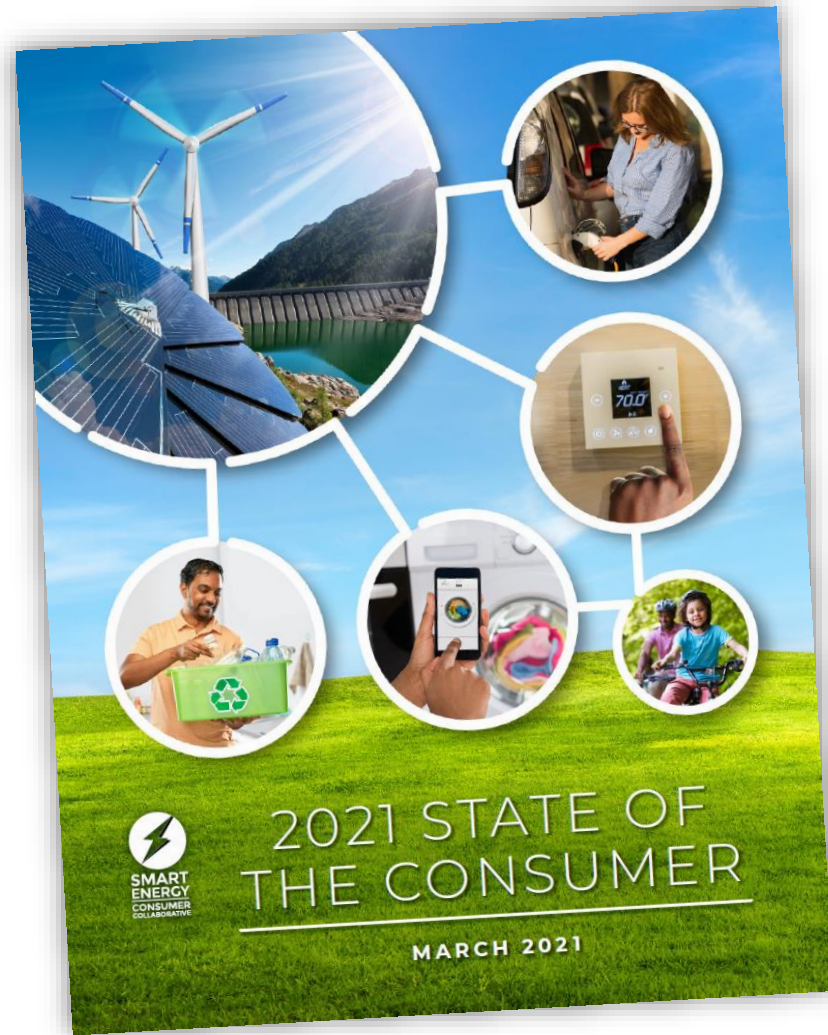


**MODERNIZING
CONSUMER
ENGAGEMENT
FOR A NEW ERA**



2021 State of the Consumer Report



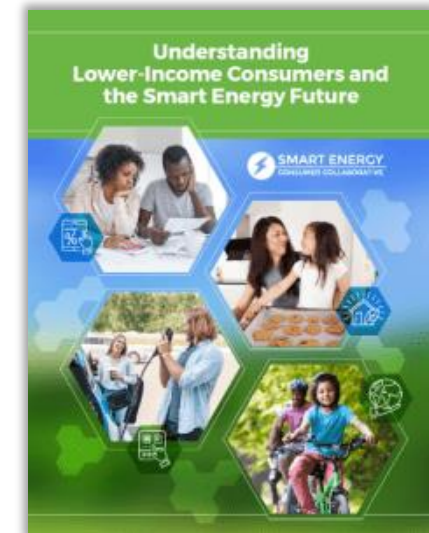
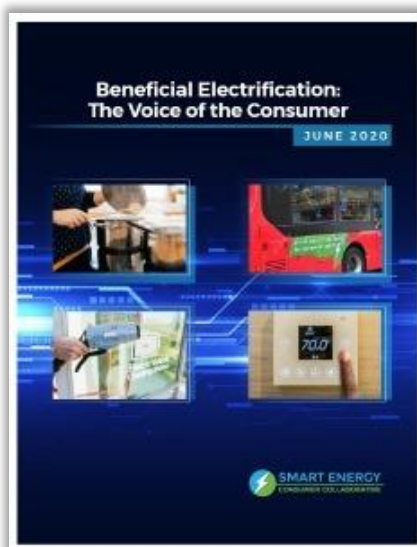


Summarizes SECC's 2020 research agenda and highlights the major themes that emerged from SECC's consumer surveys, a paper on industry views related to beneficial electrification, case studies of low-income energy programs and parts of a DOE report on AMI.

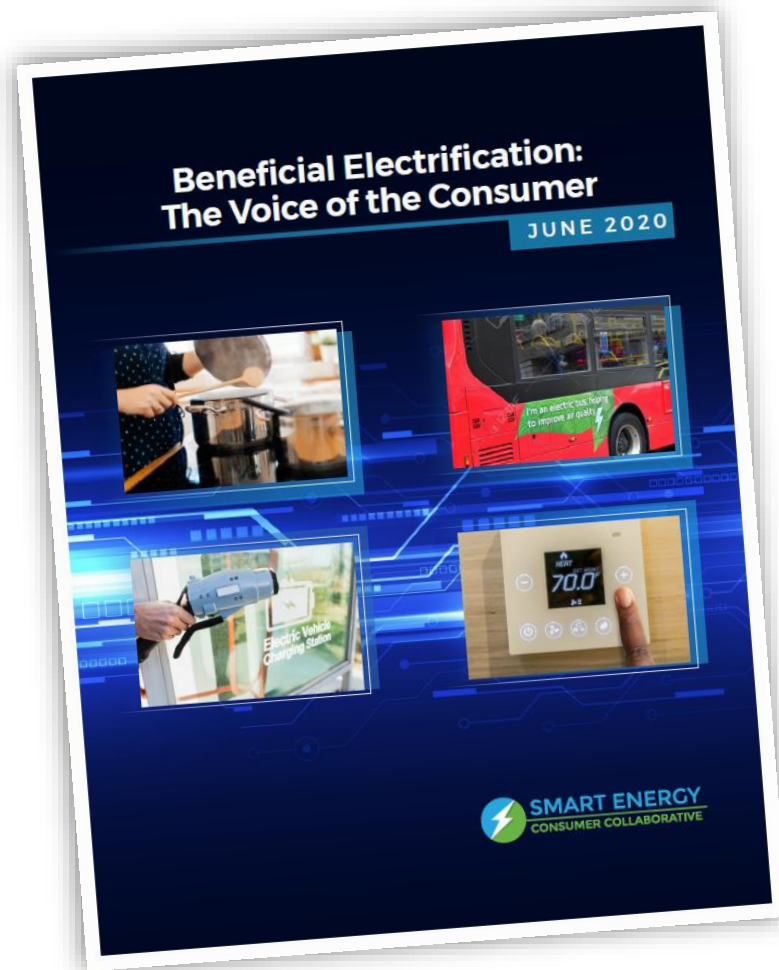


What Did We Research in 2020?

SECC worked with its members to craft a research agenda for 2020, and the “2021 State of the Consumer” report summarizes the 2020 findings.



“Beneficial Electrification” Consumer Research

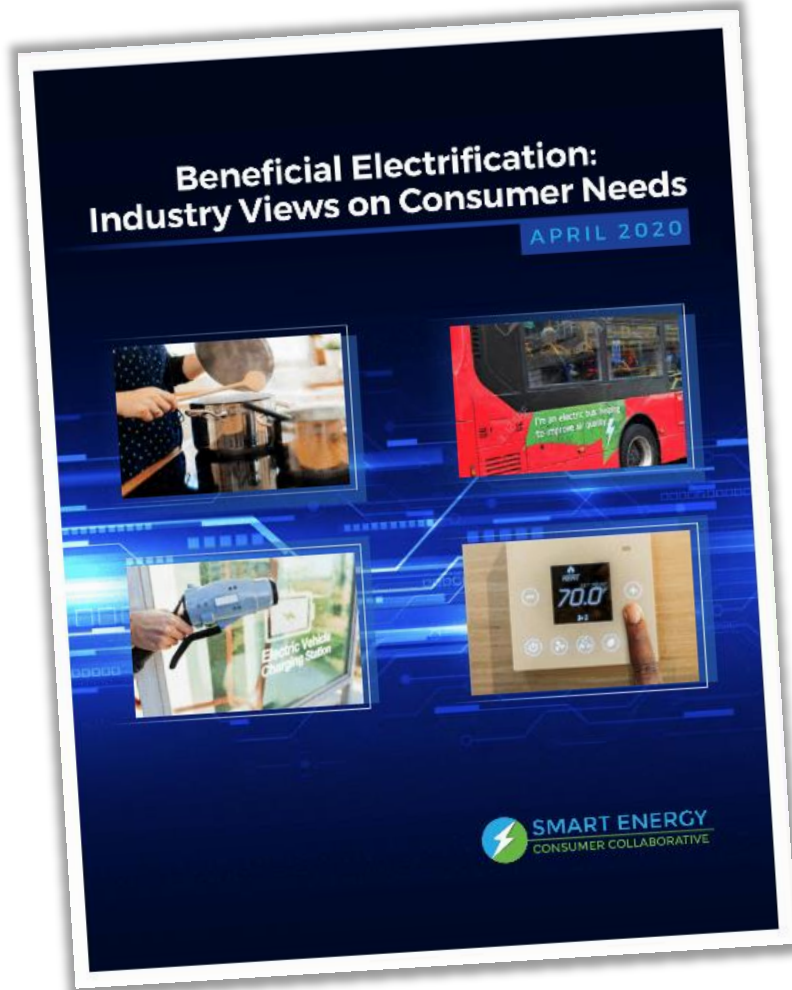


This report investigated consumer interest in transitioning to electricity from natural gas, petroleum or other fossil fuel sources in transportation, space heating, cooking and water heating.

This study reached a nationally representative sample of 1,200 Americans.



“Beneficial Electrification” Industry Views



This paper explored the role that electrification can play in addressing climate change and looked at the benefits that can potentially be delivered to residential consumers.

It was developed from a review of industry publications and in-depth interviews with 11 experts.



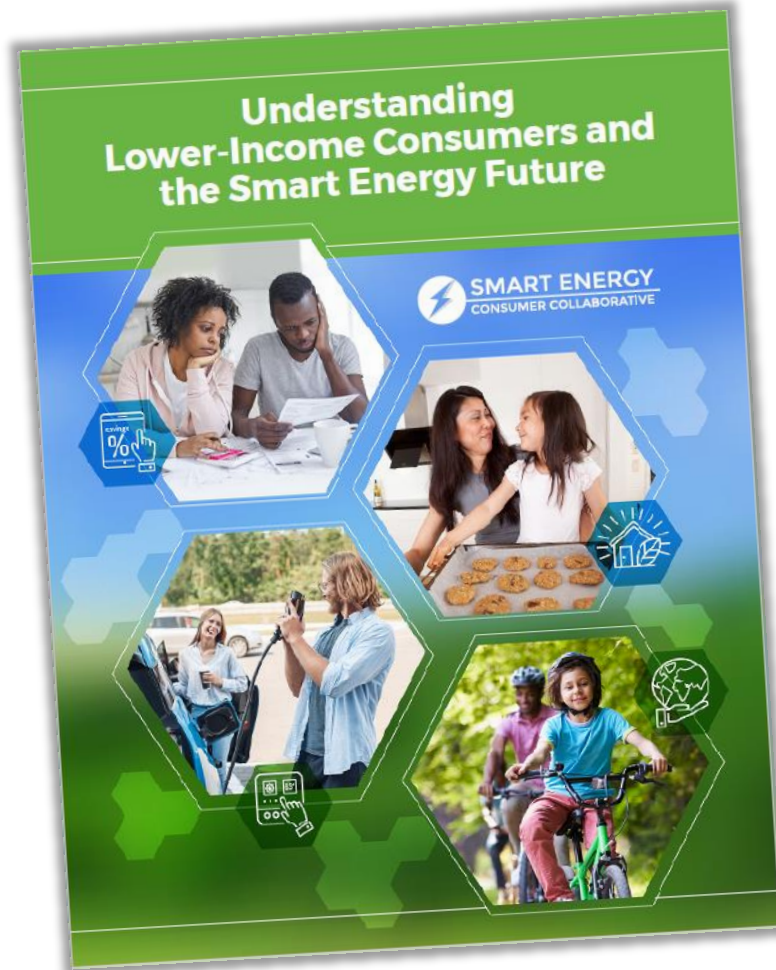
“Modern Customer Engagement Journey”



A unique research project that illustrated consumers’ attitudes and values related to energy, smart home technology, their electricity providers and more during the COVID-19 pandemic.



“Understanding Lower-Income Consumers” Report



This report shed light on who lower-income consumers are, how they engage with smart energy technology, how they view their electricity providers and more.

It is based on a survey of 1,000 Americans with incomes below \$50,000.



“Approaches for Better Serving Lower-Income”

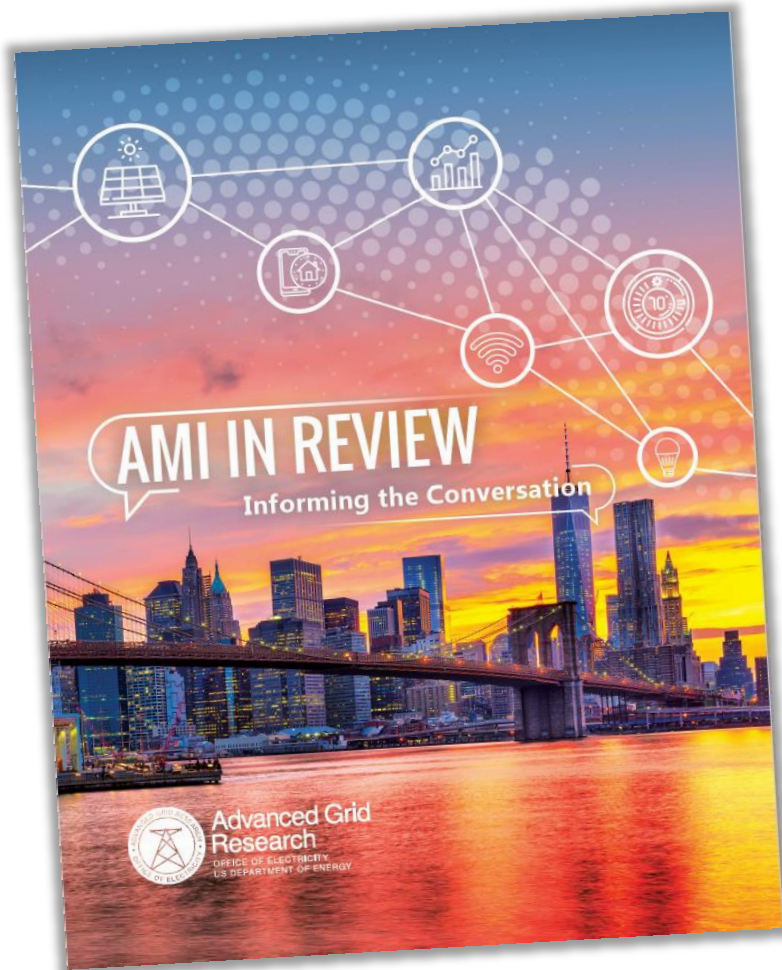


This paper explored low-income programs from electricity providers and provided an analysis of what makes these programs effective in serving under-resourced energy consumers.

Examples from TVA, Puget Sound Energy, Direct Energy and others.



AMI in Review: Informing the Conversation



The U.S. Department of Energy invited stakeholders representing commissions, utilities and consumer advocates to contribute their views to the conversation on AMI.

Researchers reviewed materials filed by utilities with regulators and commissions from 2010 to 2019 and held a series of regional workshops and individual meetings with more than 120 stakeholders.



Theme One

Consumers are making the connection between smart energy and slowing climate change.

Messaging that resonates with consumers



Crossroads Analysis (Total)

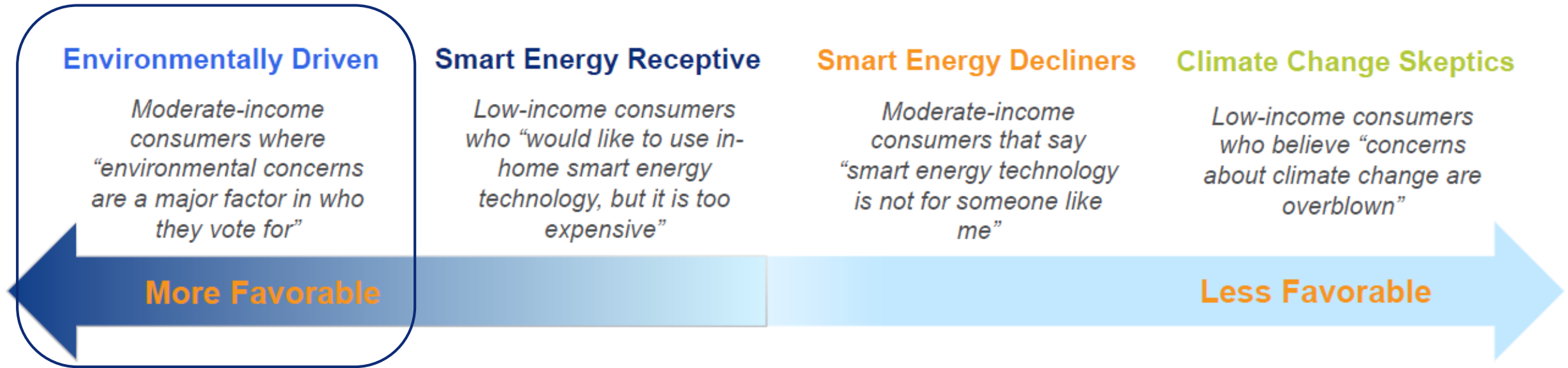


Base: All Respondents (n=1201)
 Q_IATPersonal. Does this statement describe how you feel about energy and the environment?
 Q_MaxDiff1. Please indicate which of the following statements MOST applies to you, and which one applies the LEAST.

The Most Effective Message
 “Electricity is becoming cleaner and more renewable everyday”
 addresses consumer values across segments. With the addition of cost information,
 even less-engaged consumers can be encouraged to take notice and act.



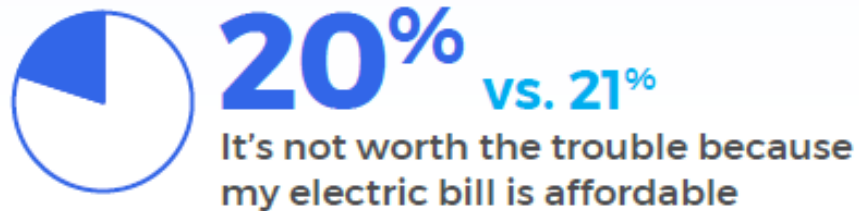
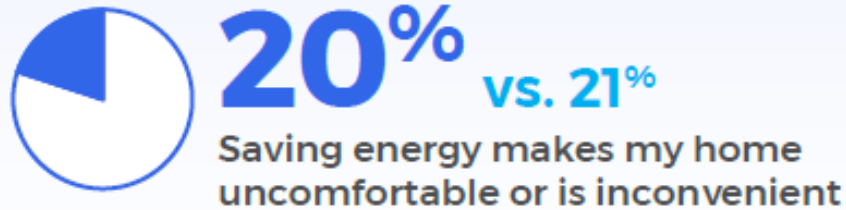
Four personas of lower-income consumers



The Environmentally Driven Persona

Barriers to Energy-Saving Activities

Top 3 Statements (% always/often applies)



Electricity Bill Amount



\$100
Median
vs. \$100

\$115
Mean
vs. \$118

Homeownership



44%
Rent
vs. 45%



56%
Own
vs. 55%



The Environmentally Driven Persona

Always Think About Energy Efficiency
(% always)



44% vs. 31%
The environmental benefits



32% vs. 24%
For future generations

IAT Agreement with Key Statements
Total Agree

94% vs. 81%
The government should invest more in renewable energy sources

91% vs. 79%
I am concerned about how pollution impacts my personal health and the health of my family

67% vs. 62%
I can easily understand how to use new smart technologies

42% vs. 49%
I am already doing enough to protect/save the environment

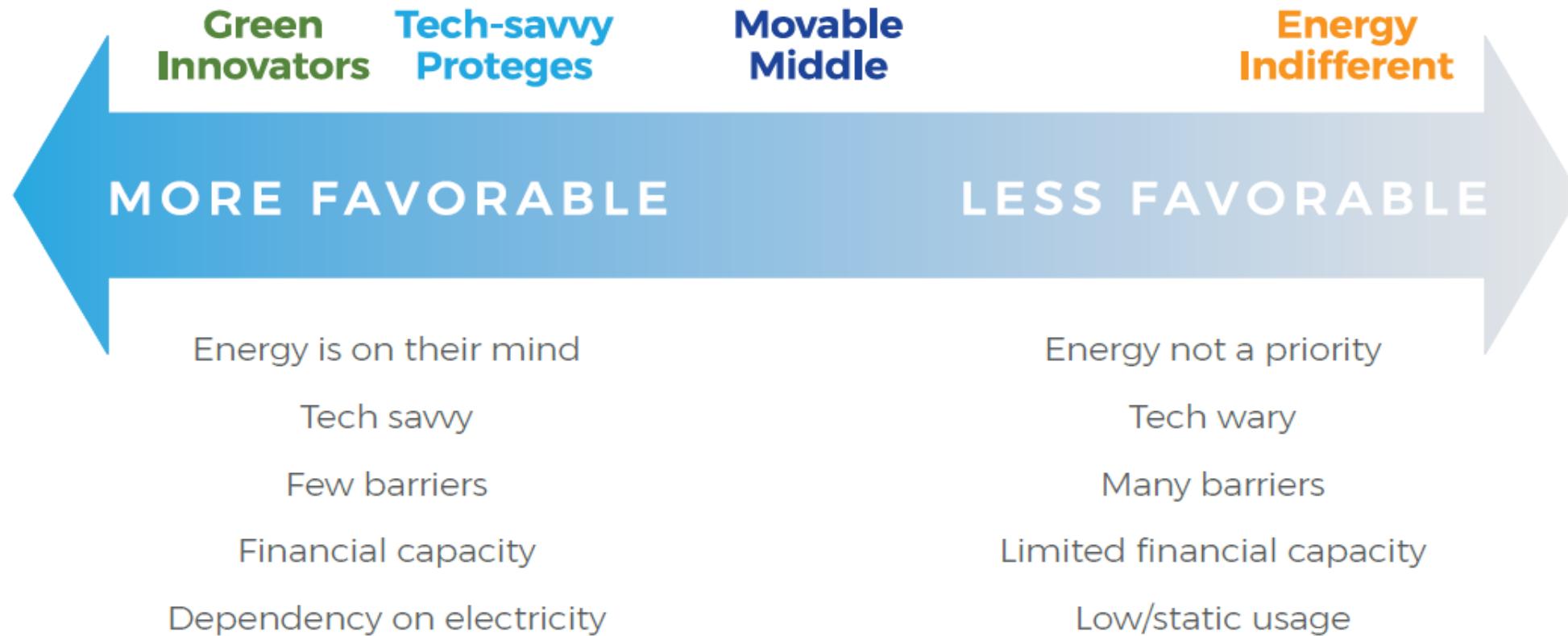
14% vs. 23%
It is not the government's role to protect the environment



Theme Two

Consumers across all segments are interested in smart energy-enabled products.

SECC's Current Consumer Segmentation Framework



Consumers find smart products appealing

- “Smart” products related to energy feel particularly interesting, especially speakers, thermostats, light bulbs and smart plugs
- Google Nest was the most talked about, even among those who don't have one yet
- Alexa and Google Home were also mentioned somewhat consistently



“I like the Ring because I have peace of mind that nobody is sitting at my door trying to get into my house. It’s nice to be able to see the history”

Green Innovator, South



"I have a smart TV, computers, phones. I have the LED lights, low-energy surge protector things, Amazon Echo."

Tech-Savvy Protege, West



A “gateway” product often begets more interest

- A consistent process or pattern for consumers and incremental in nature
 1. Starting with one product (e.g., Nest)
 2. Developing comfort with the idea of linking to phone or voice, or automating – and expecting it
 3. Upgrading other appliances or rooms (e.g., doorbell, lightbulbs)
- Introductory products in this space tend to be speakers: Echo, Alexa or Google Home



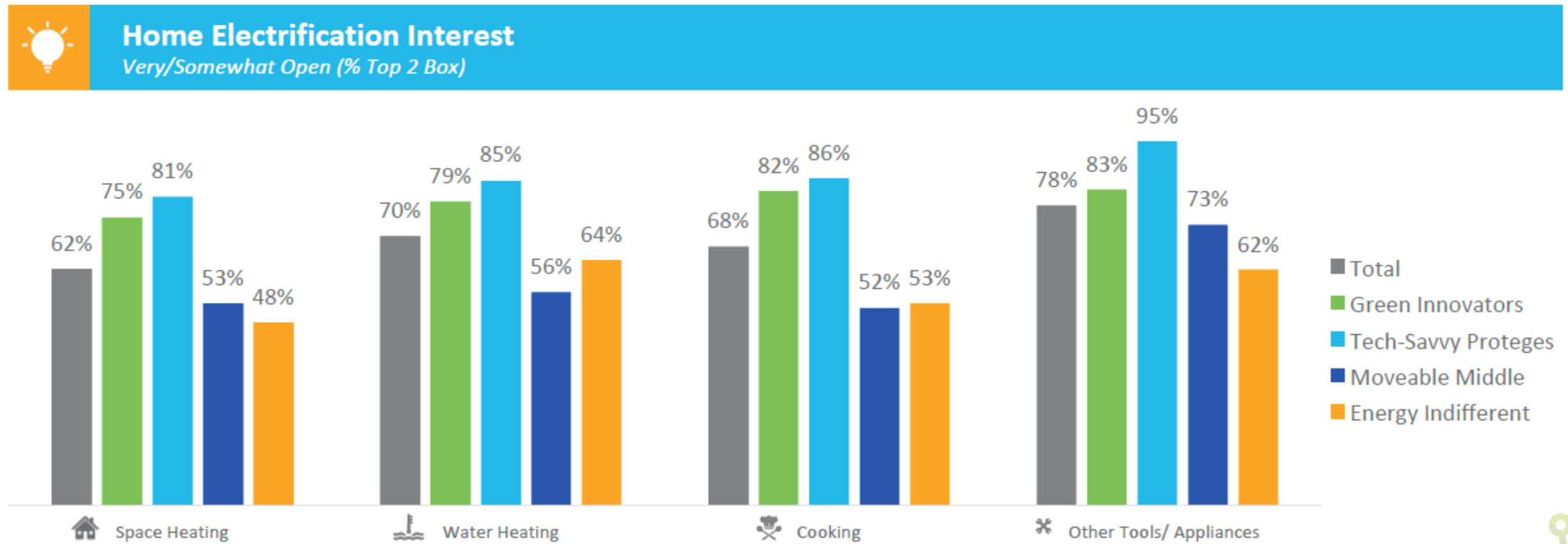
“I’ve been thinking about automated blinds that are integrated into my HVAC system. And that got me thinking it would be great if I could also automate the windows so they could open and close, so that you can take an outside temperature reading and you take one inside. You could either use fresh air to cool and heat your house or use your HVAC system.”

Green Innovator, Midwest



Are consumers interested in electrifying?

Figure 9: Interest in Home Electrification Among Consumers with Other Fuels

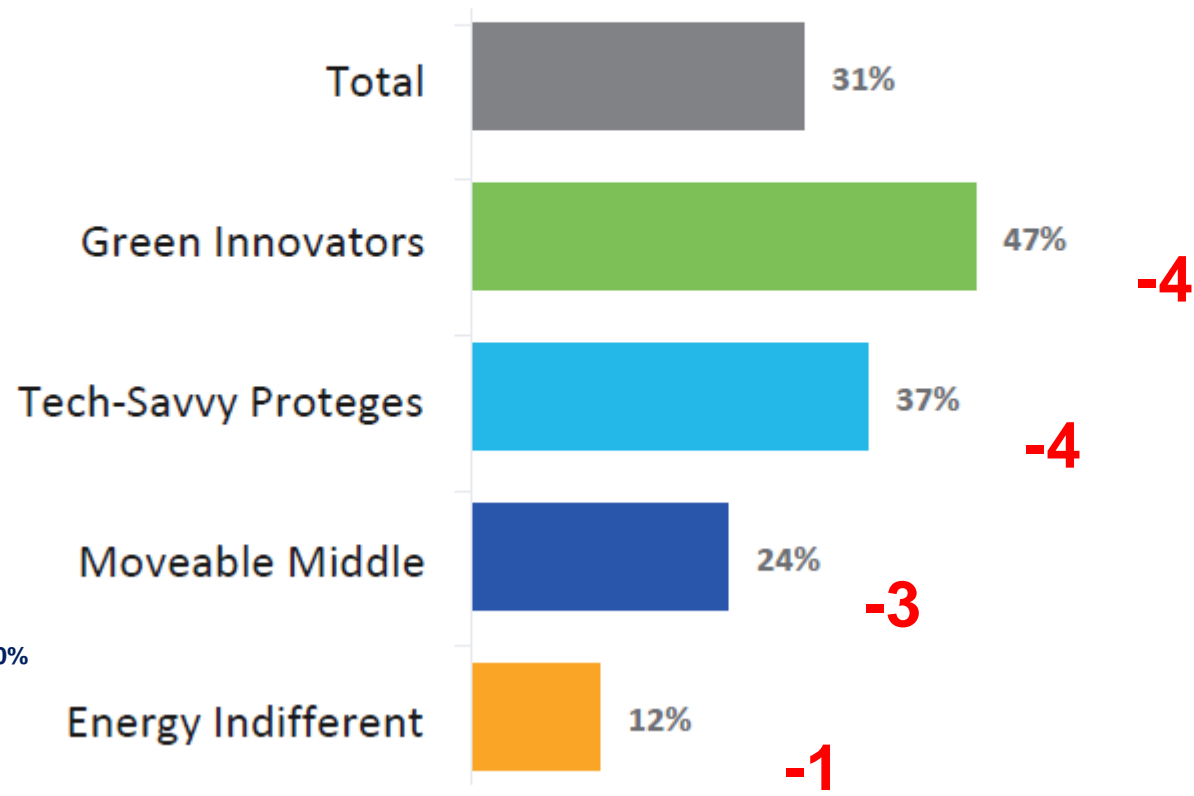


Base: Have "Other" Source in area of home (n=287); Energy Indifferent (n=43*), Green Innovators (n=67), Moveable Middle (n=49*), Tech-Savvy Proteges (n=128)
Q_ElectricInterest. How open are you to using only electricity for each of the following?



Electric vehicle interest with a price differential

 **10% Higher** *(Interested in Next Vehicle as Electric/Plug-in Hybrid)*



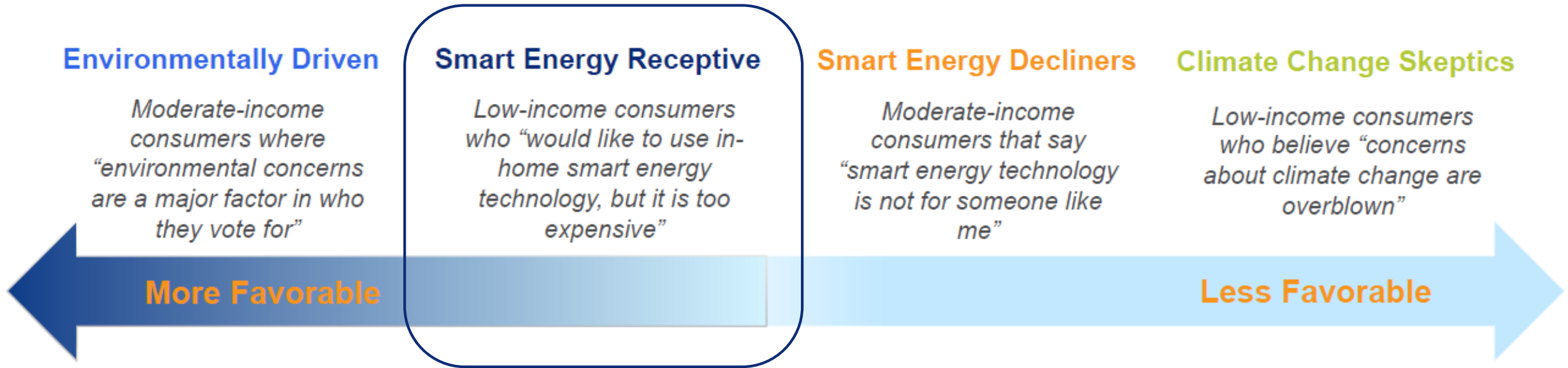
Assume that using electricity from your local power grid emits fewer greenhouse gas emissions than an equal amount of energy from fossil fuels. Would you make the following purchases if the price of electricity use were 10% more than the equivalent in liquid or gas fuels?



Theme Three

Lower-income consumers are keenly interested in smart energy and the environment.

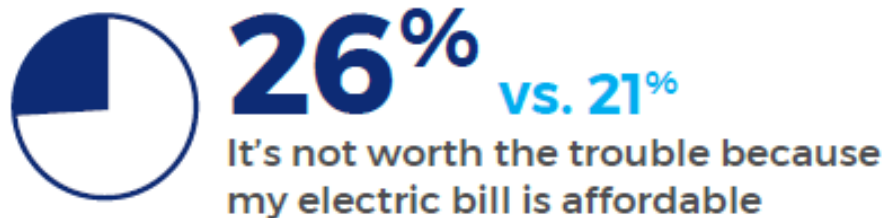
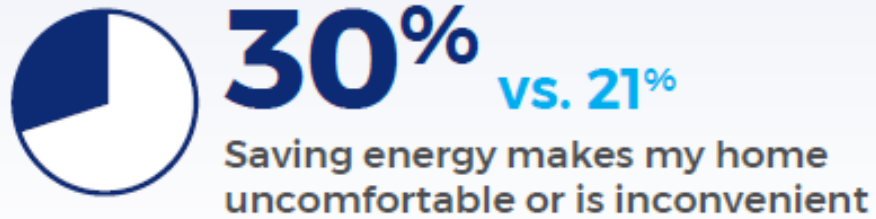
Four personas of lower-income consumers



The Smart Energy Receptive Persona

Barriers to Energy-Saving Activities

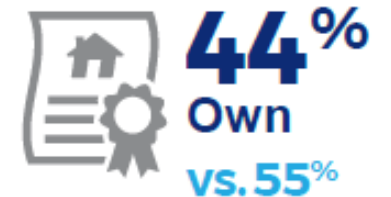
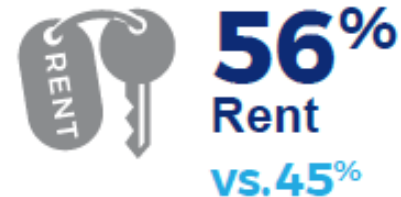
Top 3 Statements (% always/often applies)



Electricity Bill Amount



Homeownership



The Smart Energy Receptive Persona

Always Think About Energy Efficiency
(% always)



34% vs. 31%

The environmental benefits



30% vs. 24%

For future generations

IAT Agreement with Key Statements
Total Agree

91% vs. 79% I am concerned about how pollution impacts my personal health and the health of my family

89% vs. 81% The government should invest more in renewable energy sources

72% vs. 62% I can easily understand how to use new smart technologies

50% vs. 49% I am already doing enough to protect/save the environment

24% vs. 23% It is not the government's role to protect the environment

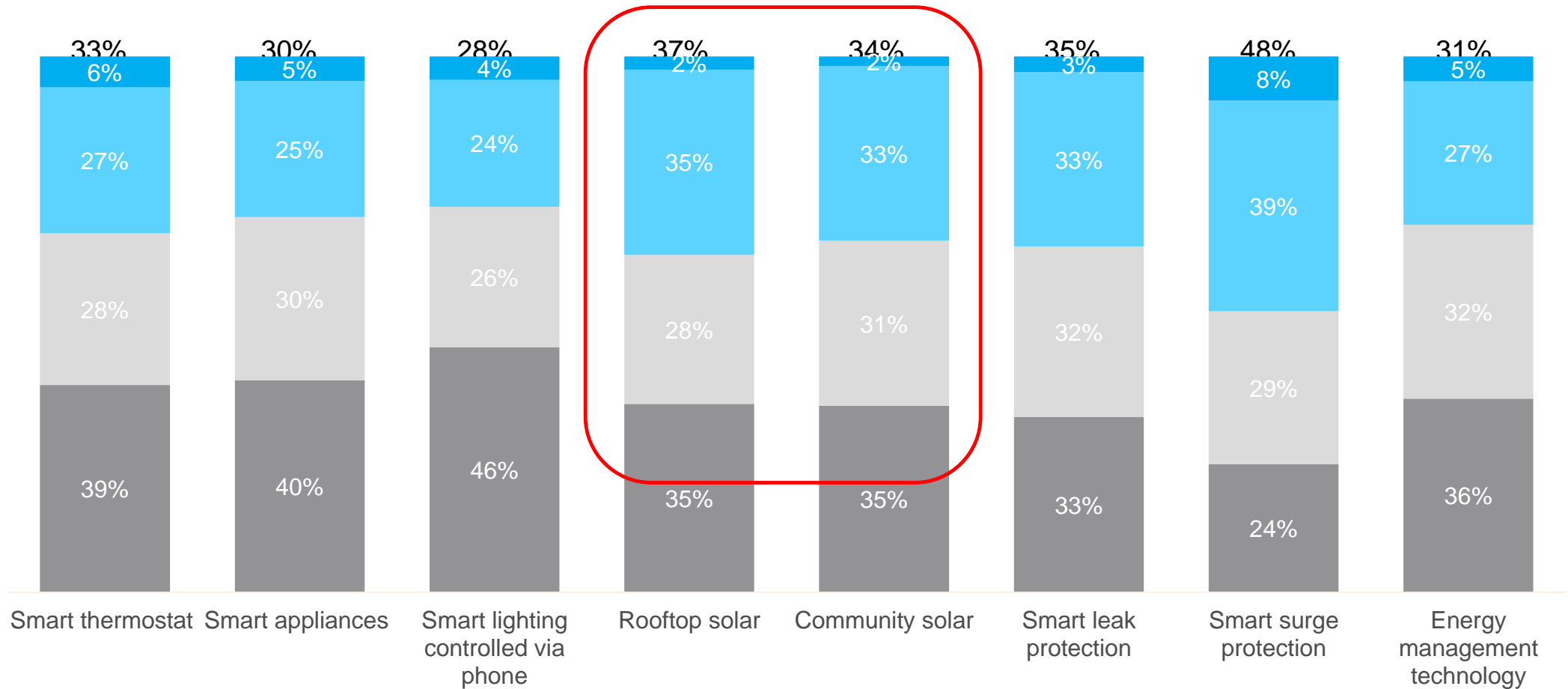


Low- and moderate-income interest in smart energy

Interest in Smart Energy Products with Financial Assistance from Provider

NET: Already have/
Very interested

- Already have
- Very interested
- Somewhat interested
- Not interested



Base: All Respondents (n=1000)

Q_ELECTRO_INTEREST. And how interested are you in the following products and services if you were to receive financial assistance from your electricity provider?

Three key takeaways for overcoming obstacles

Educational – There is a significant opportunity to build awareness of energy-saving technologies and programs designed to help lower-income consumers save money and enact behaviors that will help keep their homes comfortable.

Financial – Many financial assistance programs available to low-income consumers are limited to bill assistance and to the lowest-income consumers.

Relational – Many consumers, lower-income consumers included, interact with their electricity providers primarily through billing-related activities.



Overcoming Obstacles

Community Outreach Program

Working with not-for-profit, community organizations to help their clients save money and become more comfortable with low-cost, energy-efficient products.

Low-Income Energy Savings Program

Targets homes in need of major energy efficiency upgrades to reduce their energy use and costs.

Partnership with **Tobique First Nation**, federal government and NB Power.

Shediac Smart Community

Federal and municipal building retrofits, residential energy management and roof-top solar and NB's first community solar farm.



Theme Four

Consumers need more education on how to assess a program or technology.

Consumers often struggle to assess programs or products

- An upfront cost tends to feel off-putting
 - Most upfront costs are associated with big changes, such as solar panels or changing all the appliances in the house
 - A need to justify these purchases: When will I break even?
- Customers do not have tools to assess how products will impact energy usage
- Even after purchase, it is difficult to know the impact of an energy-saving product in the home
 - Difficult to see the difference from installing a smart thermostat or smart lighting in terms of the energy bill



"The energy-efficient dishwasher, the old one that we had two dishwashers ago, it had a 45-minute cycle, now this one goes on and on for an hour and a half. What the heck is that? Where is the energy savings? I'd like to know."

Green Innovator, South



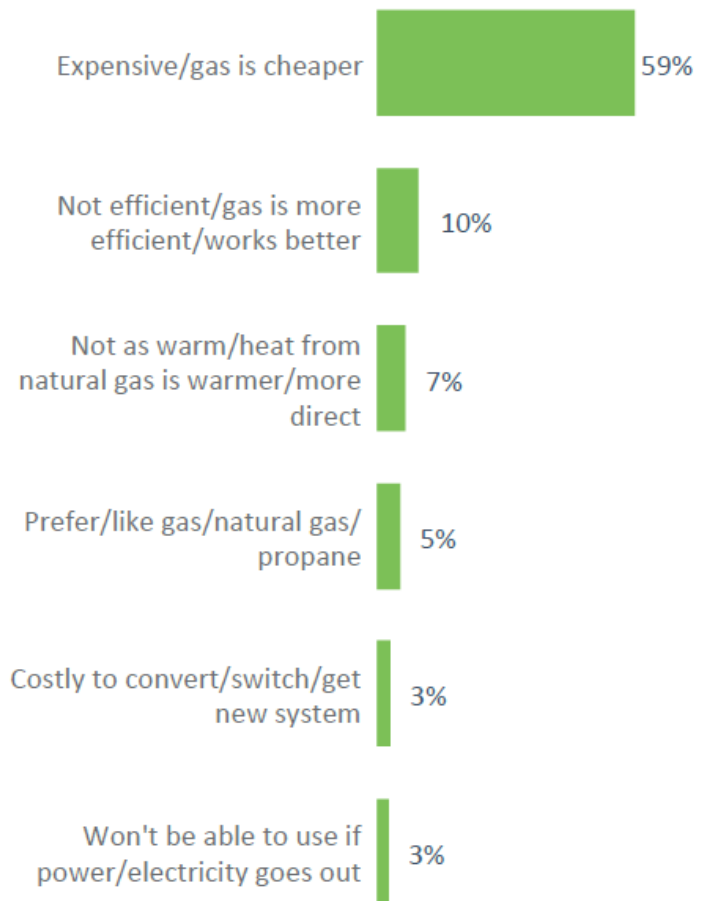
"Did I really see a difference in my hydro bill? No. I didn't see any big changes. Even though they told me I probably would, I really didn't see a change. And even with the light bulbs, I don't know that I see a huge difference at the end of the day. There's just two of us in the house but we don't leave lights on when we leave the rooms and stuff."

Movable Middle, Canada

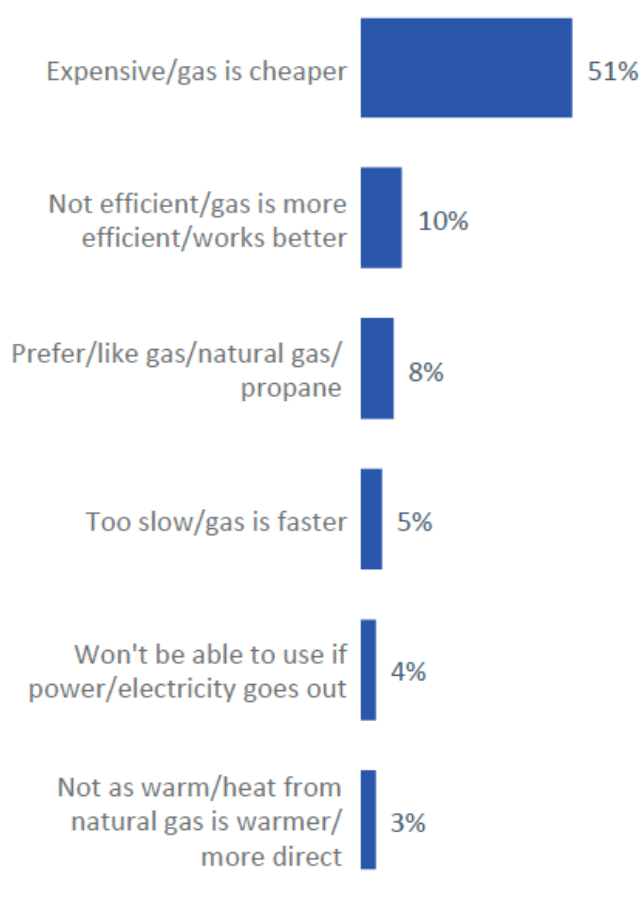


Cost is the main barrier for electrification

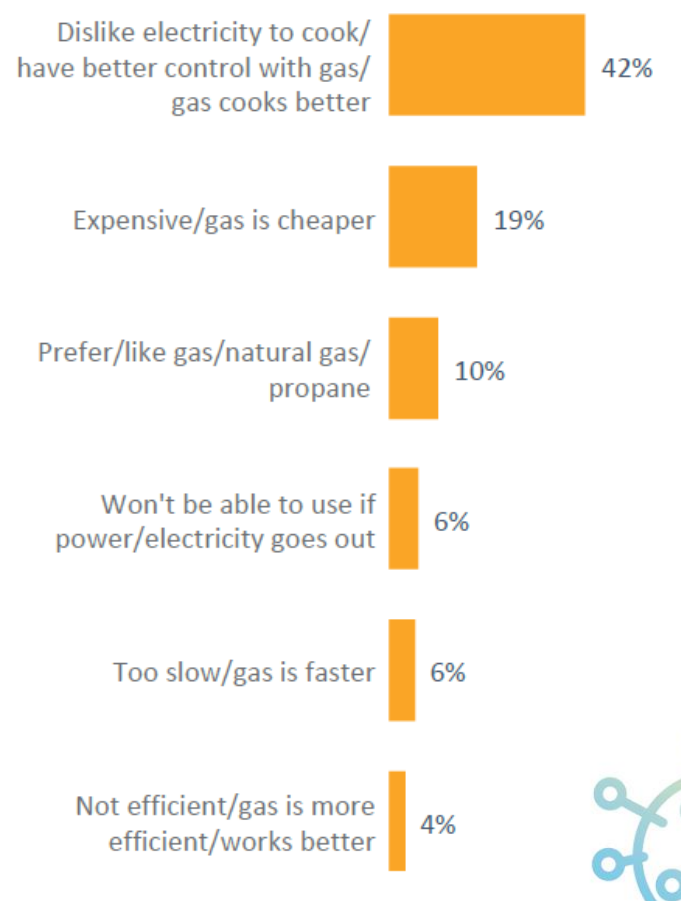
Electric ROOM Heat



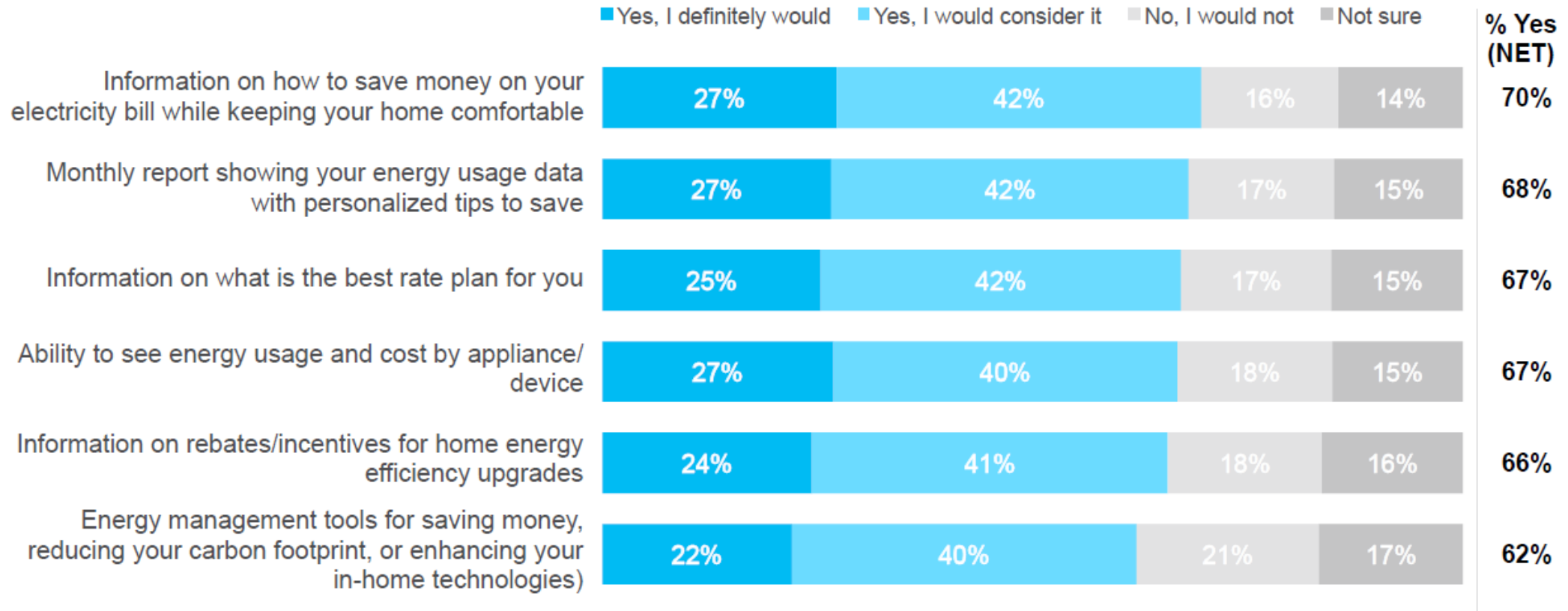
Electric WATER Heat



Electric COOKING



Consumers will share data for personalized insights



Base: All Respondents (n=1000), Q_DataSharing. Would you be willing to allow your electricity provider to share your usage information with a company that analyzes energy usage information if you were to receive each of the following in return?



Theme Five

Consumers look to their energy providers for support as they deal with the impact of COVID-19.

COVID-19: Concerns about household expenses

Figure 17: Rising Concerns About Expenses

		Low Income	Moderate Income	Rural	African American
Food	43%	55%	39%	51%	53%
Health care costs/health insurance	40%	38%	41%	57%	50%
Utilities	39%	56%	32%	57%	52%
Housing	35%	46%	31%	32%	50%
Transportation	27%	38%	23%	40%	38%
Credit card payments	27%	32%	25%	27%	30%
Clothing and household items	21%	36%	15%	25%	30%
Elder care	15%	21%	13%	16%	22%
Schooling / school supplies	13%	23%	10%	14%	20%
Childcare	11%	19%	7%	10%	19%
Other	1%	1%	1%	1%	1%



COVID-19: How can electricity providers help?

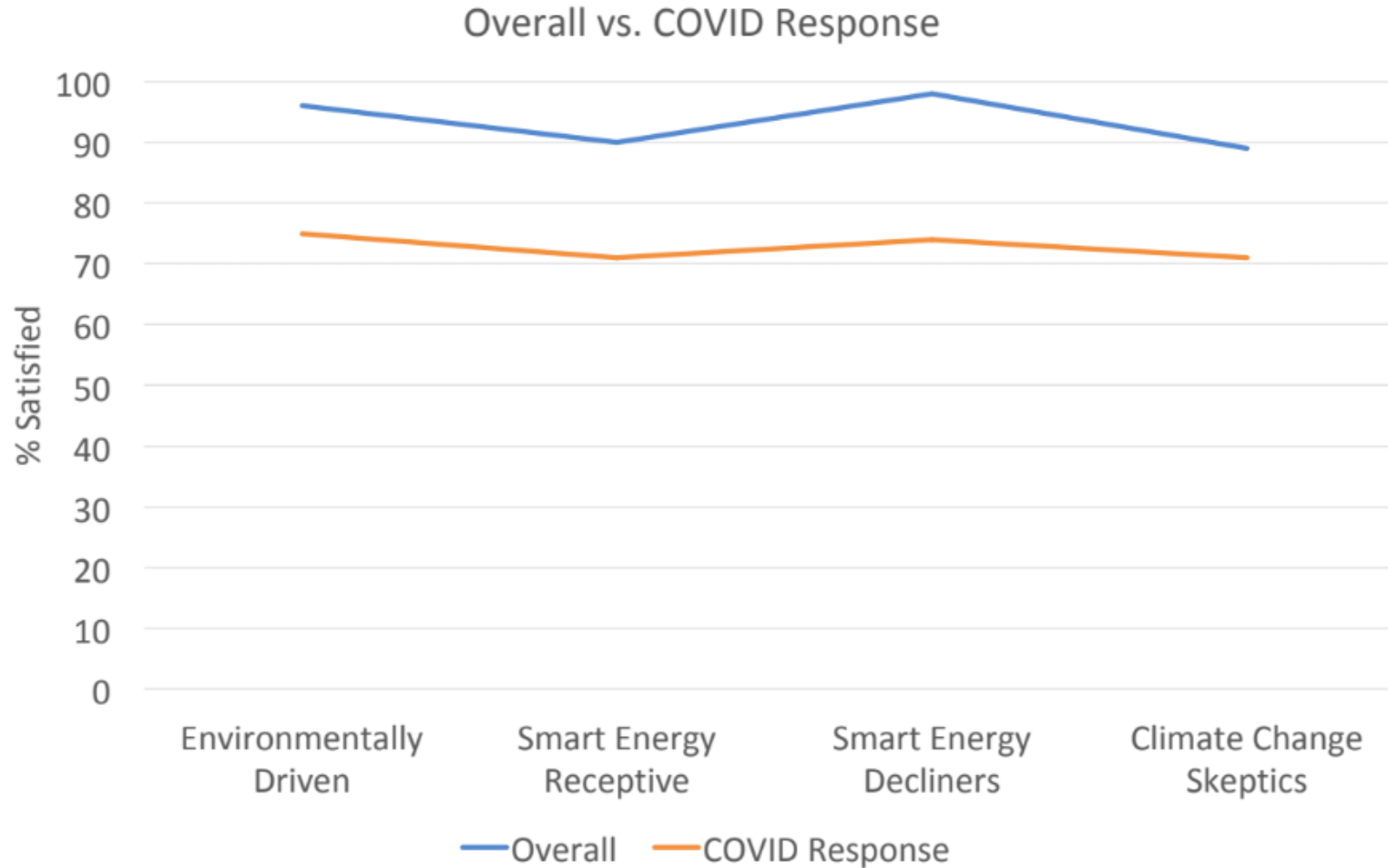
Figure 19: Ways Electricity Providers Can Help

		Low Income	Moderate Income	Rural	African American
Offer rate plans that are less expensive for my usage	40%	40%	40%	60%	42%
Provide information on how to reduce my energy usage/ lower my bill	28%	27%	29%	31%	37%
Offer direct financial assistance to help me pay my bill	27%	32%	26%	28%	34%
Offer to defer payment of my bill	23%	27%	21%	32%	40%
Provide arrears forgiveness programs that erase some of the debt owed provided customers stay on a payment plan	21%	27%	19%	18%	27%
Offer payment plans for my bill	21%	26%	19%	35%	30%
Provide information on financial aid from other organizations	18%	20%	17%	17%	23%
Other, please specify	2%	1%	2%	-	3%
I do not need help from my provider at this time	34%	29%	36%	22%	26%



Satisfaction with utilities' COVID-19 response

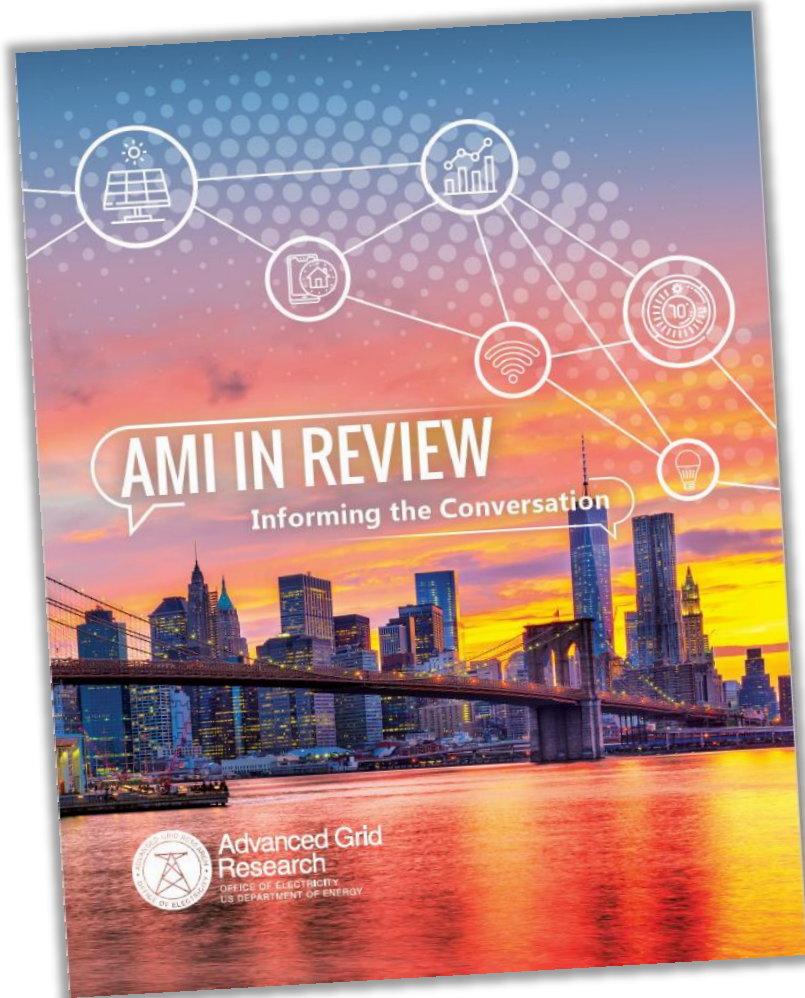
Figure 9: Satisfaction with Electricity Providers Among Lower-Income Consumers



Theme Six

Consumer education and engagement are essential to realizing the promise of beneficial electrification and advanced technologies such as AMI.

AMI in Review: Informing the Conversation



“AMI has the potential to transform the utility-customer relationship from one where customers passively use utility-provided electricity to one with a more active, engaged consumer. AMI can provide data to inform customer decisions about managing their electricity, to integrate with new products, or to enable innovative products and services by utilities and third parties.”



EDUCATING & ENGAGING CONSUMERS

- Avangrid: Enlisted community volunteers as Energy Navigators to educate and engage their neighbors and build trust
- Puget Sound Energy: Gained a 54% increase in consumer participation in an energy efficiency program following research that uncovered a specific need
- NB Power: Designing an energy literacy program in partnership with community colleges



What Have We Learned About Consumers?

1. Consumers are making the connection between smart energy and slowing climate change
2. Consumers across all segments are interested in smart energy-enabled products.
3. Lower-income consumers are keenly interested in smart energy and the environment.
4. Consumers need more education on how to assess a program or technology.
5. Consumers look to their energy providers for support as they deal with the impact of COVID-19.
6. Consumer education and engagement are essential to realizing the promise of beneficial electrification and AMI.

