

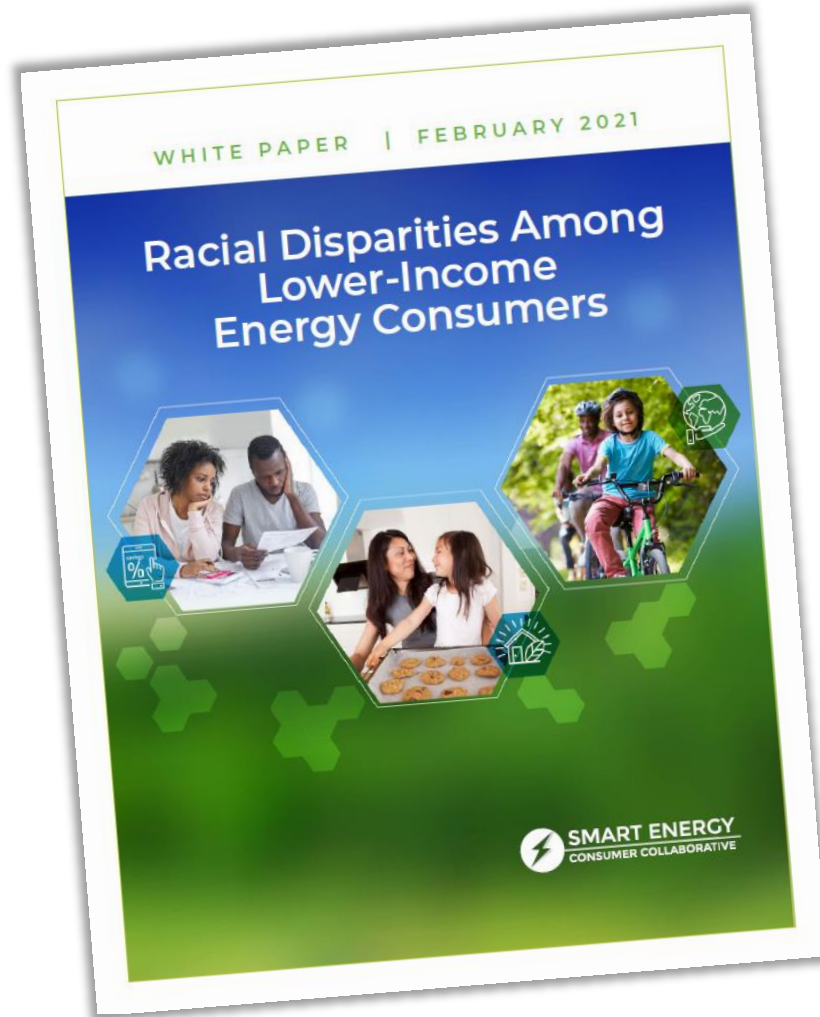
**MODERNIZING  
CONSUMER  
ENGAGEMENT  
FOR A NEW ERA**



# Racial Disparities in Energy Among Lower- Income Communities



# New Paper on Black and POC Consumers



Based on an online national survey of 1,000 Americans with incomes under \$50,000 annually

Highlights differences between White, Black and People of Color households around energy-related interests, concerns, behaviors, etc.



# The Four Lower-Income Personas

## Environmentally Driven

*Moderate-income consumers where “environmental concerns are a major factor in who they vote for”*

## Smart Energy Receptive

*Low-income consumers who “would like to use in-home smart energy technology, but it is too expensive”*

## Smart Energy Decliners

*Moderate-income consumers that say “smart energy technology is not for someone like me”*

## Climate Change Skeptics

*Low-income consumers who believe “concerns about climate change are overblown”*

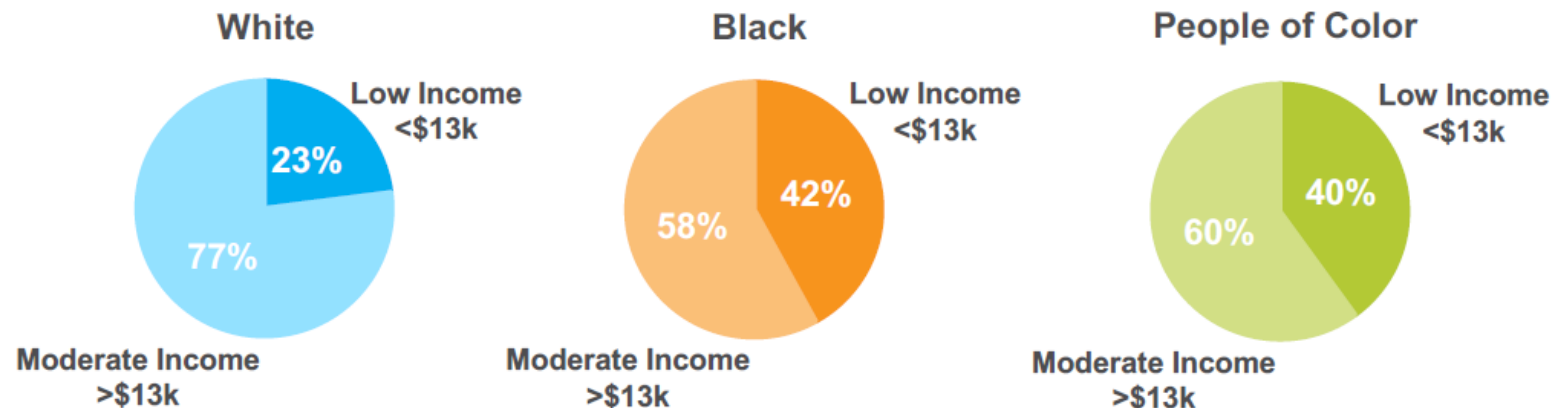
**More Favorable**

**Less Favorable**



# Income Levels and Average Electric Bills

## Income Level



## Monthly Electricity Bill Amount



Group	Median	Mean
White	\$100	\$117
Black	\$100	\$126
People of Color	\$110	\$133

Base: All Respondents (n=1307); White (n=758), Black (n=210), People of Color (n=549)

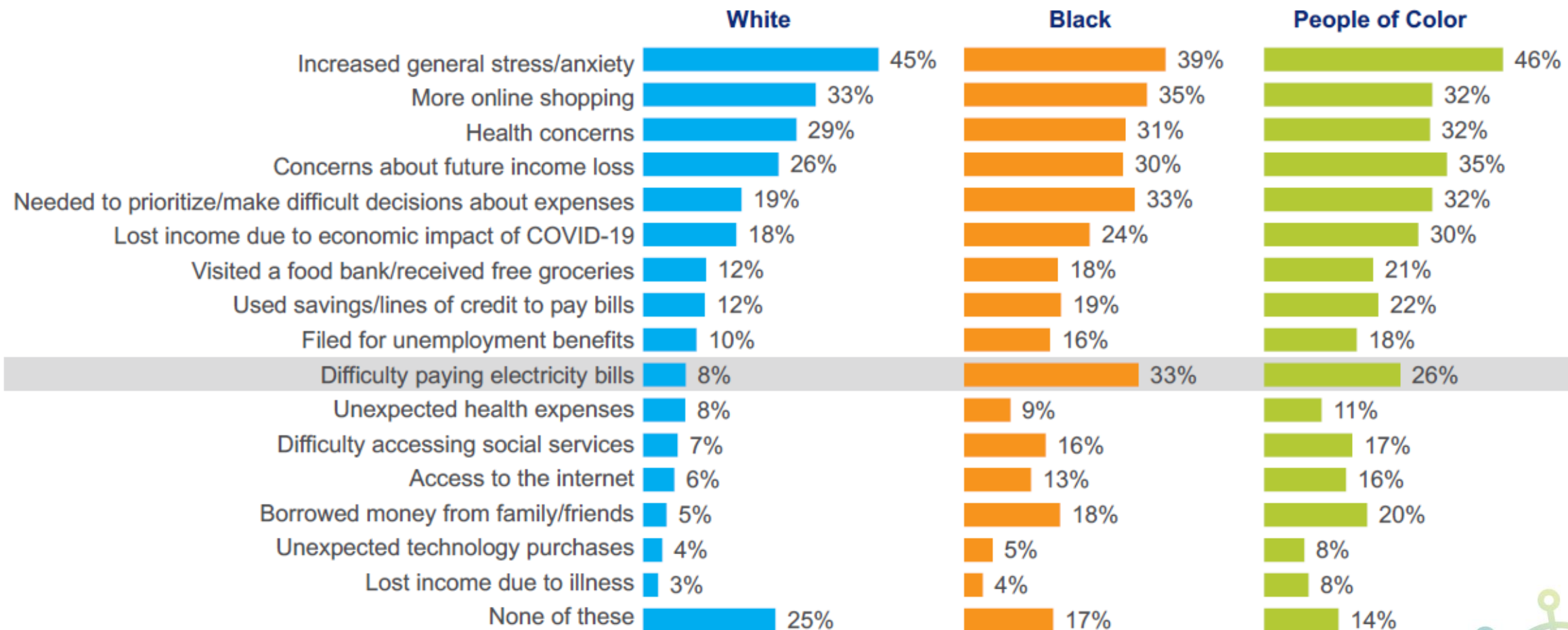
Low/Medium Income

Q\_BillAmount2. How much is your average monthly electricity bill?

Q\_Expenses. Thinking about your current household expenses, which two are you most concerned about being able to pay?



# Impact of COVID-19 on Households

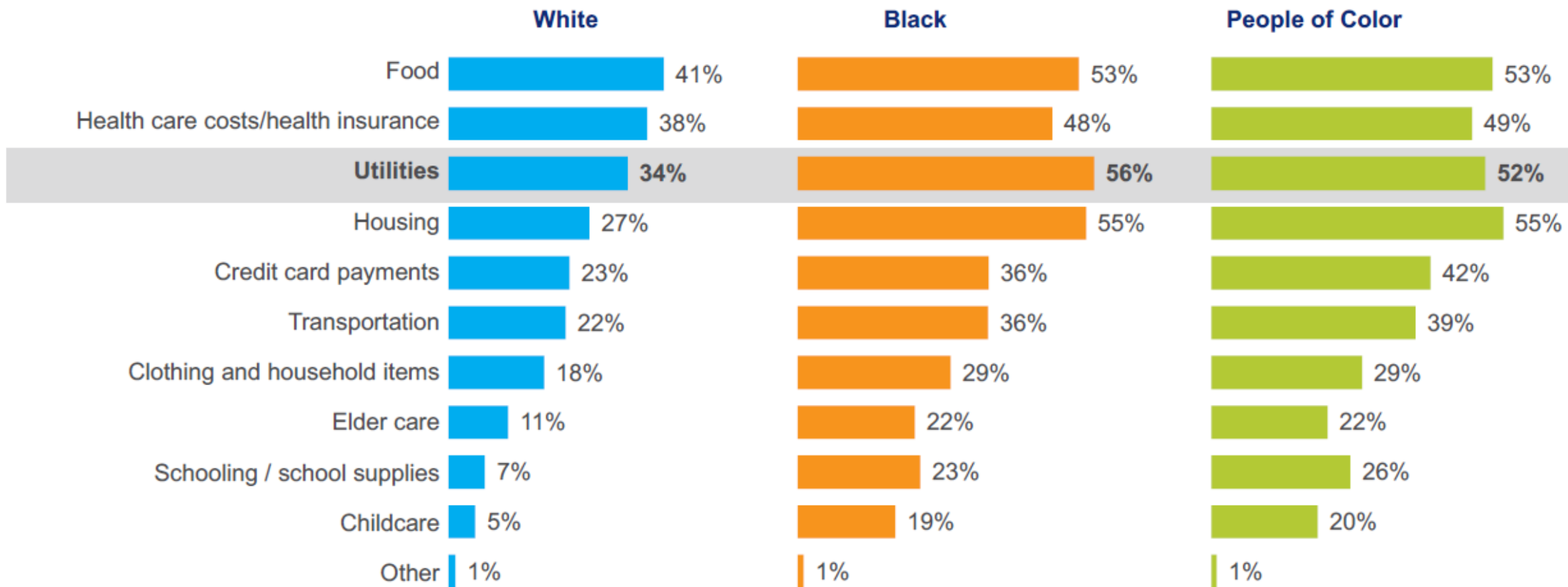


Base: All Respondents (n=1307); White (n=758), Black (n=210), People of Color (n=549)

Q\_CovidImpact. And has COVID-19 impacted you and your household in any of the following ways? Please select all that apply.



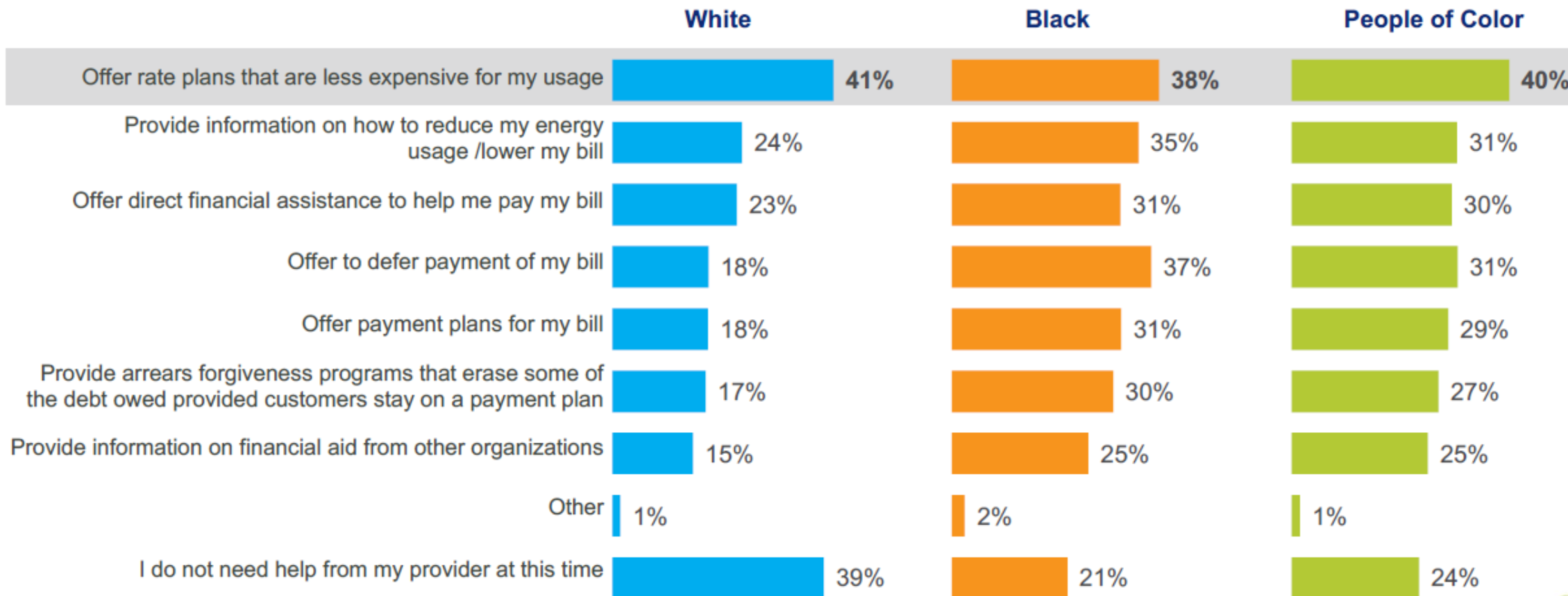
# Concerns About Expenses Due to COVID-19



Base: All Respondents (n=1307); White (n=758), Black (n=210), People of Color (n=549)  
 Q\_ExpensesCovid. Are you more or less concerned about being able to afford each of the following expenses due to COVID-19?



# How Electricity Providers Can Help



Base: All Respondents (n=1307); White (n=758), Black (n=210), People of Color (n=549)  
 Q\_CovidHelp. What, if anything, can your electricity provider do to help during this time? Please select all that apply.



# Interest in Smart Energy Technology

## Interest in Smart Energy Products with Financial Assistance from Provider

% Very Interested	Smart thermostat	Smart appliances	Smart lighting controlled via phone	Roof-top solar panels	Solar power generation (Community)	Smart leak protection	Smart surge protection	Technology to manage your energy usage
White	21%	20%	17%	30%	25%	26%	33%	20%
Black	39%	35%	37%	35%	38%	42%	45%	42%
People of Color	36%	33%	35%	41%	42%	39%	46%	38%

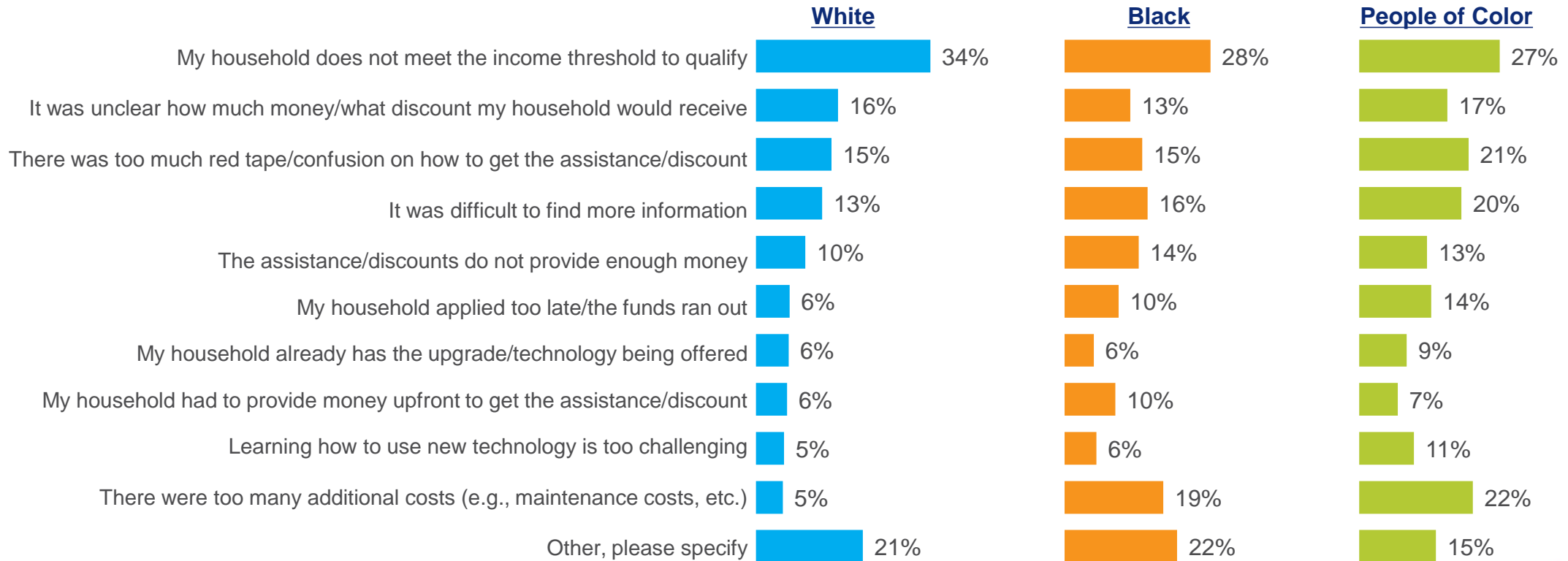




# Barriers to Energy Efficiency Assistance Programs

## Barriers to Financial Assistance on Upgrades/Technology

Among Those NOT Receiving Assistance for Upgrades/Technology

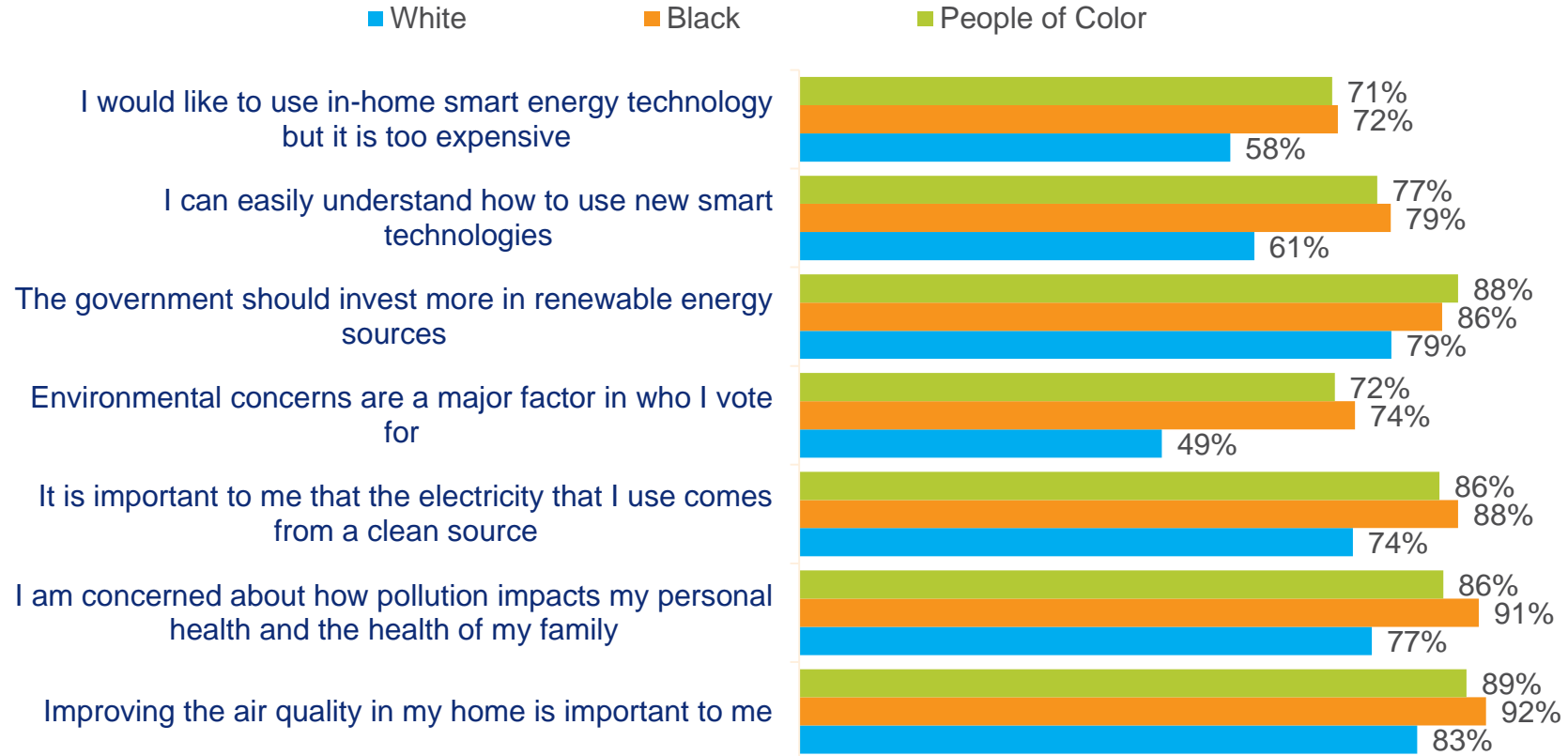


Base: Among Those NOT Receiving Assistance for Upgrades/Technology: All Respondents (n=333); White (n=171), Black (n=78), People of Color (n=162)  
 Q\_SmartBarriers. Why are you not using some of the financial assistance or discounts you are aware of to help pay for energy efficiency upgrades/technology for your home?  
 Please select all that apply.



# Environmental & Energy Attitudes & Concerns

## Agreement with Statements



Base: All Respondents (n=1307); White (n=758), Black (n=210), People of Color (n=549)  
 Q\_IATEnvironment. ["Agree" Summary] Do you agree or disagree that the statement below describes you?



# Takeaways & Next Steps

**Energy assistance programs should be targeted to the challenges faced by people of color.**



People of color, especially Black people, disproportionately reside in multi-family rental dwellings with children. These underserved consumers face higher electricity bills and unique challenges due to their circumstances. Energy assistance programs from electricity providers need to incorporate landlords and understand what works for renters in a shared dwelling in order to be successful.

**Barriers, such as upfront costs and information, need to be broken down to improve adoption of energy efficiency programs and increase usage of smart energy technology.**



People of color have a strong interest in smart energy technology, significantly stronger than white people. However, upfront costs and lack of information are barriers faced more often by people of color. Assistance programs need to address these barriers by developing specific pilot programs with incentives/rebates to reduce costs. Local organizations can also help play a role to socialize these programs within the community.

**Partnerships should be developed with community organizations, landlords, and technology companies to deliver successful programs.**



Partnerships are key to delivering a successful assistance program, especially for people of color. As mentioned earlier, landlords are important partners due to high rental rates. Community organizations and government are also important. These are central places of engagement and information on assistance programs for people of color. With costs continuing to be a barrier to smart energy technology, it is important for providers/organizations to also include technology companies as a part of programs to help reduce costs.



# Racial Disparities in Energy Among Lower-Income Communities

2021 SECC Consumer Symposium

April 21, 2021

Ariel Drehobl

Local Policy Manager, Energy Equity

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American Council for an Energy-Efficient Economy

# ACEEE Energy Burden Research

$$\text{Energy Burden} = \frac{\text{Annual Energy Bills}}{\text{Annual Income}}$$

Example: \$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 which includes national, regional, and metro data in 25 metropolitan statistical areas**

## How High Are Household Energy Burdens?

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

Ariel Dreobl, Lauren Ross, and Roxana Ayala

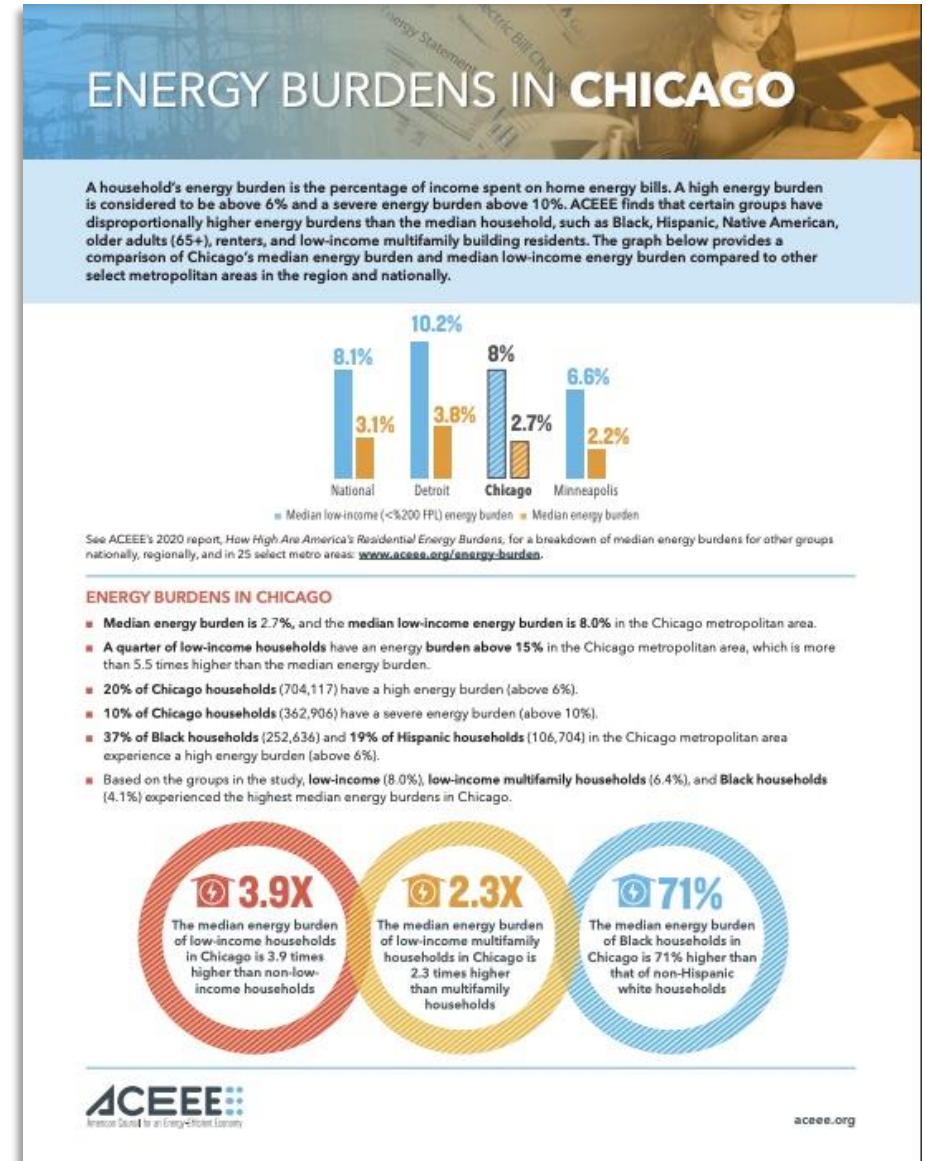


# Causes of High Energy Burdens

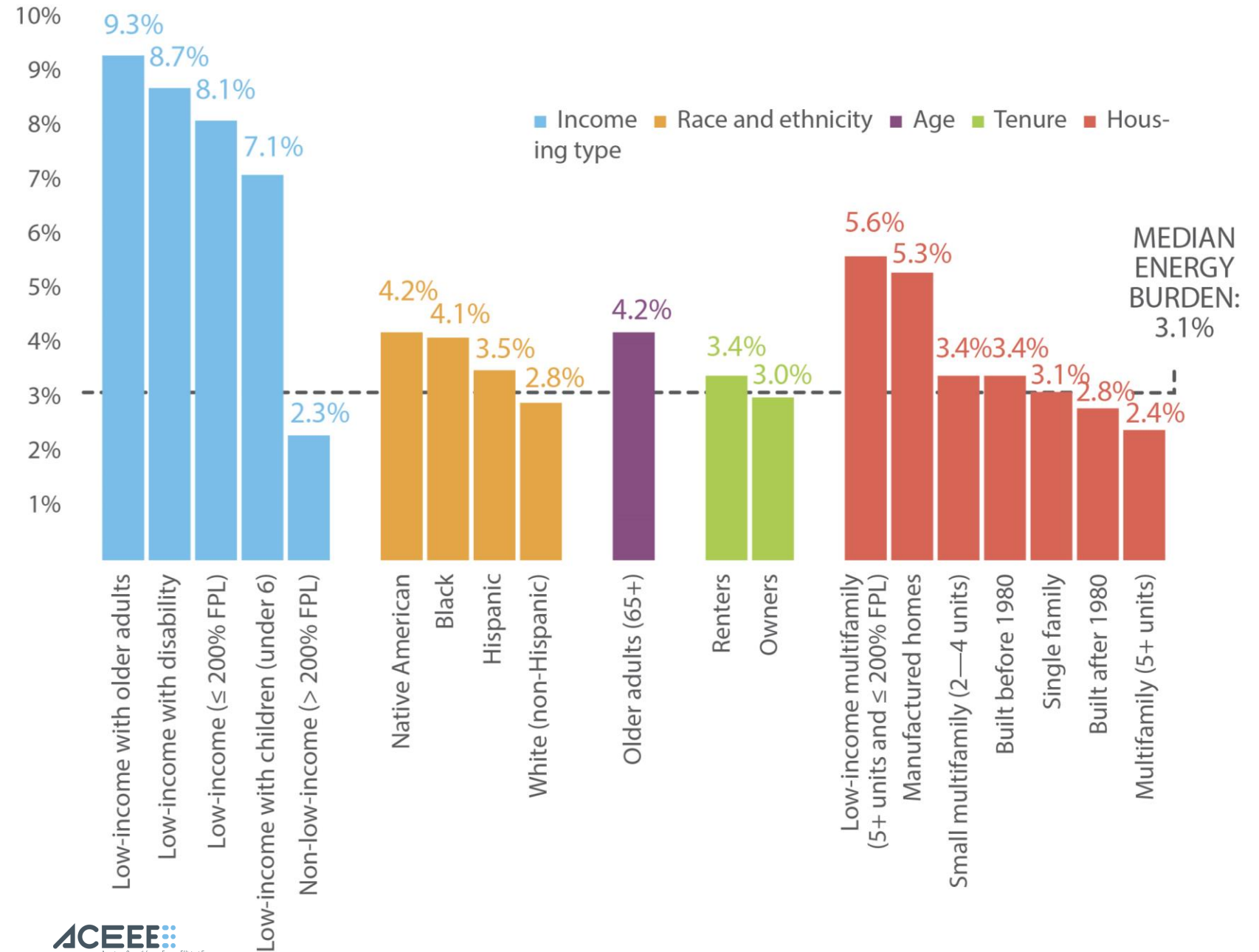
Physical	Socioeconomic	Behavioral	Policy related
Housing age (i.e., older homes are often less energy efficient)	Difficulty qualifying for credit or financing options to make energy investments due to financial or systemic barriers	Information barriers relating to available bill assistance and efficiency programs	Insufficient or inaccessible policies and programs for low-income households
Housing type (e.g., manufactured homes, single family, multifamily)	Sudden economic hardship (e.g., severe illness, unemployment, or disaster event)	Information barriers relating to knowledge of energy conservation measures and actions	Utility rate design such as high fixed charges that make it hard to respond to high bills through conservation
Climate change and weather extremes that raise the need for heating and cooling	Inability to afford (or difficulty affording) up-front costs of energy efficiency investments	Lack of trust and/or uncertainty about investments and/or savings	
Building envelope (e.g., poor insulation, leaky roof, inefficient HVAC)	Chronic economic hardship due to persistent low-income	Lack of cultural competence in outreach and education programs	
Heating and cooling equipment (e.g., system type, fuel type, fuel costs)	Systemic inequalities relating to race and/or ethnicity, income, disability, and other factors	Increased energy use due to occupant age, number of people in the home, health-related needs, or disability	
Topography and location			
Appliances and lighting efficiency			

# ACEEE 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, including:
  - 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



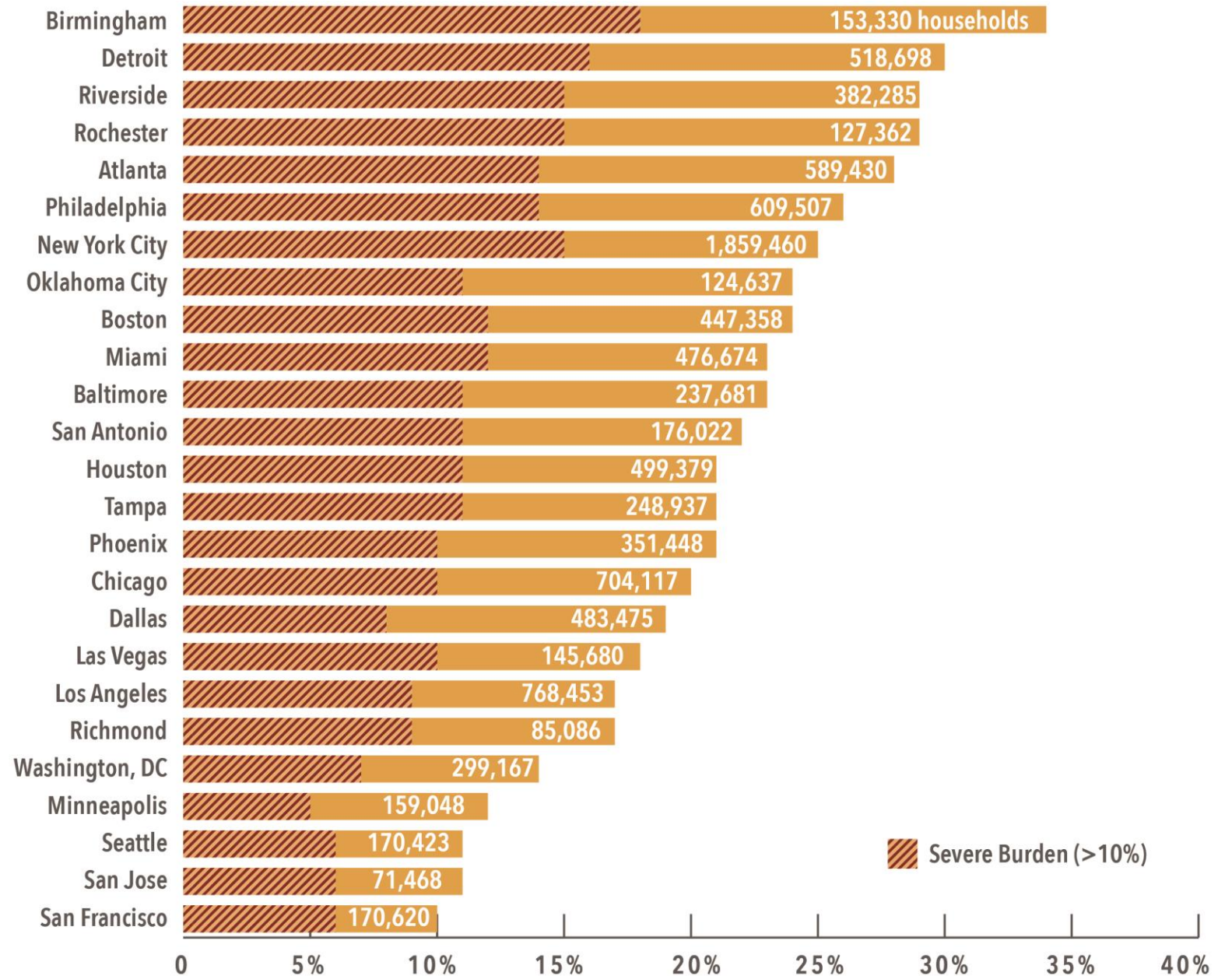
# National Energy Burdens





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

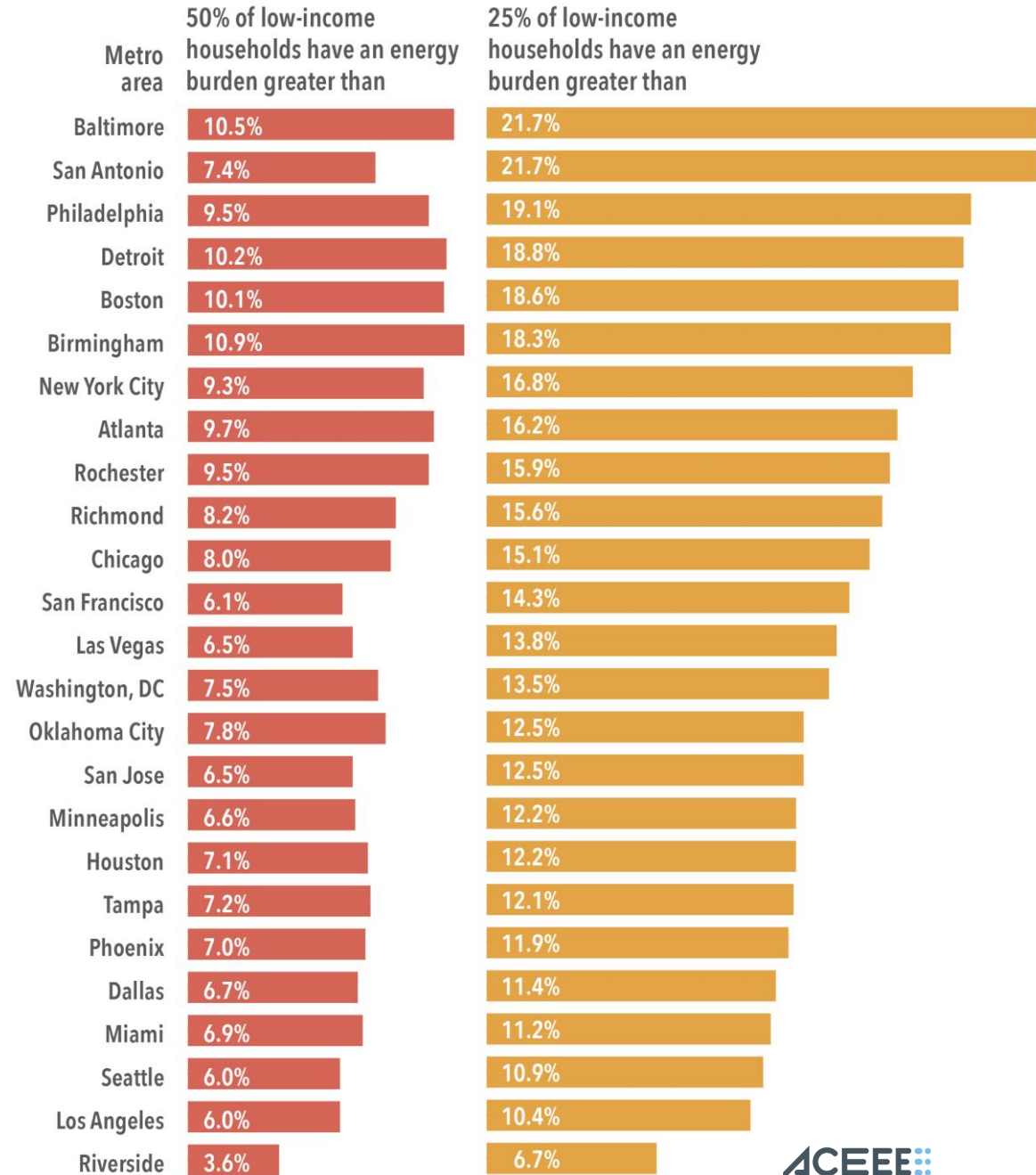
*The percentage of households in each metro area with a high energy burden (above 6%) and total number of households with a high burden*



The percentage and number of all households with a high energy burden (> 6%) in 2017

# Low-Income Metro Energy Burdens

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



# Reaching More Customers

Ruth Georges

Energy Efficiency Community Strategist

## Uplifting Customers During COVID-19

### CARES ACT

Eversource **created a dedicated team** of representatives to help assist residential customers find information on both state and federal stimulus programs

EVERSOURCE



### Here's what we did

Suspended service disconnections, including notices

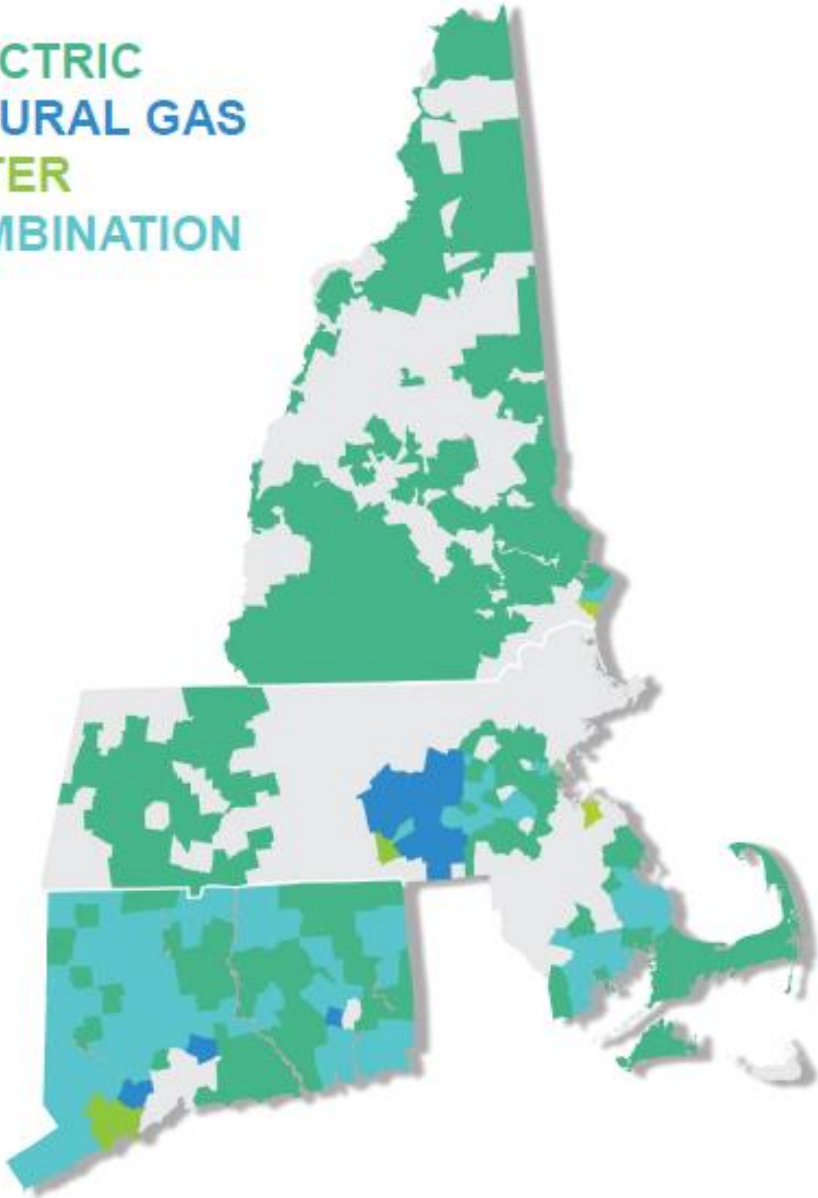
Offered flexible payment plans – with no down payment up to 18 months

Waived down payments for reinstatement of low-income Arrears Management Programs

## Customer Care Team

EVERSOURCE

ELECTRIC  
NATURAL GAS  
WATER  
COMBINATION



**47,000** customers enrolled  
across our service territories



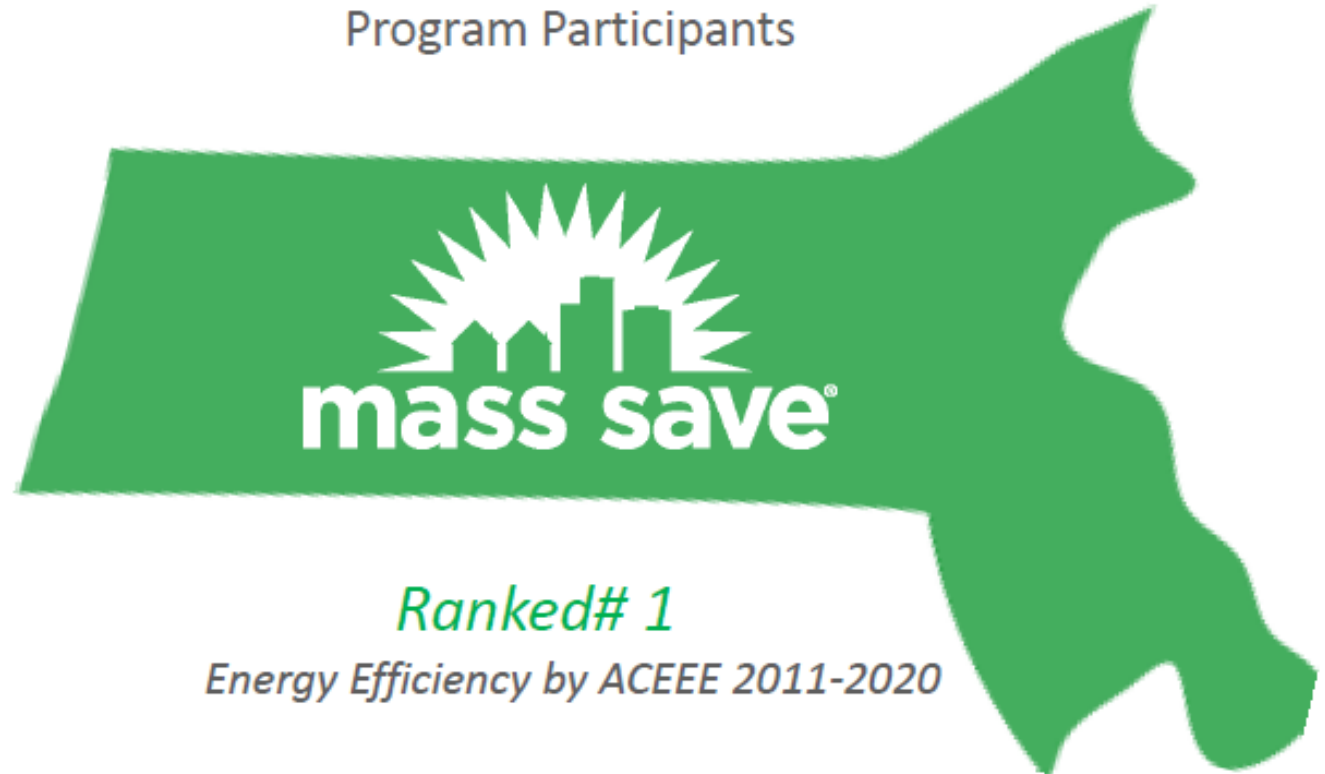
In 2020 customers received  
**\$49M** in forgiveness credits  
across our programs

### Income Eligible Program

The Sponsors of Mass Save® partner with the Massachusetts Community Action Program Agencies and Low-Income Energy Affordability Network (LEAN) to help eligible Massachusetts' residents lower their monthly energy bills and to increase the energy efficiency of their homes.

**26,211**

Program Participants



*Ranked# 1*

*Energy Efficiency by ACEEE 2011-2020*

## Reaching More Customers

### Municipal Partnership Program

Partners collectively held over **160+** outreach events and meetings with community organizations and chambers of commerce

Reached over **65,000+** hard to reach customers



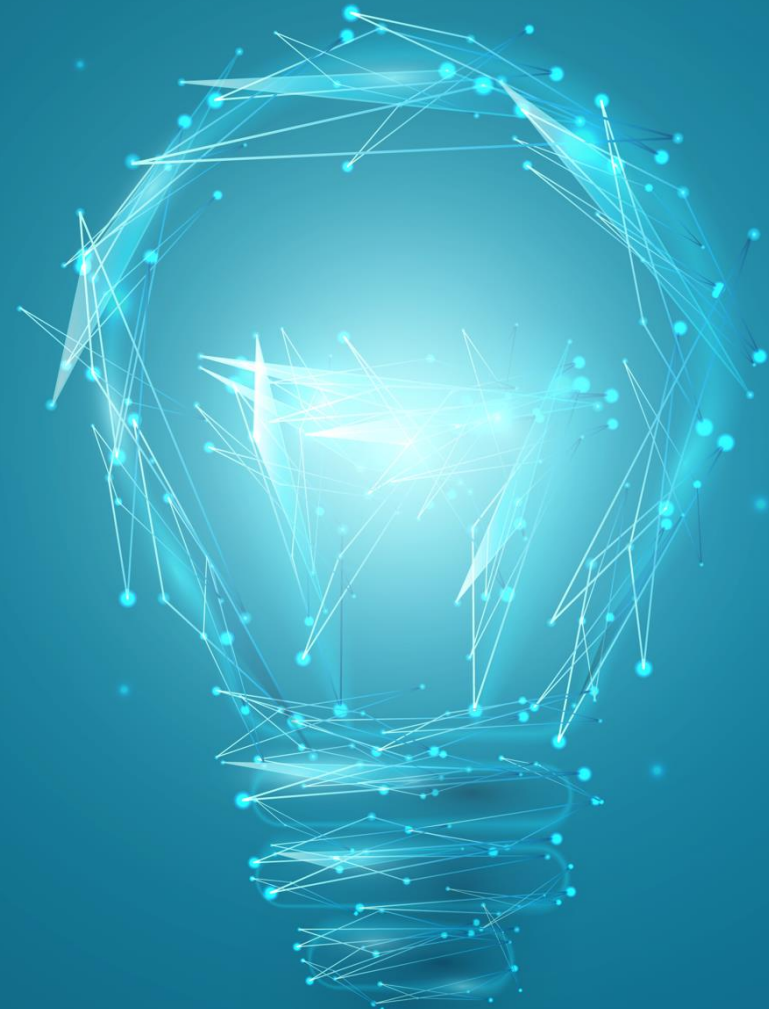
**EVERSOURCE**

**THANK YOU**





# Utility Reimagined



WE POWER LIFE<sup>SM</sup>

DRAFT

# Background

- **Role: Analyst for the Low Income Initiatives team—a subsidiary of our Corporate Social Responsibility group**
  - Innovation and process optimization lead
  - Project management lead (Agile Scrum Master)
  - Primary focus at the moment is to facilitate and optimize the flow of federal assistance dollars from state and local administrators to customers
- **Interest in SECC research**
  - To better understand energy efficiency issues, and particularly the intersection with racial and income disparities, to help guide the company efforts in this space
  - To garner insight from energy burden research conducted and the successes and challenges experienced by other utilities' programs, as well as share some of our own findings

# Programs and Efforts

- **Total Power Pilot Program in New Orleans**

- Partnership with local community action agency using Assurance 16 LIHEAP dollars
- Includes energy efficiency resources and monthly bill subsidies to cohort of ~200 customers to reduce energy burdens to affordable levels

- **Residential Rooftop Solar Pilot Program in New Orleans**

- Installed solar panels on rooftops of income-qualifying customers' homes in exchange for a \$30 credit on their bills every month

- **Weatherization Fund “Braiding” in Arkansas**

- Partnered with WAP program in the state to leverage ratepayer resources to provide a more holistic EE solution
- Households in need are identified and vetted by the WAP agency; utility EE contractor provides resources and metrics back to the PSC



WHEN TRUST MATTERS

# Racial Disparities in Energy Among Lower-Income Communities

2021 SECC Consumer Symposium  
April 21, 2021

# DNV - Introduction

Risk management and quality assurance

Facts and reliable insights for critical decision making

Committed to a clean, equitable, resilient, affordable energy transition

*While world GDP will more than double by 2050, the share of GDP devoted to energy expenditure will halve, dropping from its current level of 3% to 1.6% by mid-century – DNV Energy Transition Outlook, 2020*



Clean



Resilient



Affordable – for all?



Equitable?

# Who are the at-risk customers?

## Income Qualified Individuals

Many segments with diverse needs and interests:

- Chronic poor who simply cannot afford their utility bills
- ALICE: asset limited, income constrained, employed
- Low-income retirees with asset wealth
- Situational poverty, such as recent job loss or medical crisis

## Disadvantaged Communities

Identified via demographic/economic indicators, such as:

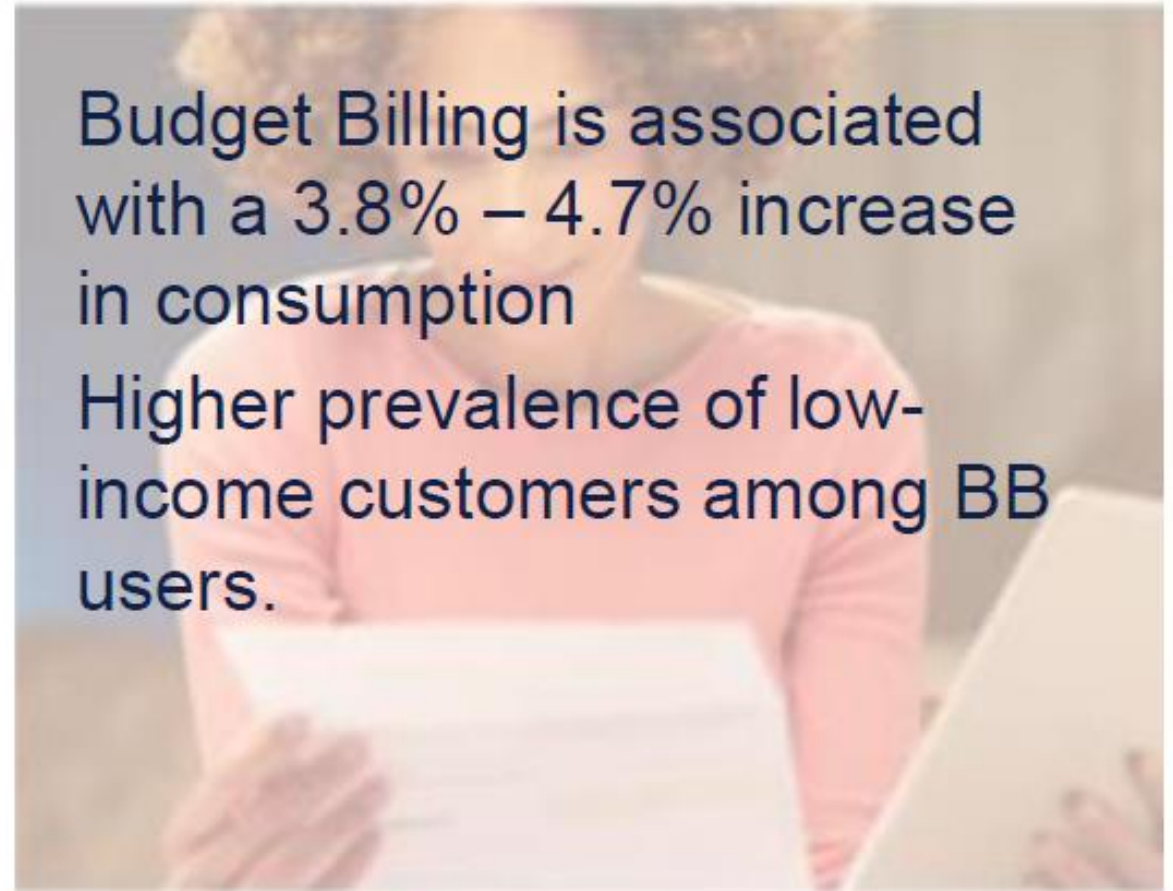
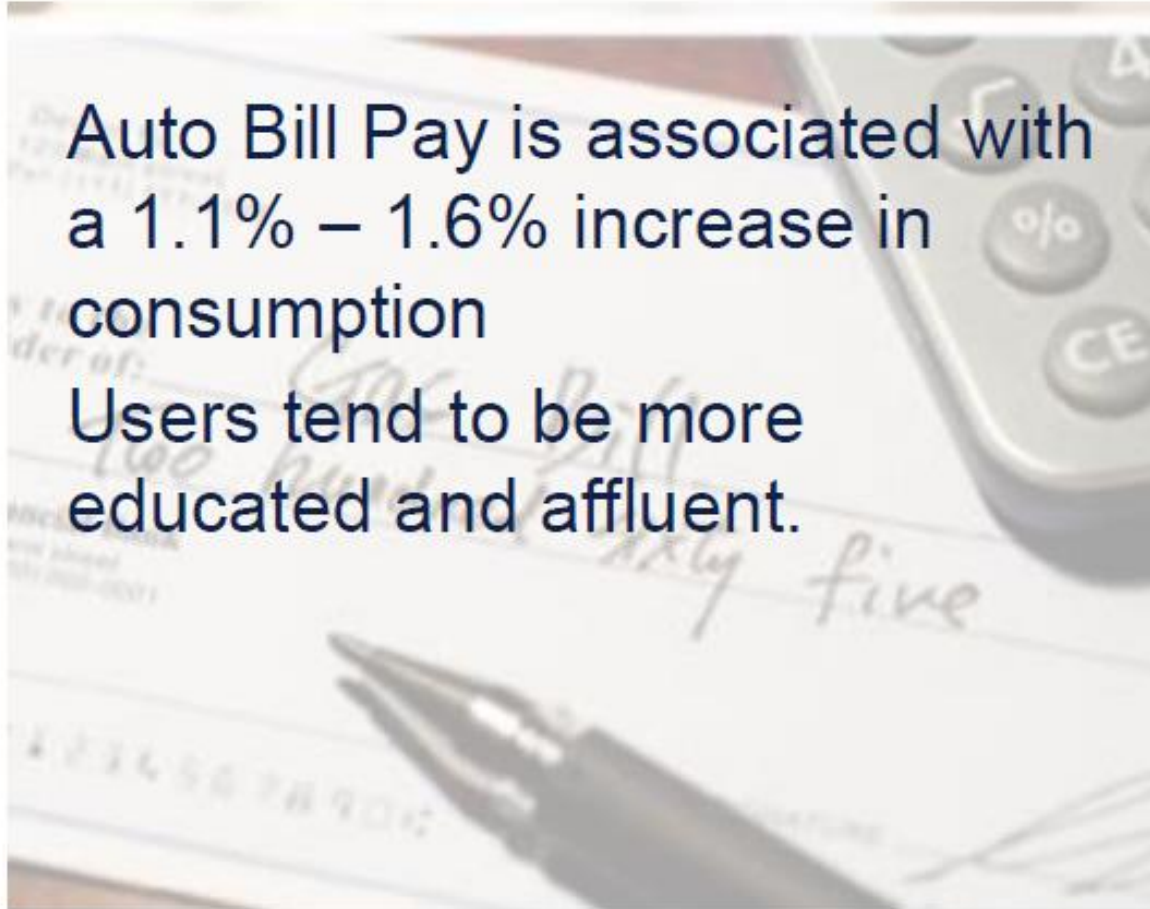
- Median income or unemployment levels
- Average education attainment
- Percent of population utilizing food assistance programs
- Crime rates

## Vulnerable Communities

Prioritized based on criteria set by policy makers:

- Exposure to climate change risks
- Pollution or other environmental screens
- Infrastructure quality assessments

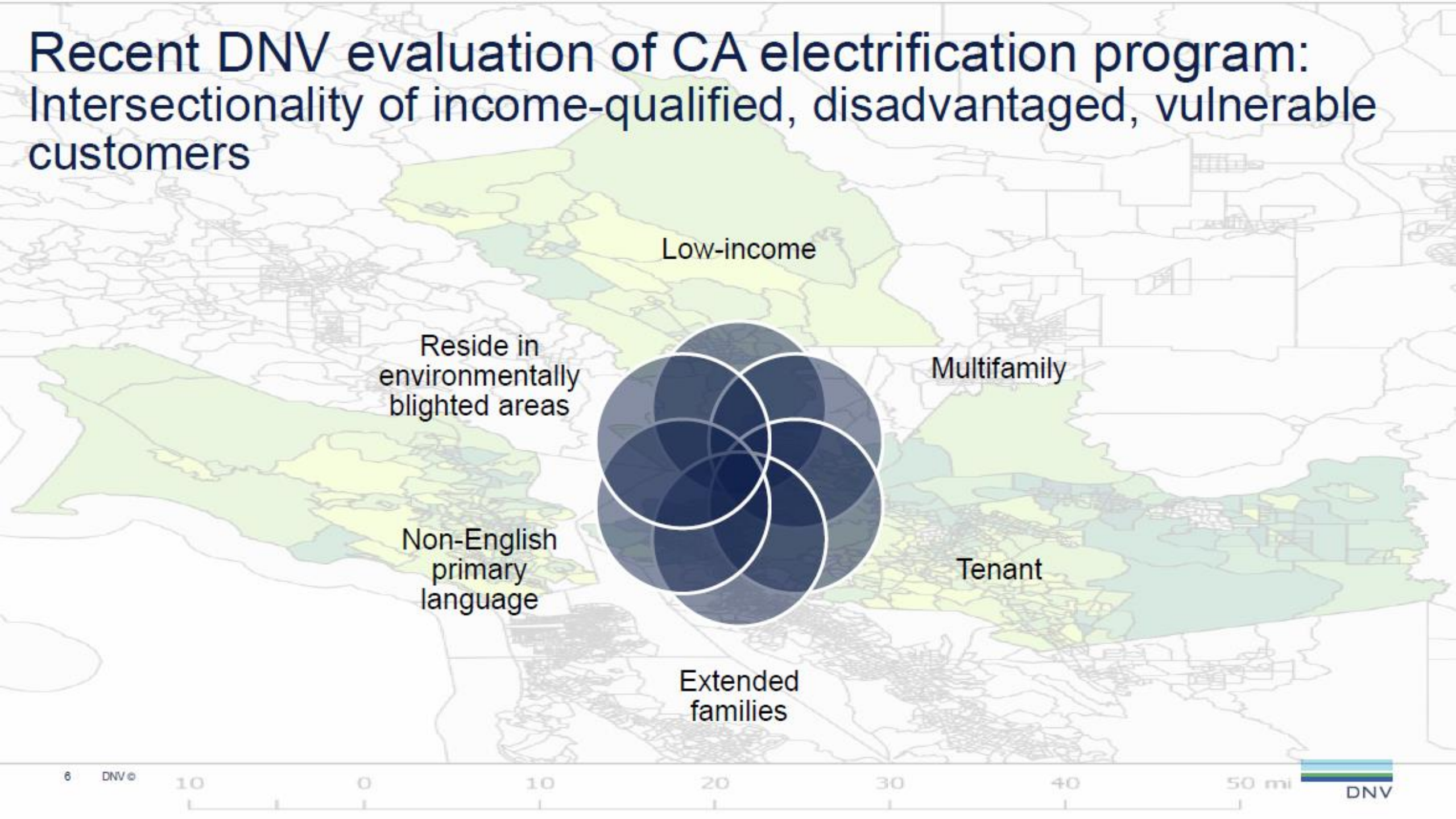
# CA IOU evaluation: Costs of convenience are higher for LI leading to even higher energy burdens



[http://www.calmac.org/publications/EDRes11\\_ABP\\_report\\_final\\_CALMAC.pdf](http://www.calmac.org/publications/EDRes11_ABP_report_final_CALMAC.pdf)



# Recent DNV evaluation of CA electrification program: Intersectionality of income-qualified, disadvantaged, vulnerable customers



Low-income

Reside in environmentally blighted areas

Multifamily

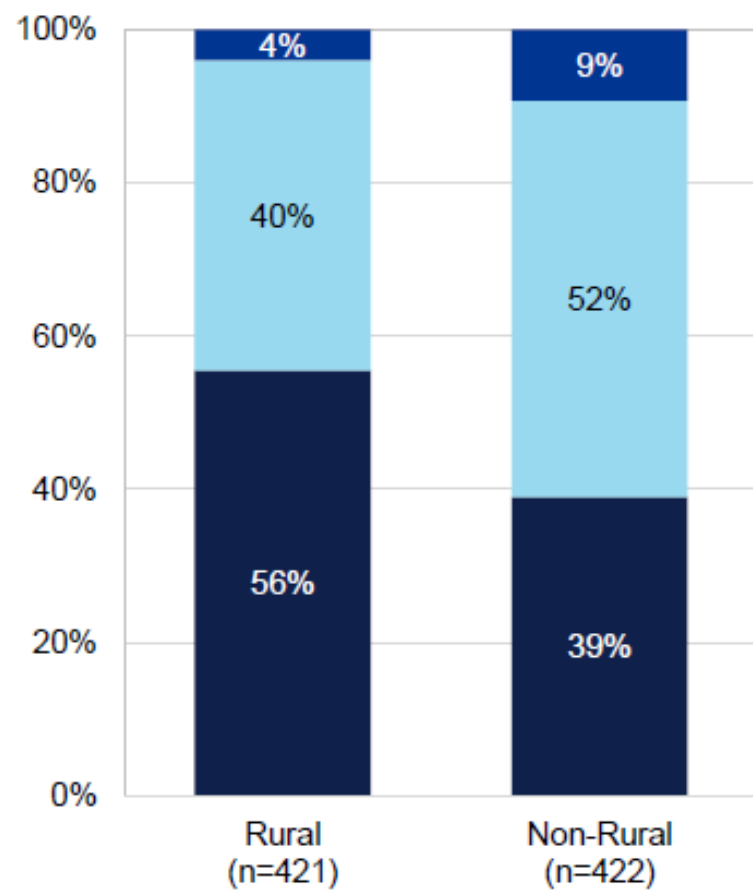
Non-English primary language

Tenant

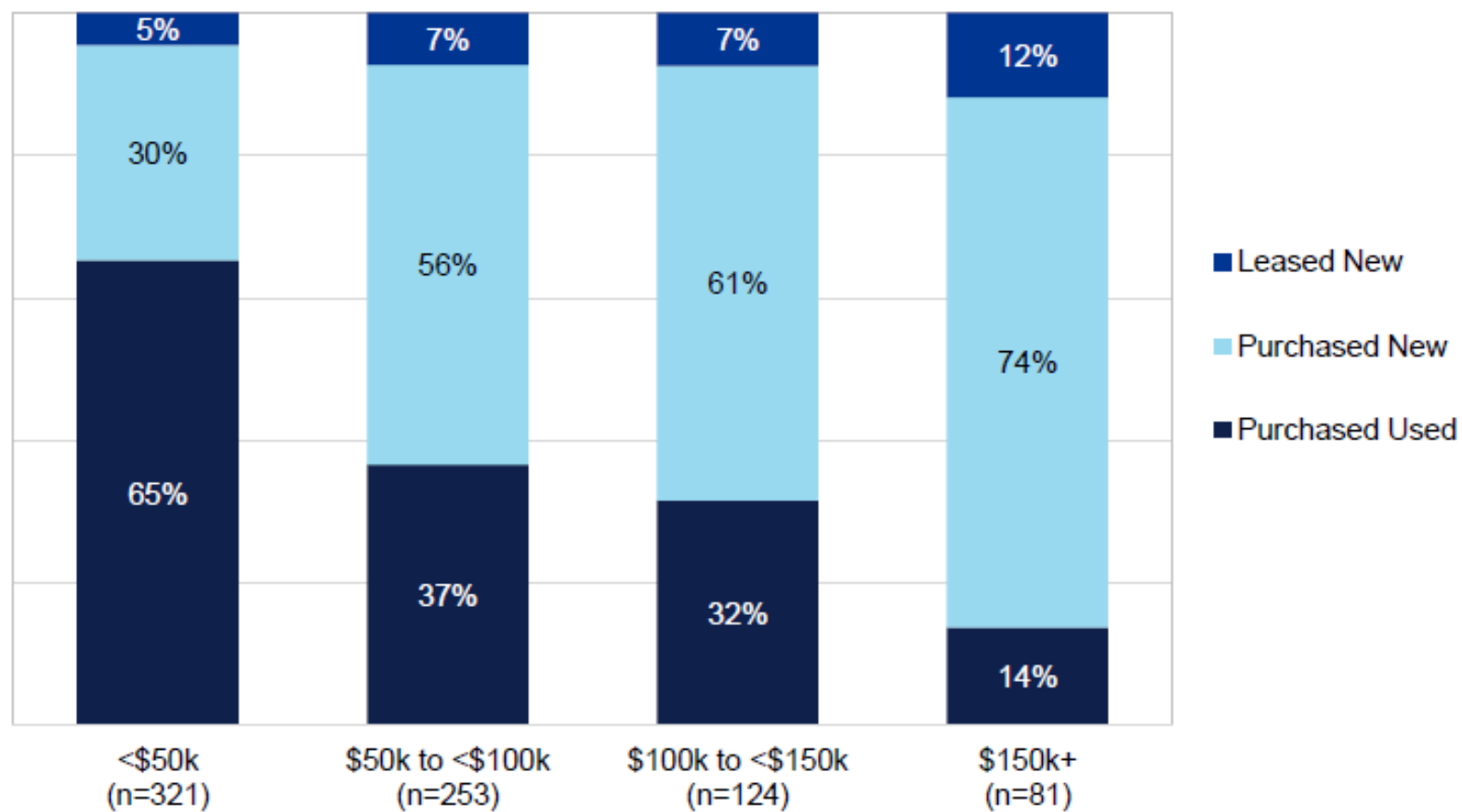
Extended families

# Recent NY EV study: EV adoption barriers higher for rural due to upfront cost of acquiring the vehicle

## Rural vs. Non-Rural



## 2019 Household Income



# Thank you.

Gomathi Sadhasivan  
Director – Customer Decision Sciences, DNV

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