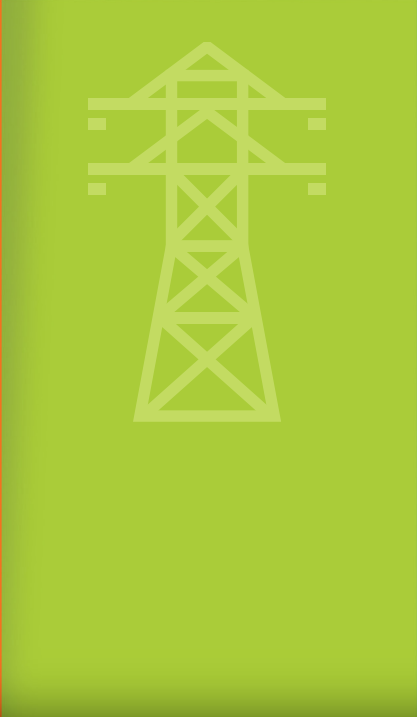
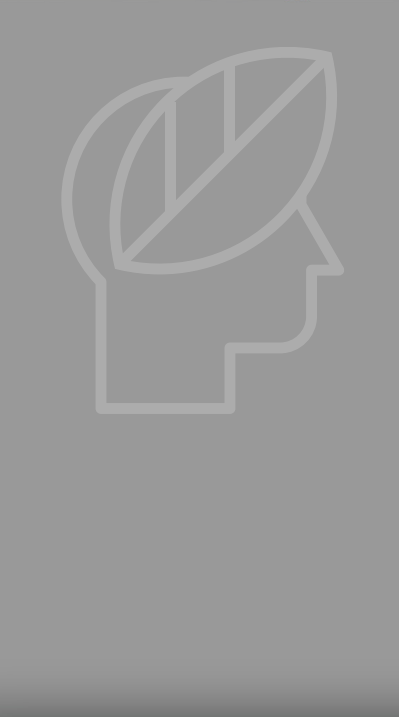


2023

STATE OF THE CONSUMER



ACKNOWLEDGEMENTS:

The Smart Energy Consumer Collaborative (SECC) would like to thank Barbara Leary for her assistance in writing this report. Barbara specializes in executive communication and change management for the electric power sector and teaches graduate-level courses on communication at Georgetown University.



Working for consumer-friendly, consumer-safe smart energy

SECC's mission is to serve as a trusted source of information on consumers' views of grid modernization, energy delivery and usage, and to help consumers understand the benefits of smart energy.

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MISSION

SECC's mission is to serve as a trusted source of information on consumers' views of grid modernization, energy delivery and usage, and to help consumers understand the benefits of smart energy.

VISION

SECC's vision is to empower all consumers to benefit from smart energy.

THANK YOU, MEMBERS

SECC would like to thank all its members, the 2022 research sponsors and the Research Committee participants for their support of SECC's consumer research over the past year. Only by continuing to collaborate on consumer issues will we fully realize the promise of smart energy.

If you are not a member, we invite you to be a part of the conversation as we listen, collaborate, and educate.

MEMBERSHIP

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Citizens Utility Board of Ohio	Leviton	Sonoma Clean Power	
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Con Edison	National Institute of Standards and Technology	Stevens Institute of Technology	
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ecobee Energy	New Brunswick Power Corporation	The Cadmus Group	
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Electrum	North Carolina Sustainable Energy Association	The Greenlining Institute	
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Energy Federation Incorporated		Touchstone Energy Cooperatives	
EnergySage		Tucson Electric Power	
Enverve			
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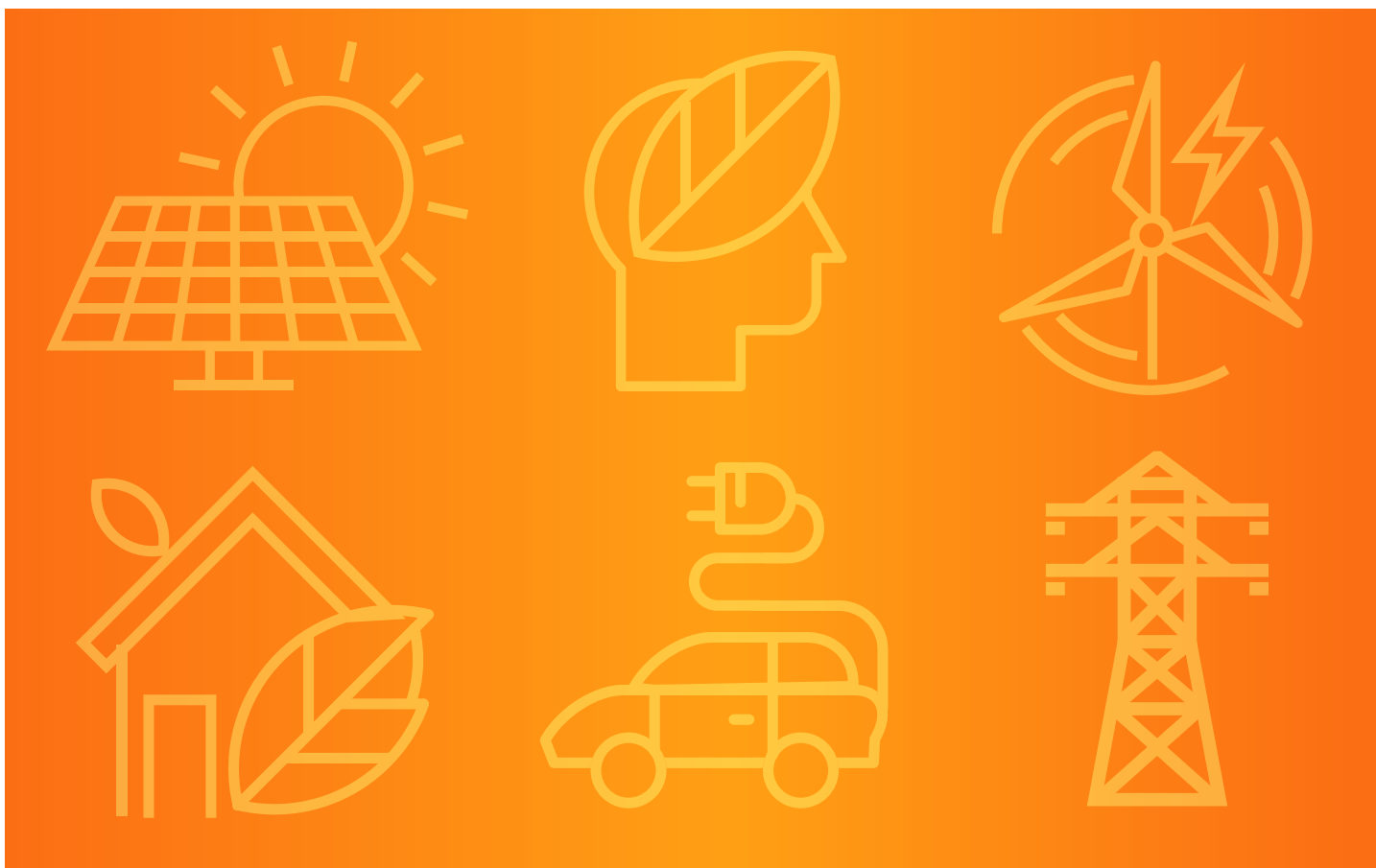
Austin Energy
 American Municipal Power
 Central Alabama Electric Cooperative
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 City Utilities of Springfield
 Cobb EMC
 Colorado Springs Utilities
 CPS Energy
 ElectriCities NC
 Eugene Water & Electric Board
 Fayetteville Public Works Commission
 Great River Energy
 Lafayette Utilities System
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 Trico Electric Cooperative
 Tri-County Electric Cooperative (Oklahoma)
 Waterloo North Hydro Inc.
 Wilson Energy

INTRODUCTION

In keeping with its mission, the Smart Energy Consumer Collaborative conducts research on consumers' attitudes and perceptions related to energy to help its members better understand and serve their customers. In collaboration with its members, SECC develops an annual research agenda that includes both qualitative and quantitative studies, as well as deeper analysis of data and trends uncovered in previous studies.

The *2023 State of the Consumer* report summarizes the findings of the SECC's 2022 research agenda and synthesizes the insights that emerged from these studies. It also considers research from other organizations that follow energy consumer trends, including the American Council for an Energy-Efficient Economy (ACEEE) and the National Energy Assistance Directors Association (NEADA).

SECC hopes this report provides actionable insights for industry stakeholders who are committed to helping their customers derive the greatest possible value from smart energy programs, products, and services.



RESEARCH OVERVIEWS

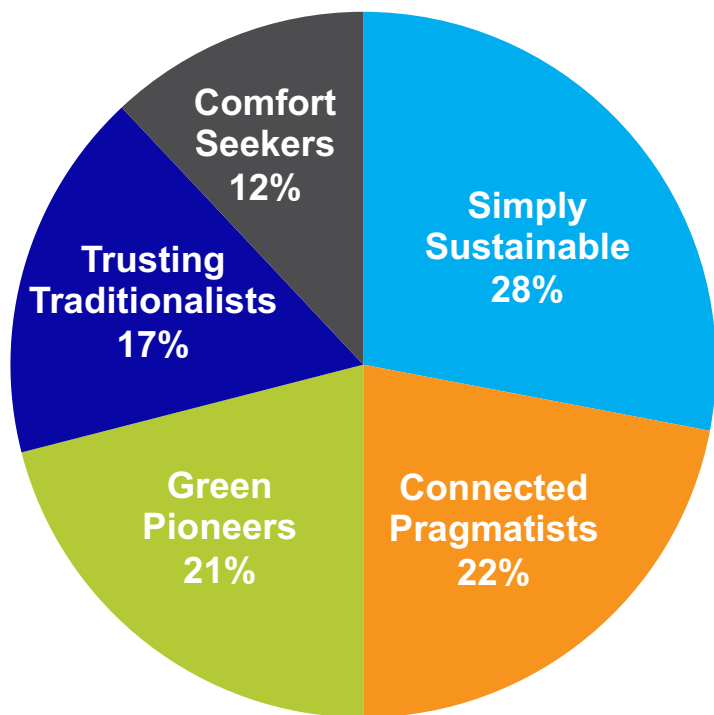
Consumer Pulse and Market Segmentation – Wave 8

In 2022, SECC refreshed its flagship *Consumer Pulse and Market Segmentation* report, the longest-running longitudinal survey of energy consumers' perceptions and needs in the United States. The eighth wave of the survey examines consumer attitudes considering the significant changes in energy technology over the past decade and concern over climate change. It also considers consumer interest in electric vehicles, renewables, and battery storage.

Much has changed about smart energy technology as well as consumer behaviors and attitudes since 2011 when SECC's first segmentation was published. This includes the growth of smart home devices, increasing concern around climate change, the widespread implementation of Advancing Metering Infrastructure, the impacts of the COVID-19 pandemic and more. Given these energy industry and societal changes, it was important for SECC and our stakeholders to revisit our consumer segmentation with a fresh lens.



Figure 1: Consumer Segments and Expected Distribution in the General Population



Through a series of 30-minute interviews, followed by a quantitative survey of 2,500 U.S. energy consumers, researchers explored a variety of topics, including attitudes toward smart energy technology and energy providers, how well they understand their bill, their awareness of how their actions affect the power grid, where they go for information about energy and what they are looking to find.

The findings led to the development of five consumer segments, primarily differentiated by the consideration they give to their electricity usage, their concern for the environment and reducing their carbon footprint, and their interest in and comfort with technology.

The five new segments can be understood as:

Simply Sustainable Consumers who are not tech-savvy but interested in saving energy and reducing their carbon footprint. The largest segment (28% of the general population), these consumers are among the oldest of the segments and have some of the lowest electricity bills. They are open to smart energy solutions but lean toward simple lifestyle approaches.

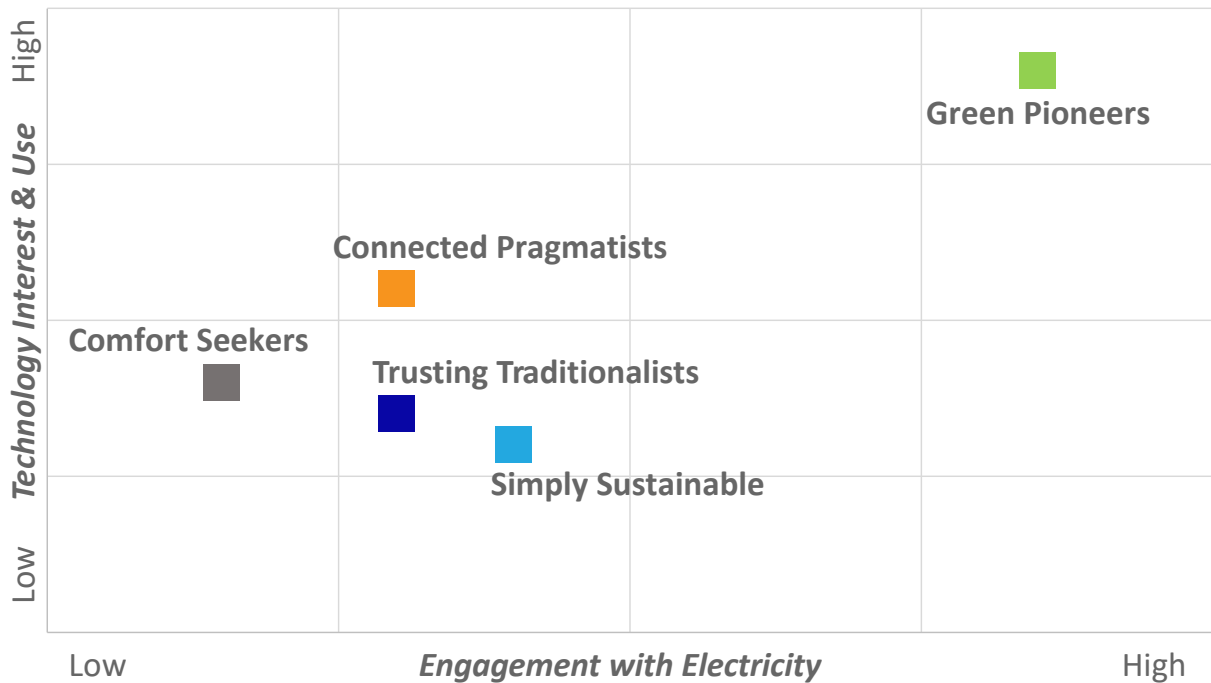
Connected Pragmatists Consumers who are comfortable with technology but not overly concerned about the impact of their electricity usage. As the youngest and most mobile consumer segment, representing 22% of the general population, they have the potential to become more energy conscious as they move into home ownership.

Green Pioneers Consumers who value technology and care about the environment and thus occupy the “sweet spot” among energy consumers. Consumers in this segment make up 21% of the general population. They are busy, well-educated homeowners with a median age of 44. They have the highest electricity bills and the highest incomes of all the segments.

Trusting Traditionalists Consumers who understand the impact of their energy use on the environment but do not make the connection to technologies that can help them achieve their energy goals. These consumers look to their electricity provider as a trusted source of information. At 17% of the population, they are the oldest and have the lowest incomes among the segments.

Comfort Seekers Consumers who are all about their own personal comfort. They are disinterested in saving energy and unlikely to exert much effort to learn about or invest in energy-related technology. These are middle-income consumers, predominantly male, with an average age of 52. They make up the smallest segment, at 12% of the general population.

Figure 2: Electricity and Technology Attitudes by Segment



Electric Bills and Rate Plans: Consumer Awareness and Understanding

December 2022

As the electric power sector evolves and grows more complex, consumers have more choices and opportunities than ever before: new technologies to consider, new products and programs to explore and new rate plans to evaluate. Many consumers are inexperienced when it comes to weighing the pros and cons of new rate plans, whether they relate to time-of-use (TOU), EV charging or prepay options. In fact, consumer knowledge and perception of rate plans is unclear, and it is difficult to gauge how prepared they are to act on the options presented to them.

This survey sought to help utilities:

- Understand how consumers believe they can benefit from various rate structures.
- Explore consumer attitudes towards electric bills.
- Craft strategies for developing new and alternative rate structures and outreach efforts.
- Develop messaging and communication to drive consumer consideration and adoption of alternative rate plans.

The survey synthesized responses from 2,013 American household energy decision-makers ages 18 and older and applied the SECC's new segmentation data to illuminate differences among the five segments identified in that study.

Attitudes Toward Electric Bills

Most respondents (72%) like checking their bills to monitor their efforts to reduce energy consumption, but about one-half of respondent also said they “hate opening electricity bills.” (Figure 3) The reason seems to be that many respondents, especially the **Connected Pragmatists**, find their bills difficult to understand. This sentiment was also prevalent among **Green Pioneers** — the most engaged segment and the one that felt most strongly about the potential of the bill to serve as a cost-savings tool.



Figure 3: Attitudes Toward Reading Electric Bills (% Strongly and Somewhat Agree)

		SEGMENT				
		SIMPLY SUSTAINABLE	CONNECTED PRAGMATISTS	GREEN PIONEERS	TRUSTING TRADITIONALISTS	COMFORT SEEKERS
I actively look to save money on household expenses and by adjusting my usage of electricity I can do so	80%	82%	83%	86%	77%	61%
I like checking my electricity bill to see if I have been able to reduce energy consumption.	72%	75%	81%	82%	61%	37%
I have been known to shift my activities around the home to try and use electricity when it might save me...	62%	58%	73%	70%	55%	38%
I understand most of my electricity bill, but some parts of it seem like they are written in another language.	59%	54%	74%	54%	60%	46%
I wish my electricity bill was easier to understand.	56%	52%	69%	54%	56%	42%
The only thing I look at on my electricity bill is how much I owe and when it is due.	54%	49%	70%	40%	56%	60%
I hate opening electricity bills.	50%	46%	63%	44%	50%	47%
I think most of what is included in an electricity bill is just there to confuse you and distract you from the price.	43%	34%	66%	36%	37%	40%

Base: Total (n=2,013); Simply Sustainable (n=551), Connected Pragmatists (n=442), Green Pioneers (n=477), Trusting Traditionalists (n=345), Comfort Seekers (n=198)
Q_ATTITUDES_UNDERSTANDING. Please indicate if you agree or disagree, strongly or moderately.

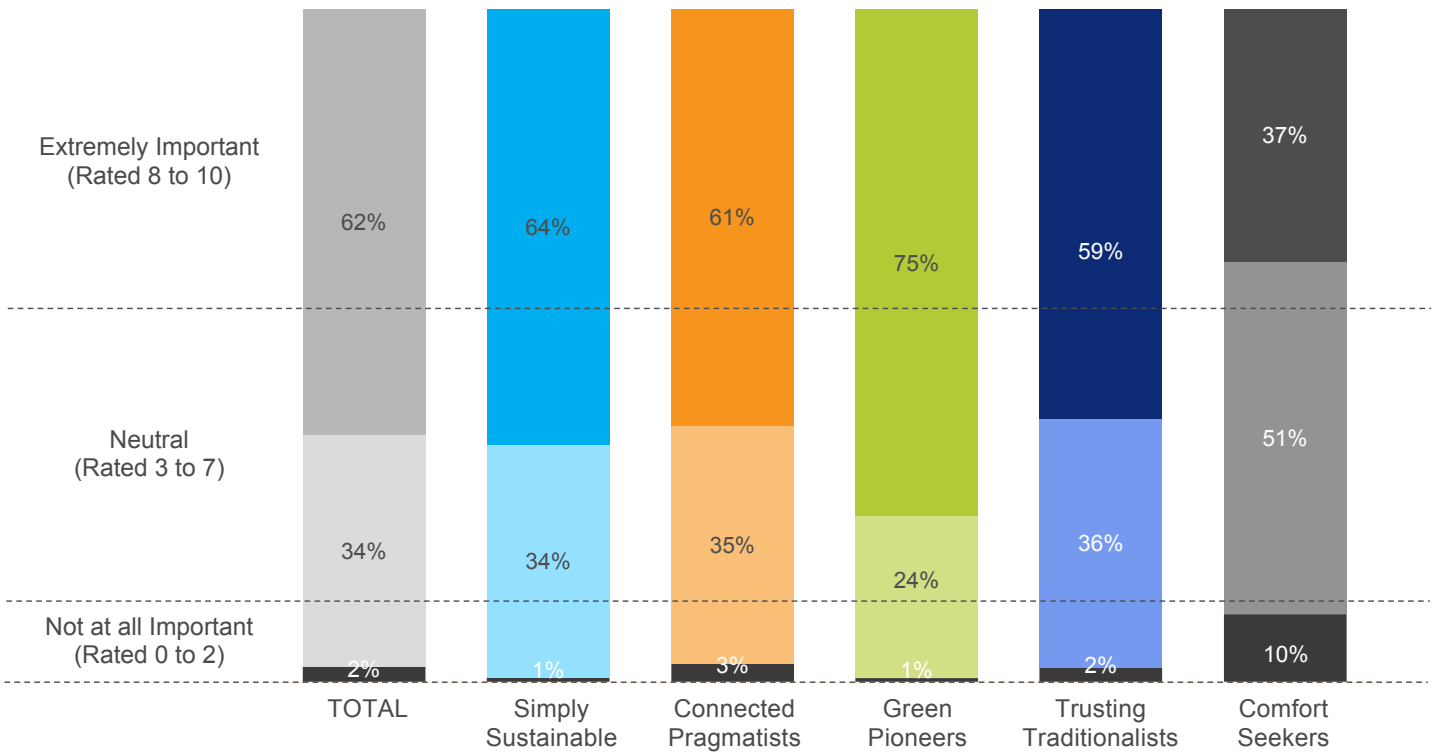
Note: The colored shading indicates a few areas where segments score significantly higher/lower than the others.

Bill Understanding and Factors Driving Consumption

The survey participants showed a general lack of awareness of the different types of charges found on the bill (energy charge, customer charge, demand charge), with 40% saying they “don’t pay attention to any of them.” When it comes to understanding what drives usage, however, most respondents (77%) identified air conditioning as the main factor driving home energy consumption, far surpassing the impact of other major appliances. Less important factors were identified as entertainment devices (45%), computer equipment (44%), the heating system (42%, and interior lighting (37), with no marked differences among segments. Consumer perceptions closely aligned with real data from the U.S. Energy Information Administration.

Energy inefficiency was cited by respondents as the second most important contributor to energy costs (26%), behind volume of use (56%). As expected, a large majority of **Green Pioneers** (75%) said that energy efficiency and lowering home energy costs were extremely important, followed by the **Simply Sustainable, Connected Pragmatists**, and **Trusting Traditionalists**, aligned at roughly 60%. About half of **Comfort Seekers** were neutral on the question, and 10% said energy efficiency was not important to them at all.

Figure 4: Importance of Energy Efficiency and Lowering Energy Costs



Base: Total (n=2,013); Simply Sustainable (n=551), Connected Pragmatists (n=442), Green Pioneers (n=477), Trusting Traditionalists (n=345), Comfort Seekers (n=198)
Q_EE_HOME_IMPORTANCE. How important is it to you, personally, to know that your home is energy efficient and that you have done all that you can to lower your energy costs?

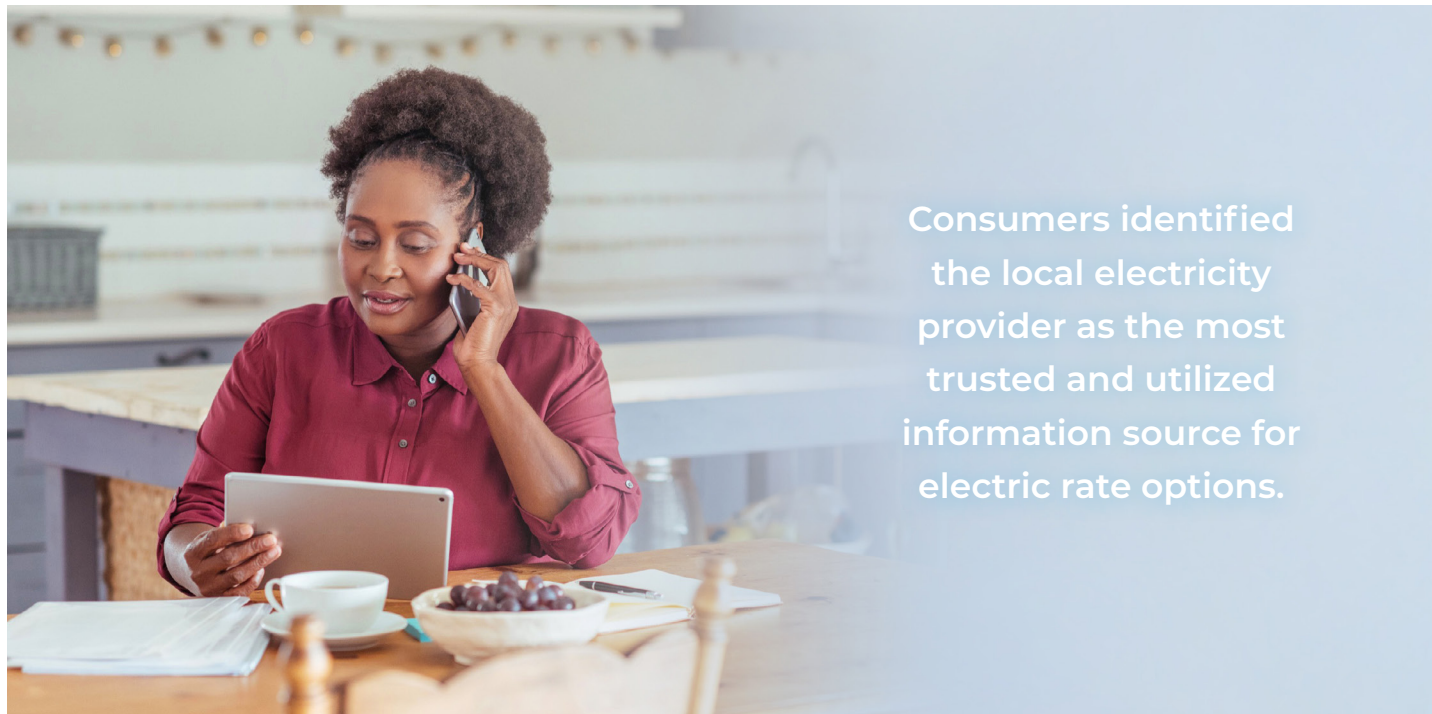
Rate Plan Understanding and Satisfaction

Most consumers today have rate plan options, but only 28% of respondents were aware of having a choice. This lack of awareness spanned all segments, even the energy-engaged **Green Pioneers**. When asked the extent to which they were satisfied with their current rate plan, the dominant reply among all segments was a tepid “somewhat satisfied.” This low level of awareness extended to consumers’ understanding of the types of rate plans, with no single rate plan—not even the flat rate—known to the majority.

Rate Plan Preferences

In terms of desirable rate plan attributes, consumers overwhelmingly want stable, predictable rates. “Bill stability” rose to the top for all consumer segments. “Bill predictability” (knowing the amount of the bill ahead of time) ranked second for the **Simply Sustainable**, **Connected Pragmatists**, and **Trusting Traditionalists**. **Comfort Seekers** and **Green Pioneers** both ranked “predictability” (the ability to use as much as needed without an impact to the bill) higher than “bill predictability,” but, for **Green Pioneers**, “control” (the ability to manage bills through shifting load or automating electricity use) ranked slightly higher. “Green power” rate plans, which source electricity from zero-emission, renewable resources, ranked far below all other choices for all segments. In keeping with their interest in stable and predictable rates, all segments indicated a strong preference for flat rate and fixed rate plans. In an apparent contradiction, interest in prepaid plans was low across segments.

When asked to whom they would turn for information on rate plans, respondents cited their electricity provider as the most trusted and utilized source of information. Considering the level of trust and need for greater consumer education and awareness, electricity providers are in the strongest position to help consumers understand their rate options.



Consumers identified the local electricity provider as the most trusted and utilized information source for electric rate options.

Segmentation in Action: Advancing the Customer Relationship

January 2023

This white paper explores the attributes and characteristics that differentiate the five consumer segments defined in the SECC's new segmentation study. It provides actionable insights and suggestions to help electricity providers better identify and connect with their customers, along with examples of best-practice utility programs.

Simply Sustainable consumers are not as comfortable using new technologies as the Green Pioneers or Connected Pragmatists, and their energy usage tends to be modest. They are environmentally aware, however, and value ways to save energy and simplify their lives, so they are a key group to engage. These consumers would respond well to clear, direct messages that emphasize energy-savings benefits and ease of use. Given the size of this segment, they can be reached through mass communication channels such as general advertising, mail and email, social media, and billing messages.

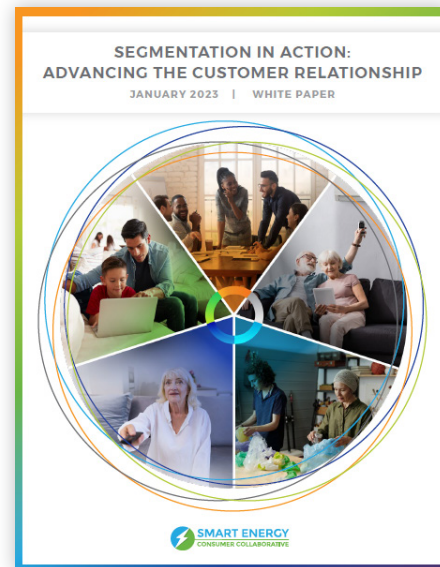
Examples of utility programs include SDG&E's AC Saver demand response program and Ameren Illinois' Smart Savers Initiative, which provides free smart thermostat devices for eligible customers.

Connected Pragmatists are highly educated and adept at technology but indifferent about the impact of their energy use. This could be because they skew younger and are likely to rent their homes. They may be harder to identify but cultivating relationships with them could lead to engagement in the longer term once they become homeowners. Partnerships with service consolidators, landlords and home goods retailers could help to reach these consumers at key moments in time—such as moving into a new residence. A soft-sell emphasis on lifestyle benefits and being the “first to try” could help to engage this segment.

This is the approach taken by Southern California Edison with its Energy Expert Alexa Skills pilot, which enables customers to use their smart speaker to learn about their energy usage. The Energy Expert app is portable, a feature that would appeal to this mobile segment and help facilitate longer-term energy engagement.

Among all five segments, the **Green Pioneers** best represent the ideal energy consumer. Engaged, environmentally aware and well-educated, they value technology and energy efficiency and are willing to moderate their energy behavior for the greater good. Predominantly mid-career homeowners with children, they are likely to be engaged in conserving energy through participation in solar, electric vehicles and other programs that connect energy and technology. These consumers have higher incomes than other segments and higher energy costs, and they expect a return on their investments, whether it is realized in terms of energy efficiency or conservation. Messaging that emphasizes tangible returns and environmental responsibility would resonate with Green Pioneers.

Xcel Energy hit the mark with its Charging Perks Pilot Project, which provides financial incentives for EV drivers who charge up at the best times for the energy grid. Con Edison has also succeeded with its HVAC Rebate Programs, which offer incentives to customers who invest in heat pumps and appeal to Green Pioneers based on their interest in the latest technologies and environmental consciousness.




Trusting Traditionalists tend to be senior homeowners who are retired or otherwise not in the workforce. They are environmentally aware and knowledgeable about energy, but although they are willing to make modest changes to save money, their discomfort with technology can serve as a barrier. However, their trust their electricity providers can open the door to engagement, especially if providers use a high-touch approach. These consumers are best encouraged to try new programs that meet them where they are and guide them through small, simple steps toward a greater goal, building on the trust already established.

One such example is CPS Energy's Consumer Outreach Resource Effort (CORE), through which the utility contacted thousands of customers during the COVID-19 pandemic to check on their wellbeing and connect them with bill assistance and other resources. Delaware Electric Cooperative appealed to this segment's interest in saving energy and money through its Beat the Peak program, which enables customers to take incremental steps to conserve energy during times of peak usage.

The most challenging consumers to engage are the **Comfort Seekers**, mostly older middle-income male consumers who prize their own comfort above energy considerations and technology. These consumers have no interest in using technology to control their energy usage. Comfort Seekers are laser-focused on having the energy they want when they want it, so reliability is of paramount importance to them, and they can be quite vocal during outages. Electricity providers should be proactive in informing these consumers about potential service interruptions and seek to engage them through programs that appeal to their narrow interests.

Santee Cooper, for example, offers a Duct Replacement program that explains how ductwork affects comfort in the home and provides participating homeowners with a \$500 rebate. Even better, customers select a participating contractor who handles the installation and helps with the paperwork.



Green Pioneers are likely to be engaged in conserving energy through participation in solar, electric vehicles and other programs that connect energy and technology.

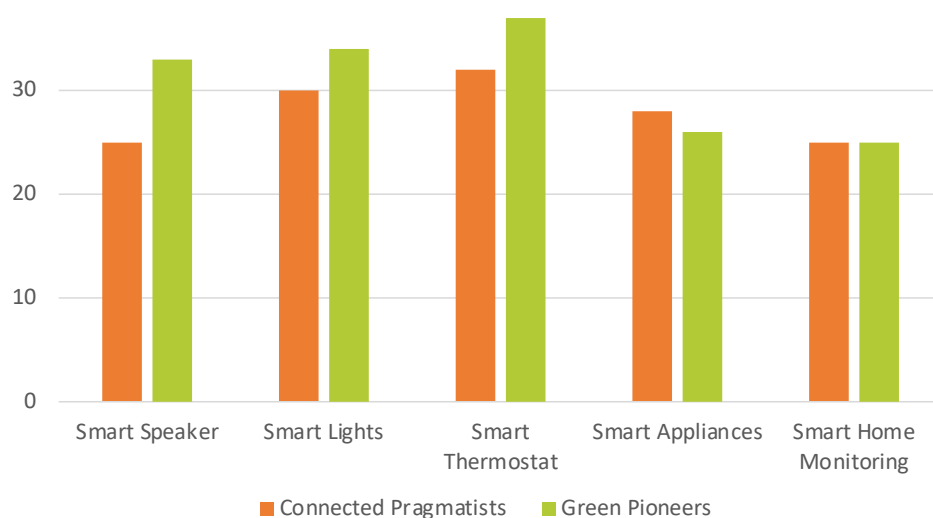
WHAT TO KNOW ABOUT TODAY'S CONSUMERS

Consumers' interest in technology has emerged as a major influence over energy engagement.

The SECC's new consumer segmentation research shows that concern over the environment is not the differentiator it once was when consumers make energy-related decisions; it has been eclipsed by attitudes toward technology. The five new consumer segments provide clear insights into how different consumer groups view and use technology and how these preferences influence the ways in which they engage with energy.

Young and middle-aged adults, who came of age as the Internet of Things was flourishing, are today's tech-savvy consumers. At the younger end of the range, **Connected Pragmatists** tend to be more mobile and likely to rent their homes. They are practical when it comes to investing in energy-related devices and relatively unconcerned about the environment and energy efficiency, even though their energy bills are slightly higher than most other segments'. However, their ease with technology makes them a go-to source for friends and family members looking for advice and prime candidates for greater engagement in the longer term.

Figure 5: Device Usage Among Connected Pragmatists and Green Pioneers



Once settled into their own homes and preoccupied with families and careers, consumers are more likely to look to technology and energy efficiency to accomplish their energy goals and enter the “sweet spot” identified as **Green Pioneers**. With an average age of 44, Green Pioneers are the early adopters, confident and knowledgeable about energy. They have the highest energy bills (\$151/ month on average compared with \$135 for all segments) and a strong interest in reducing their environmental footprint, so this segment is primed to value technology and energy efficiency.

At the higher end of the age range, consumers are likely to view technology as more of a barrier than an enabler. The largest consumer segment, the **Simply Sustainable**, exhibit the lowest interest in technology and are only slightly behind the Green Pioneers in their environmental awareness. More than half of consumers in this segment are over 55. They are not tech-savvy, but they are open to smart energy technologies such as smart thermostats and smart lighting. About half express an interest in hybrid vehicles.

The lowest technology adoption rates are seen in the **Trusting Traditionalists**, who have a mean age of 60 and are overwhelmingly female. They also have the highest home ownership rates (80%) and the lowest incomes, and only 38% are employed. This segment, distinguished by its trust and satisfaction in energy providers, seems most content with the status quo.

If Green Pioneers, with their keen interest in both technology and the environment, embody the ideal energy consumer, the **Comfort Seekers** are their antithesis. Consumers in this segment, personified by an older, middle-income male, have almost no interest in reducing their environmental footprint, but neither are they interested in technology. They care about their own comfort and convenience and expect the energy they need to be available when they need it.










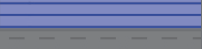


Consumers understand that energy efficiency can mitigate energy costs, but the households that need it the most face the greatest barriers.

Although the start of 2023 was accompanied by a boost in U.S. consumer optimism amid signs of easing inflation, pessimism over the possibility of a recession lingered throughout the first quarter.¹ One reason for the gloom: Energy costs, which are expected to remain at record high levels throughout 2023.

This makes energy efficiency programs that much more attractive. The research shows that consumers understand the importance of energy efficiency, but their motivations and preferences vary wide. They need help evaluating their options and calculating the potential benefit.

Consumers have more opportunities than ever before to participate in energy efficiency programs and leverage smart technologies, renewables and distributed energy resources. SECC's segmentation offers a useful tool to help match consumers with the programs most likely to interest them. In addition, energy providers might consider how to make better use of data to personalize offers and communication.

Figure 6: Product and Program Offers by Segmentation

	Technologies	Renewables and DERs	Home Improvements	Behavior Modification	Rate Plans
Simply Sustainable					
Connected Pragmatists					
Green Pioneers					
Trusting Traditionalists					
Comfort Seekers					

Consumers' ability to act on their interests varies widely based on income and whether they own or rent their homes. Energy efficiency programs that require home ownership or up-front investments are out of reach for many lower-income households, who shoulder a disproportionate share of higher energy costs. According to the American Council for an Energy-Efficient Economy (ACEEE), "On average, low-income households pay three times the share of their income on energy as non-low-income households, and Black households have an energy burden 45% higher than white households."¹ In early November 2022, a report issued by the National Energy Assistance Directors Association (NEADA), noted that one in six U.S. families were in arrears on their electricity bills in early November 2022, owing, on average, about \$788.²

These families' energy burden could be eased, and more opportunities opened to them if state policymakers, energy providers and regulators collaborate with the customers and communities most affected by high energy bills, climate change and inequities in the energy system.³

¹ American Council for an Energy-Efficient Economy. <https://www.aceee.org/blog-post/2022/06/community-engagement-accountability-key-equitable-energy-policy>

² National Energy Assistance Directors Association Midwinter Energy Update. https://neada.org/wp-content/uploads/2023/01/Midwinter-2022-23-Update-1_30_23.pdf

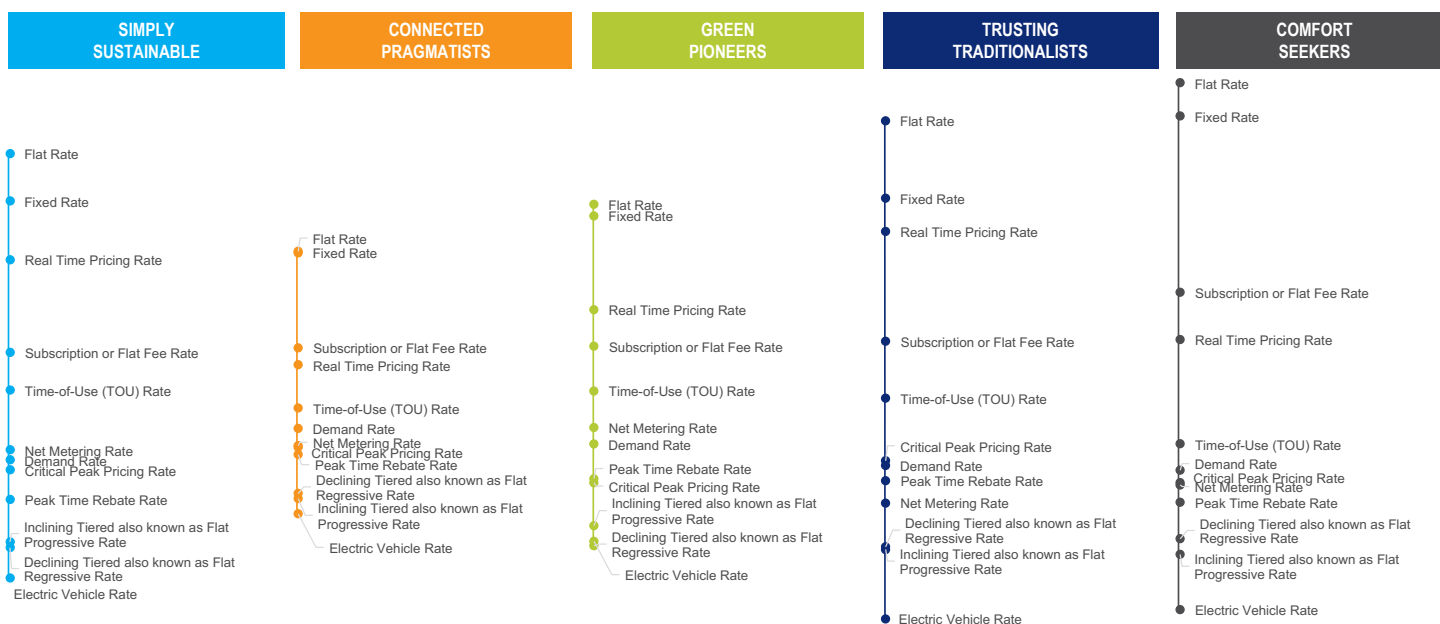
³ American Council for an Energy-Efficient Economy Fact sheet on Leading Equity. <https://www.aceee.org/fact-sheet/2023/02/leading-equity-recommendations-state-decision-makers-utilities-and-regulators>

In paying for electricity, consumers value stability, simplicity and transparency — and bills that are easy to understand.

American consumers are accustomed to having the energy they need at the flip of a switch, and all consumers consider reliable power the energy provider's most important mandate. Given the seismic shift in work habits caused by the COVID-19 pandemic and the proliferation of electronic devices, consumers are more dependent than ever on uninterrupted electricity. In the energy consumer's hierarchy of needs, reliable power is still at the very foundation.

Consumers in all segments also overwhelmingly want stable, predictable rates from their electricity providers. Although many might have a choice of rate plans, most consumers are unaware of this and thus might not be taking advantage of opportunities to save. Overall, consumers know very little about rate plans, and most are unaware of or do not believe they have a choice of rate plans, suggesting that this might serve as a barrier to using that information to their advantage.

Figure 7: Interest in Rate Plans by Consumer Segment



As rate options grow in number and complexity, the SECC's research reinforces consumers' desire for clarity and simplicity. Even the most engaged and motivated energy consumers, the **Green Pioneers**, express a preference for flat rate and fixed rate plans. As the industry migrates toward more time-variable rate options, stakeholders will need to guide consumers through communication that clearly illustrates the benefits and sets accurate expectations for any behavior changes that might be required. When new rates are introduced, consumers prefer to be informed through communication that is simple, personalized, and specific to the topic and not lumped into billing communication.

Consumers turn primarily to their energy providers for information on rates and plans—and trust the information they find there — but their attitudes about their bills suggest skepticism toward the intentions of their providers. Most consumers like knowing they can use their electricity bills to monitor their efforts to save energy, but half dread opening the bill, probably because they find it so difficult to understand. There is a tremendous opportunity here, especially since many North American consumers now have access to interval usage data made possible by smart meters, but the research suggests that providers are not helping their customers connect the dots and act on the information available to them.

HOW TO DEEPEN THE CUSTOMER RELATIONSHIP

Build trust by segmenting your own customer base.

What it takes to foster trust varies widely across segments, so the first step is to ensure you are doing all you can to understand your customers. SECC members have access to the new segmentation study and can apply it to their customers to connect with them based on their values. In the absence of segmentation, one-size-fits-all messaging can erode trust by making customers feel like their energy provider is out of touch with their needs.

In addition to using SECC's segmentation data, consider customer needs based on other factors, such as income level and whether they own or rent their homes. In terms of energy efficiency programs, according to an ACEEE report, "Much more effort is needed to engage local communities about their needs and how best to serve them. Such engagement will build interest and trust, ultimately making programs more successful at reaching the households they target."⁴

To spur electrification, ACEEE advises electricity providers to use segmentation to target their marketing and communication and educate consumers on how products work, how to evaluate if they are a good fit for the customer's home, and ways to estimate project costs.⁵

Make the energy bill work harder.

Consumers are accustomed to receiving information and offers tailored to their interests, but many companies are still not using data analytics effectively to improve the customer experience—a statement that applies to most sectors, not just energy. Considering the SECC's research on rate plans and the bill, energy providers are missing opportunities to make the monthly bill work harder.

It's the one piece of communication guaranteed to get your customers' attention every month. Although they recognize its usefulness as a tool for monitoring their energy usage, most consumers don't like opening it and they don't understand it. It's also the second most preferred channel for customers wishing to receive new offers.

When was the last time you invited your customers to provide input on the bill? What if, instead of frustrating your customers, the bill made their lives easier? SECC's research suggests that customers are interested in usage graphs, personalized information about what's driving their usage and relevant ways to manage their consumption, such as energy efficiency programs and rebates for which they would qualify.

⁴ Morales, D., and S. Nadel. 2022. *Meeting the Challenge: A Review of Energy Efficiency Program Offerings for Low-Income Households*. Washington, DC: American Council for an Energy-Efficient Economy. www.aceeee.org/research-report/u2205.

⁵ Bastian, H., and C. Cohn. 2022. *Ready to Upgrade: Barriers and Strategies for Residential Electrification*. Washington, DC: American Council for an Energy-Efficient Economy. www.aceeee.org/research-report/b2206.

Take the long view and leave no customer behind.

Consumers' needs and interests evolve as they move through life. Today's Connected Pragmatists are tomorrow's Green Pioneers. Simply Sustainable consumers might become Trusting Traditionalists in their later years. Connect with your customers based on where they are now — but understand where they're going so you can guide them. Consumers who are less at ease with technology might need more encouragement, so show them how they can take small, incremental steps toward their energy goals.

It would be tempting to focus disproportionately on engaging the Green Pioneers, the ideal energy consumer, but it would be a mistake. Technology might be the new differentiator among consumer segments, but the threat of climate change is still very real, and there is a place for every consumer in the smart energy ecosystem.

Take the Connected Pragmatists, for example, a young, well-heeled, and well-educated group of consumers who tend to be apathetic toward their energy use and the environment. Appeal to their fondness for the new and novel by finding ways to engage them in pilot programs that don't require home ownership.

Don't give up on the Comfort Seekers just because they are protective of their comforts and don't care about the environment. You'll hear from them if the lights go out, so support them with robust outage communication. If you have an offering that can enhance their comfort, keep it simple and easy to implement, and they might let energy efficiency in through the side door.

Let the Green Pioneers lead the way and let their enthusiasm inspire the Simply Sustainable and reassure their Trusting Traditionalist elders. Amid the excitement of new technologies and energy efficiency programs, however, recognize that all consumers prioritize reliable service and stable, predictable rates. Maintain a steady drumbeat of communication on what you're doing to make the basics better, and help your customers understand how their actions can contribute.



SUMMARY AND CONCLUSION

In recent years, external forces — advances in technology, the COVID-19 pandemic, inflation, geopolitical unrest and climate change — have had a tremendous effect on the energy sector and energy consumers. As the landscape shifts, presenting both opportunities and challenges, what does not change is the need for collaboration among all stakeholders in the energy sector and the consumers they serve. Understanding the needs and motivations of consumers and meeting them on their terms is the key to building the trusting relationships needed to cultivate informed and engaged energy consumers.

The SECC is committed to fostering this understanding for the benefit of everyone in the energy ecosystem and the planet we all share. We are grateful to the many industry stakeholders and consumers who contributed to our 2022 research agenda and look forward to building on this body of work in 2023.

In 2023, our research will expand on SECC's consumer studies from 2022 and include:

- *Renewables: Engaging Consumers in the Clean Energy Transition*
- *Electrification in the Home and on the Road*
- *Disaster Preparedness and Awareness: Communicating to Consumers*
- *Customer Satisfaction and the Smart Grid*

New in 2023, the SECC will initiate a Snapshot Survey Series to quickly capture and share consumer insights on topical issues such as:

- Economic impact on consumers' energy burdens
- Electric vehicle price sensitivity and other consumer concerns
- Consumers' motivations for electrifying their homes
- Consumer concerns around renewable energy

We look forward to sharing the information and insights from our research agenda through education and outreach programs geared to both industry stakeholders and consumers.

APPENDIX A: SELECTED THIRD-PARTY STUDIES

American Council for an Energy-Efficient Economy (ACEEE)

Ready to Upgrade: Barriers and Strategies for Residential Electrification

October 25, 2022

Hannah Bastian and Charlotte Cohn

This report examines the barriers to residential electrification and recommends strategies to address them. It explores the challenges of whole building and technology barriers, market barriers, high project costs and long payback periods, supply chain and workforce issues, and the need for more consumer education and awareness.

Meeting the Challenge: A Review of Energy Efficiency Program Offerings for Low-Income Households

November 18, 2022

Diana Morales and Steven Nadel

According to, this study, although utilities have increased spending on low-income energy efficiency programs, funding and program access gap remain. The authors recommend solutions related to recommendations encompass the following areas: program funding, equitable community engagement, program design, and data collection and program evaluation.

National Energy Assistance Directors' Association (NEADA)

Midwinter Energy Update

February 1, 2023

The NEADA found that lower-income households receiving energy assistance in the winter of 2022 experienced the largest one-year increase in more than a decade, from 4.9 million in 2009 to 6.2 million. This reflects the highest total rate of application for the Low Income Home Energy Assistance Program (LIHEAP) since 2011.



Working for consumer-friendly, consumer-safe smart energy

SECC's mission is to serve as a trusted source of information on consumers' views of grid modernization, energy delivery and usage, and to help consumers understand the benefits of smart energy.

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