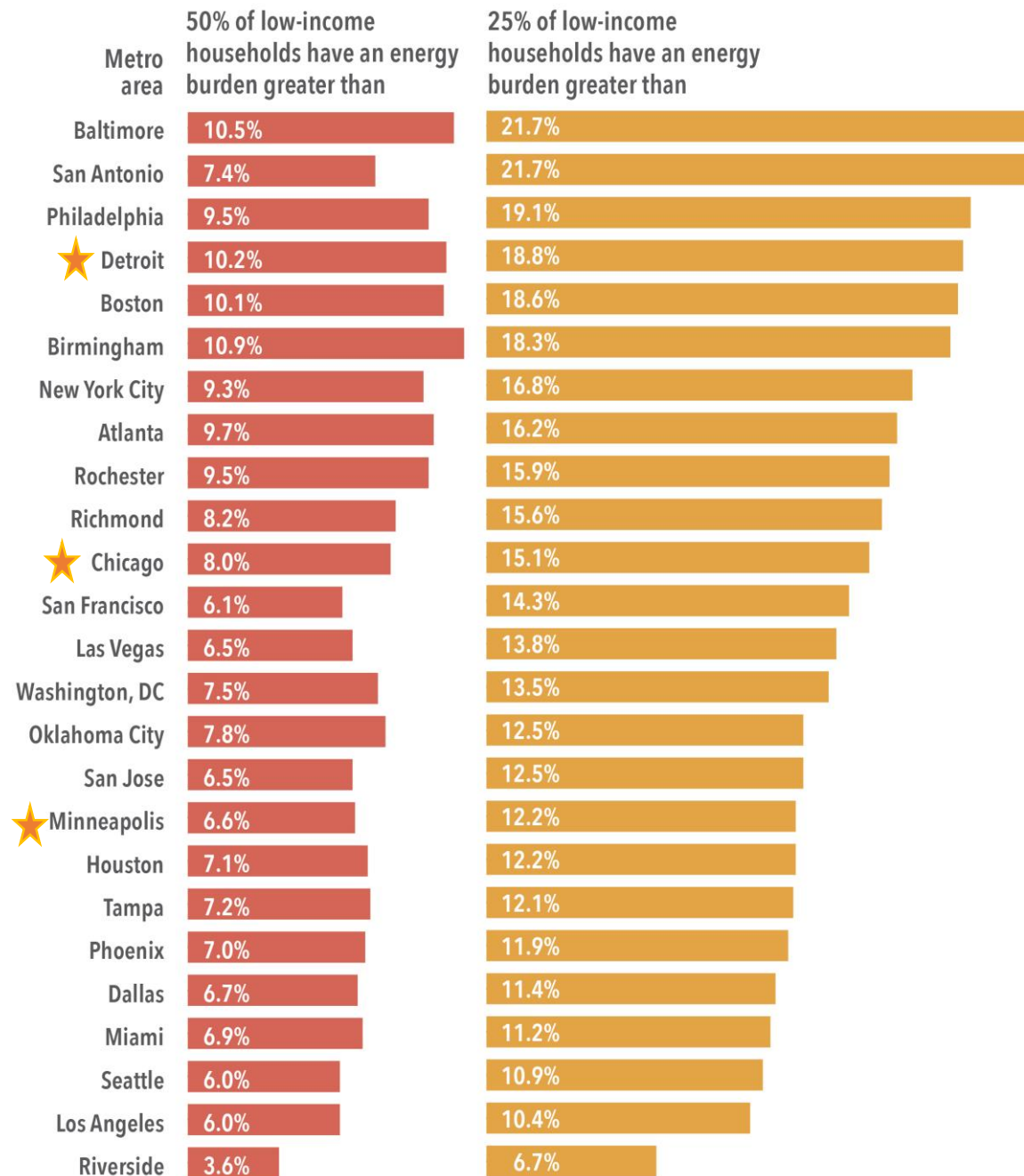
# High Energy Burdens (>6%) in Metro Areas

*The percentage of households in each metro area with a high energy burden (above 6%) and total number of households with a high burden*



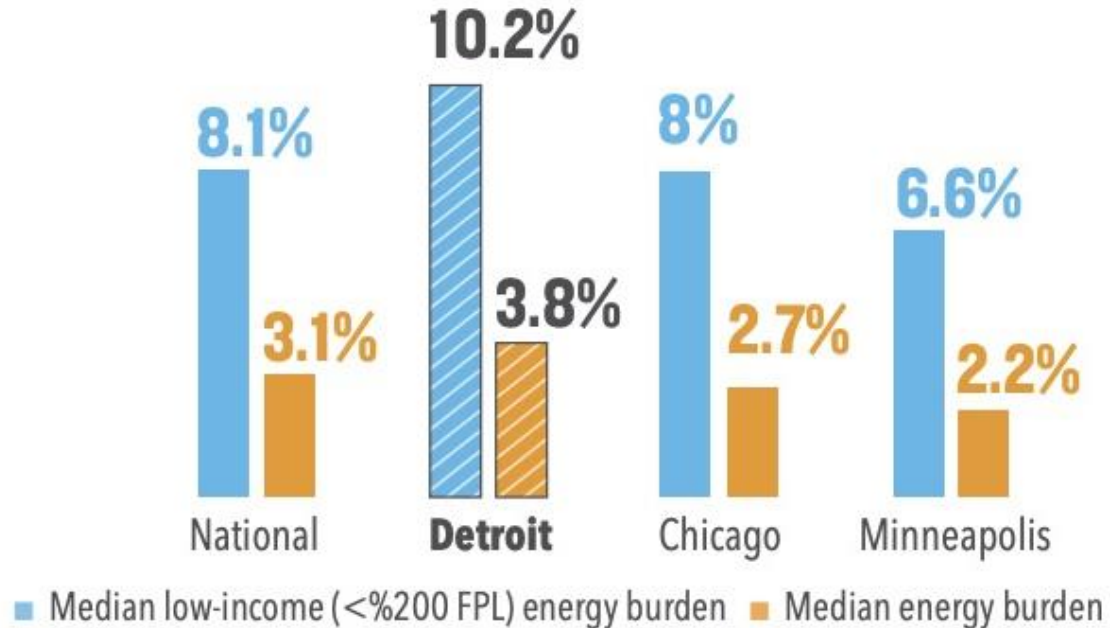
# Low-Income Metro Energy Burdens

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





# Midwestern Metro Burdens

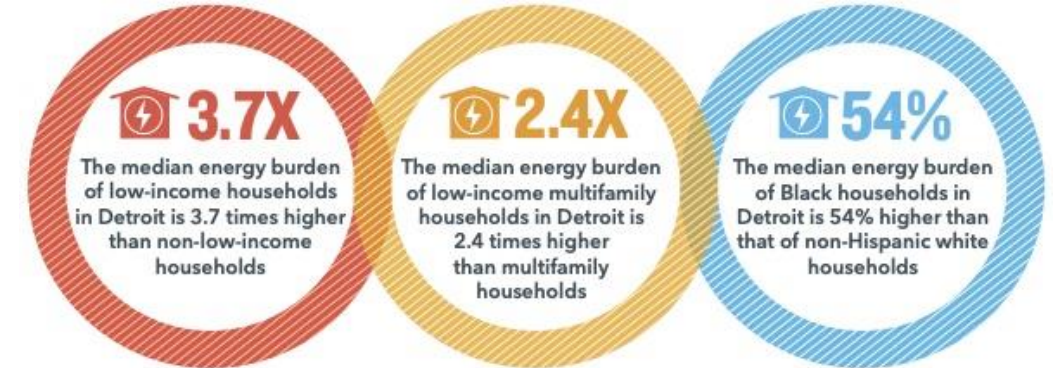


Fact sheets for Chicago, Detroit, and Minneapolis available at [www.aceee.org/energy-burden](http://www.aceee.org/energy-burden)

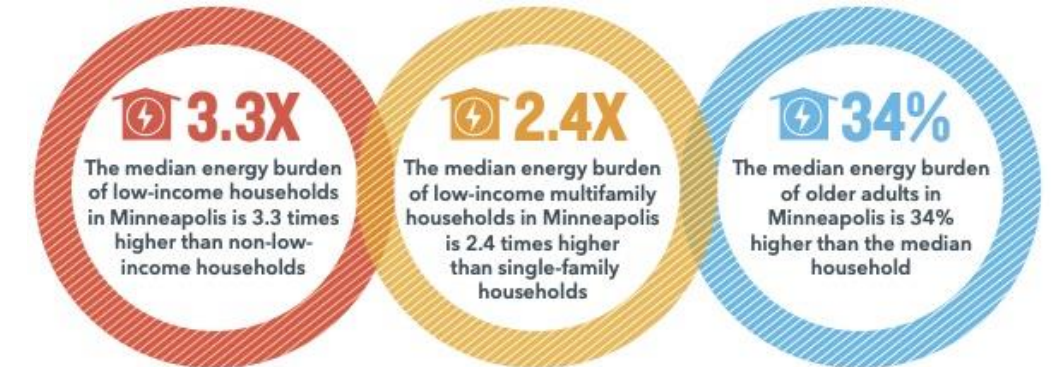
## CHICAGO



## DETROIT

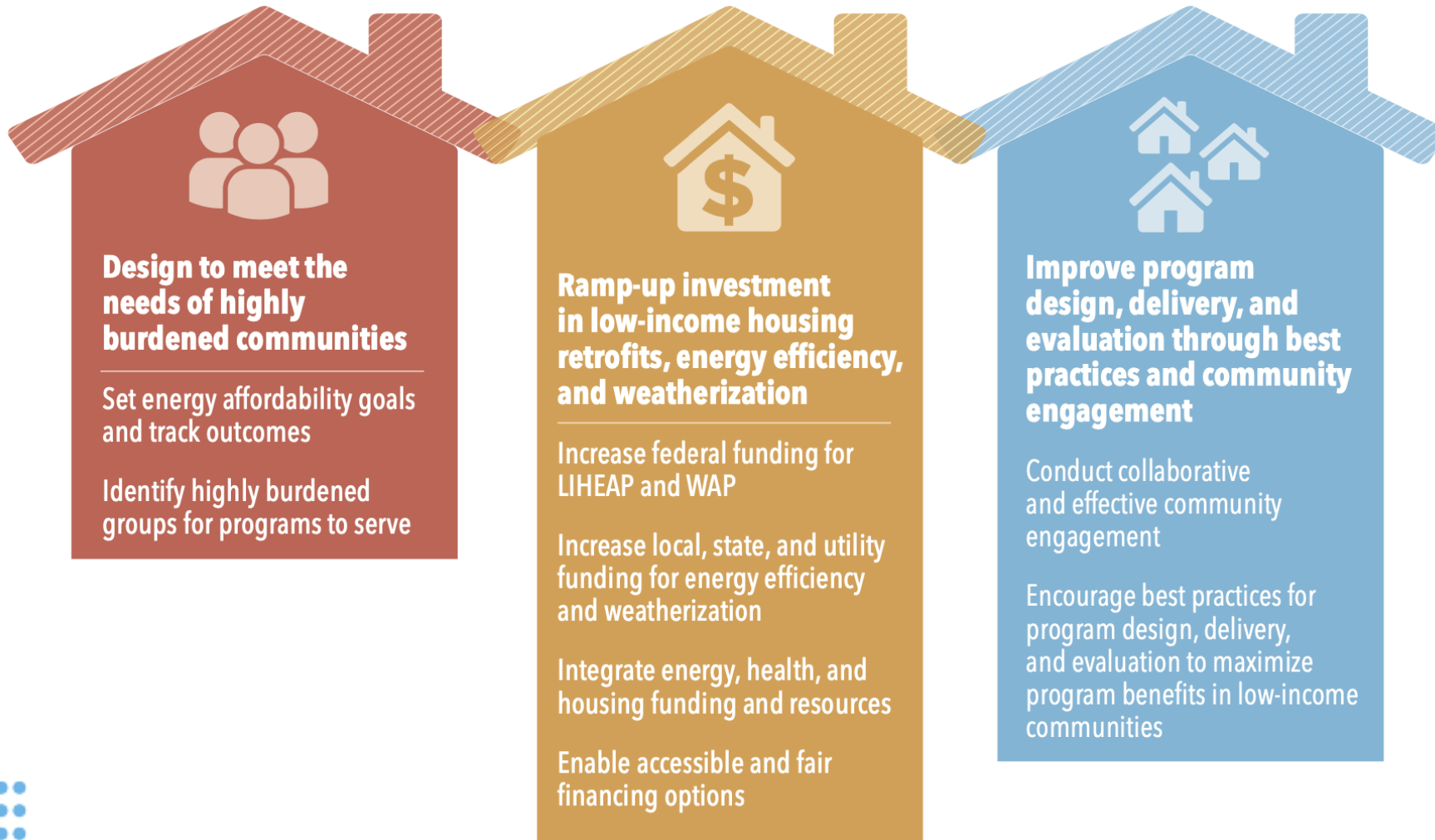


## MINNEAPOLIS





# Low-Income Energy Efficiency Strategies



# Energy Affordability Policy Examples

## Midwest City and State-Led Policies

- **Cincinnati** — Green Cincinnati Plan goal to reduce energy burden by 10% by 2023; city partnered with Duke Energy Ohio on Warm Up Cincy pilot
- **Minneapolis** — Climate Action Plan prioritizes high energy burden neighborhoods and includes energy burden as an equity indicator
- **Pittsburgh** — Switch PGH to address high energy burdens through civic engagement tool
- **Saint Paul** — Goal to lower energy burdens in 10 years so all households have burden of 4%
- **Minnesota** — Under 5% campaign to reduce energy burden by 2025
- Clean Energy Resource Teams, [www.cleanenergyresourceteams.org/under5#introduction](http://www.cleanenergyresourceteams.org/under5#introduction)

## Public Utility Commission Policies

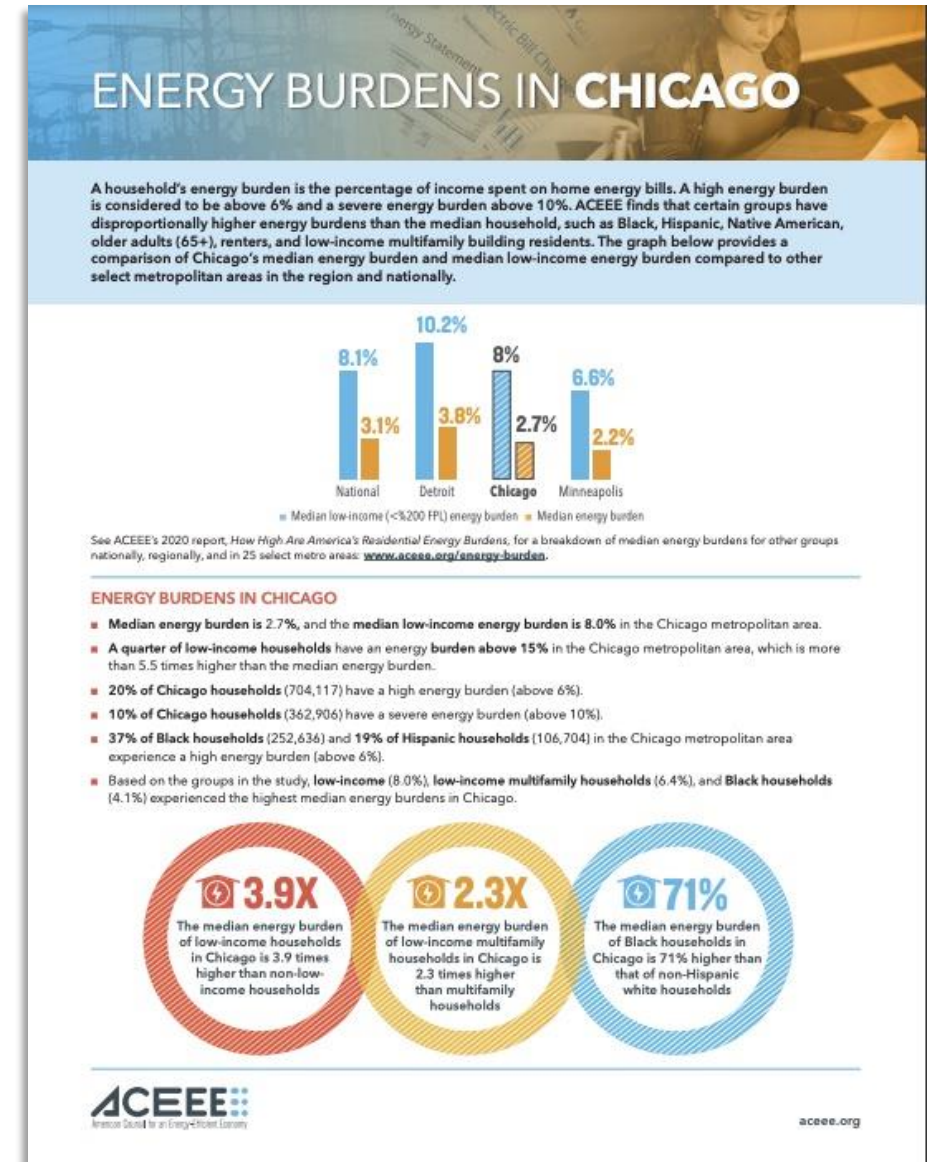
- Low-income program spending and savings requirements
- Different cost-effectiveness rules for low-income programs
- Targeting disadvantaged communities with programs and resources

For more info on PUC and state level policies, see [database.aceee.org/state/guidelines-low-income-programs](http://database.aceee.org/state/guidelines-low-income-programs)

For more city and state policy examples, see [www.aceee.org/research-report/u2006](http://www.aceee.org/research-report/u2006)

# Energy Burden Report and Factsheets

- [aceee.org/energy-burden](https://aceee.org/energy-burden)
- Report and short video
- Fact sheets: 1 national/regional and 25 metro areas
  - Atlanta, Baltimore, Birmingham, Boston, Chicago, Dallas, Detroit, Houston, Las Vegas, Los Angeles, Miami, Minneapolis, New York city, Oklahoma City, Philadelphia, Phoenix, Richmond, Riverside, Rochester, San Antonio, San Francisco, San Jose, Seattle, Tampa, Washington DC





# ACEEE's New *Leading with Equity* Initiative

- New initiative to incorporate more equity-centered metrics into our City, State, and Utility Scorecards
- Goal to move the needle so that Scorecard leaders need to be doing more on equity
- Project will convene community-based organizations, advocates, and utilities to jointly define success for equitable decarbonization and data needed to track progress
- **More information:**  
[www.aceee.org/energy-equity-initiative](http://www.aceee.org/energy-equity-initiative)
- **Sign up for updates and ways to participate:**  
[survey.alchemer.com/s3/6168745/ACEEE-LWE-Interest-Form](https://survey.alchemer.com/s3/6168745/ACEEE-LWE-Interest-Form)





# Thank you for your attention!

Please send additional questions to:

**Ariel Drehabl**  
[adrehobl@aceee.org](mailto:adrehobl@aceee.org)