

**SECC Research Brief** WEBINAR SERIES

# **Lower-Income Consumers and Smart Energy**

**November 18 at 1 p.m. (ET)**

# Today's Presenters



**Nathan Shannon**  
**Deputy Director**  
**Smart Energy Consumer**  
**Collaborative**



**Marie D'Arrigo**  
**Director, Public Services**  
**Maru/Matchbox**

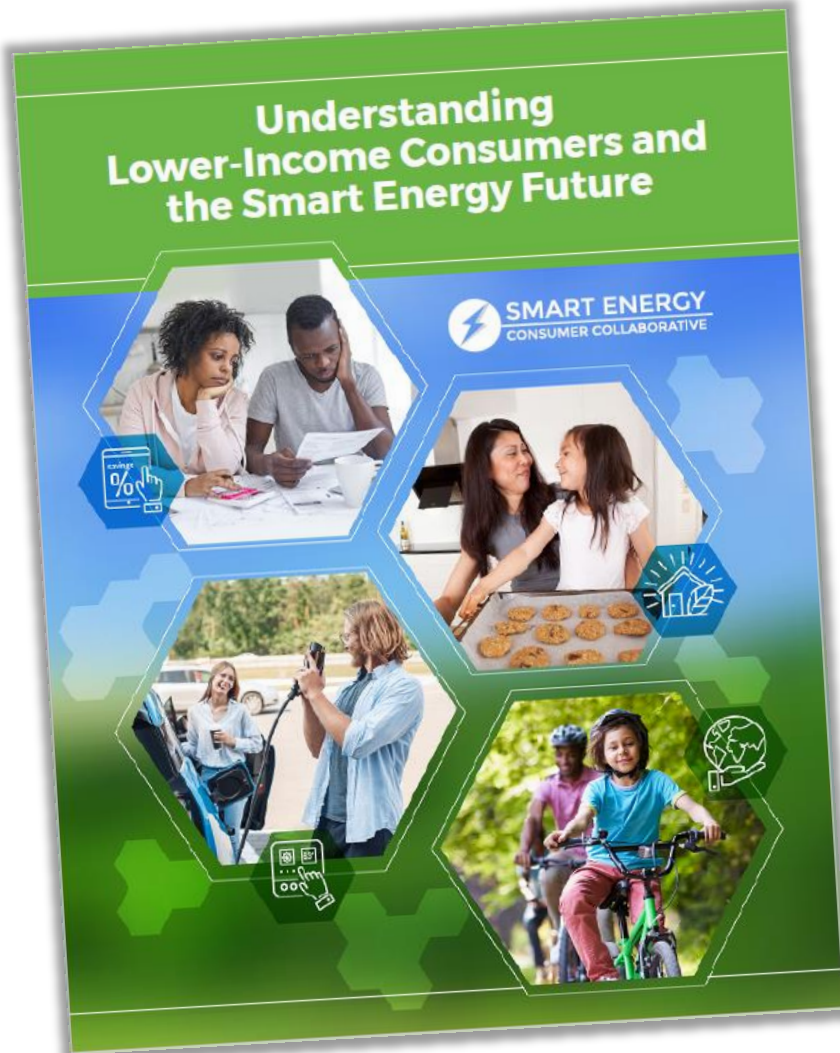


**Kristen Murphy**  
**Lead Analyst, Market Intelligence**  
**National Grid**



**Mackenzie Martin**  
**Community Projects Manager**  
**Puget Sound Energy**

# “Understanding Lower-Income Consumers” report



This report sheds 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.

## Background



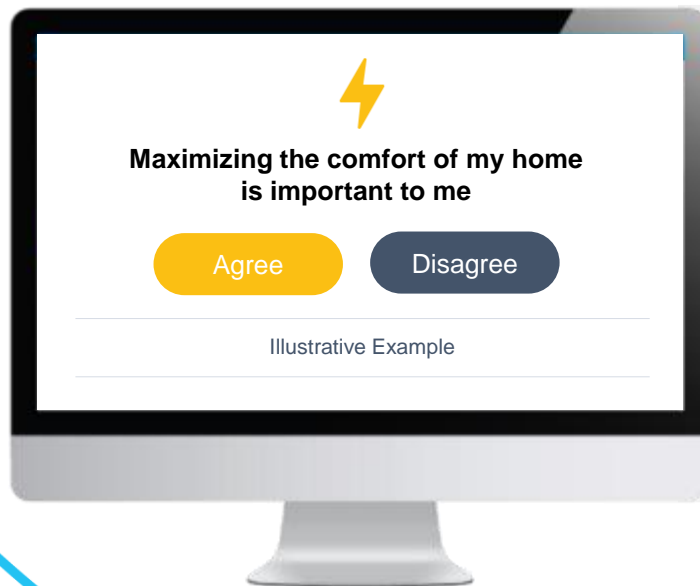
### **Director, Public Services, Maru/Matchbox**

- Research consultant within the Public Services practice at Maru/Matchbox, a global insights and technology firm
- Over 10 years of experience consulting utilities, governments and telecommunications firms across North America
- Previously worked with SECC on various research projects, such as the Consumer Market Segmentation and Distributed Energy Resources research
- Specializes in consumer experience and engagement research in the energy sector

# Research methodology: Implicit Association

Respondents are shown a series of statements and asked if they agree or disagree with whether each statement applies to them. A short reaction time shows implicit association, i.e., an instinctive reaction and strong connection (System 1).

Passive System 1 tools (such as Implicit Association Testing) are used to understand the strength and influence of subconscious connections, capturing the emotions that overwhelm the decision-making process.



*Reaction time testing provides the means by which psychologists can discriminate subconscious brain processes from conscious thoughts or decisions. This is because conscious and subconscious mental processes occur within different timeframes, allowing for two distinct paths for decision making:*

## System 1

- Unconscious Emotions
- Very Fast
- Involuntary
- Associative
- Implicit Responses



## System 2

- Conscious Thinking
- Slow
- Controlled
- Rule Following
- Explicit Responses



# Research methodology: Key Driver Analysis

We conducted a **Key Driver Analysis** to understand what key attributes drive interest in adopting each smart energy technology relative to one another.

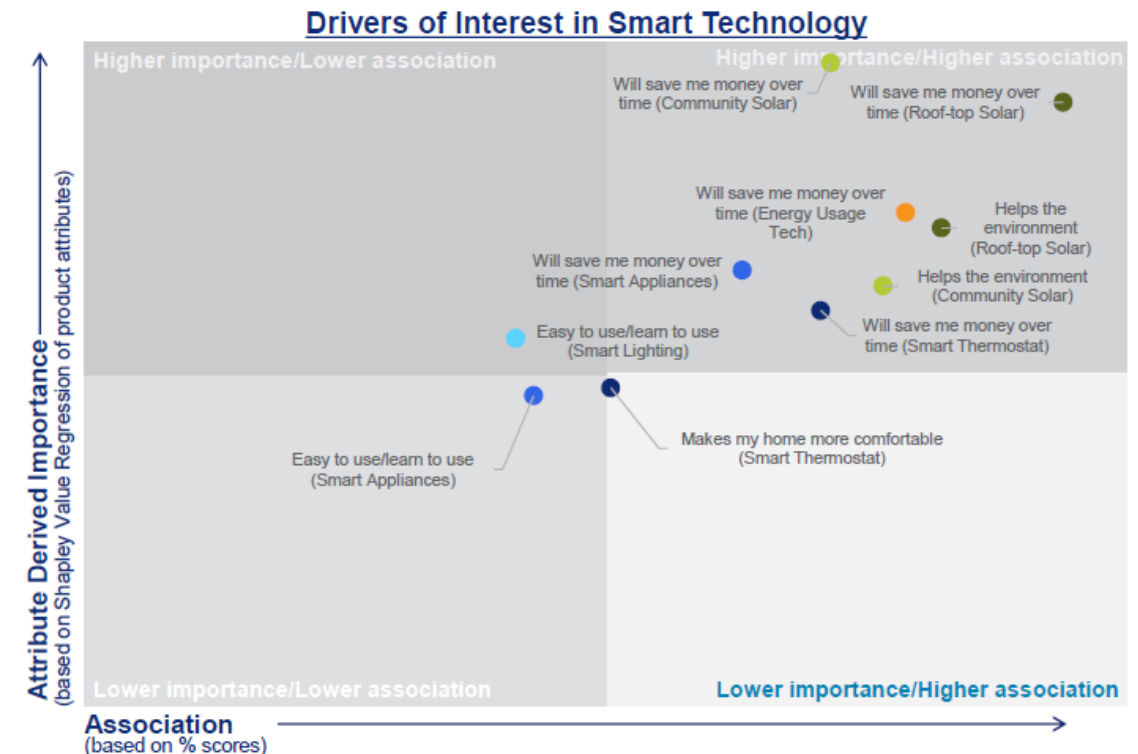
Conducting a driver analysis over simply asking consumers directly what is important, or why they did something is a stronger measure – because consumers don't recognize the underlying factors why they make a decision.

**The attributes are typically broken into three buckets:**

- Primary Drivers
- Secondary Drivers
- Tertiary Drivers

**There were eight smart energy technologies tested:**

- Smart thermostats
- Smart appliances
- Smart lighting
- Rooftop solar
- Technology to manage energy usage
- Smart leak protection
- Smart surge protection
- Community solar power



# Developing four consumer 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”*

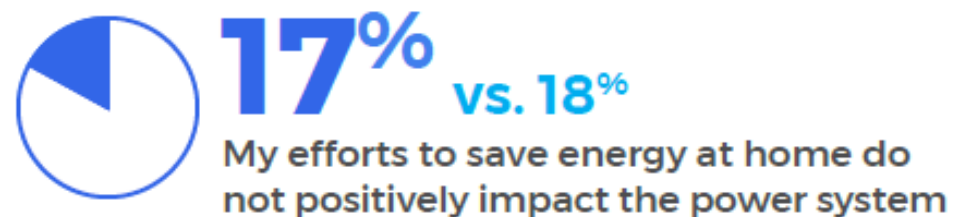
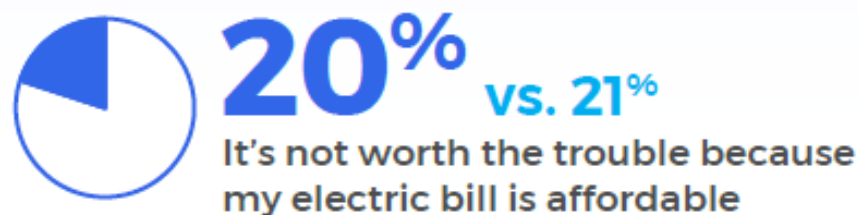
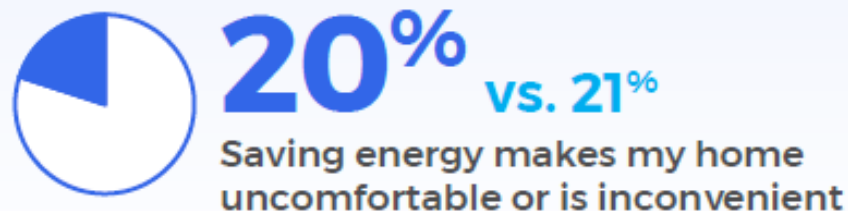
**More Favorable**

**Less Favorable**

# Persona #1: Environmentally Driven

## Barriers to Energy-Saving Activities

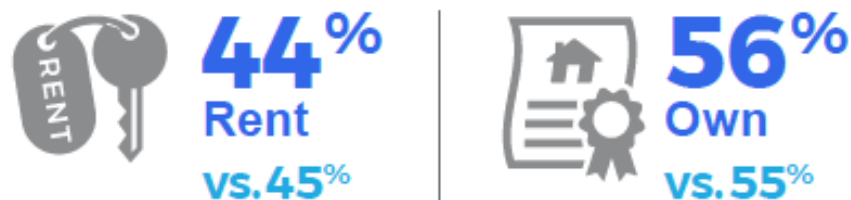
Top 3 Statements (% always/often applies)



## Electricity Bill Amount



## Homeownership





# Persona #1: Environmentally Driven

**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

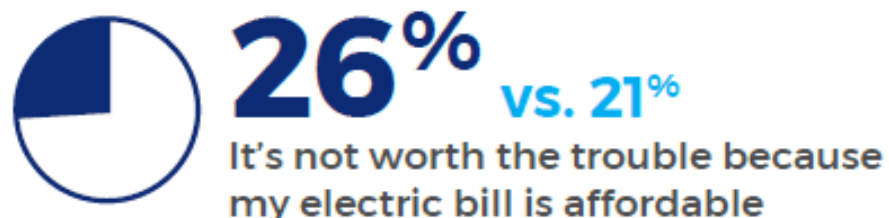
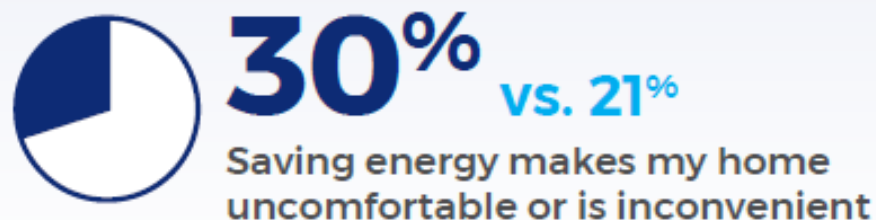
**42%** vs. 49%  
I am already doing  
enough to protect/save  
the environment

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

# Persona #2: Smart Energy Receptive

## Barriers to Energy-Saving Activities

Top 3 Statements (% always/often applies)



## Electricity Bill Amount



**\$120**  
Median  
vs. \$100

**\$133**  
Mean  
vs. \$118

## Homeownership



**56%**  
Rent  
vs. 45%



**44%**  
Own  
vs. 55%

## Persona #2: Smart Energy Receptive

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

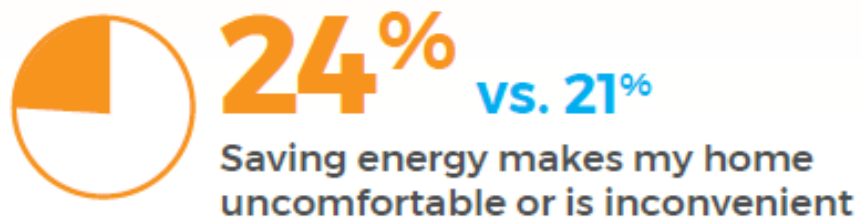
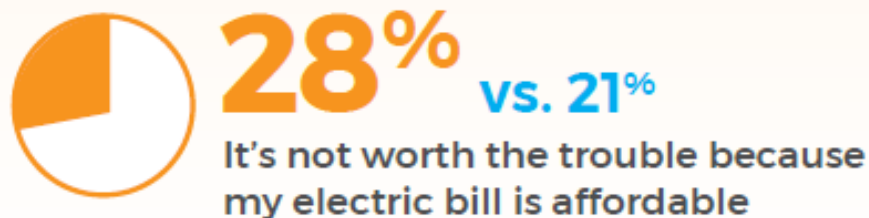
**50%** vs. 49% I am already doing  
enough to protect/save  
the environment

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

# Persona #3: Smart Energy Decliners

## Barriers to Energy-Saving Activities

Top 3 Statements (% always/often applies)



## Electricity Bill Amount



## Homeownership



# Persona #3: Smart Energy Decliners

**Always Think About  
Energy Efficiency**  
*(% always)*



**20%** vs. **31%**  
*The environmental benefits*



**16%** vs. **24%**  
*For future generations*

**IAT Agreement with  
Key Statements**  
*Total Agree*

**74%** vs. **51%** The government  
should invest  
more in renewable  
energy sources

**71%** vs. **79%** I am concerned  
about how pollution  
impacts my personal  
health and the health  
of my family

**62%** vs. **49%** I am already doing  
enough to protect/save  
the environment

**52%** vs. **62%** I can easily understand  
how to use new smart  
technologies

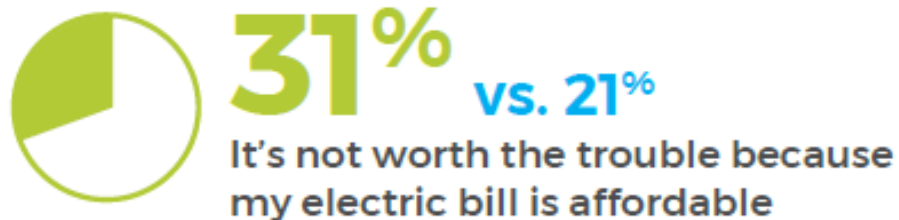
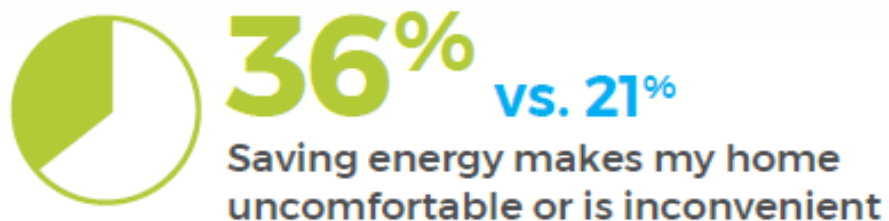
**32%** vs. **23%** It is not the  
government's role  
to protect the  
environment



# Persona #4: Climate Change Skeptics

## Barriers to Energy-Saving Activities

Top 3 Statements (% always/often applies)



## Electricity Bill Amount



**\$110**  
Median

**\$132**  
Mean  
vs. \$118

## Homeownership



**60%**  
Rent



**40%**  
Own

## Persona #4: Climate Change Skeptics

Always Think About  
Energy Efficiency  
(% always)



**27%** vs. **31%**  
The environmental benefits



**24%** vs. **24%**  
For future generations

IAT Agreement with  
Key Statements  
Total Agree

**73%** vs. **79%** I am concerned  
about how pollution  
impacts my personal  
health and the health  
of my family

**72%** vs. **49%** I am already doing  
enough to protect/save  
the environment

**65%** vs. **81%** The government  
should invest  
more in renewable  
energy sources

**63%** vs. **62%** I can easily understand  
how to use new smart  
technologies

**47%** vs. **23%** It is not the  
government's role  
to protect the  
environment

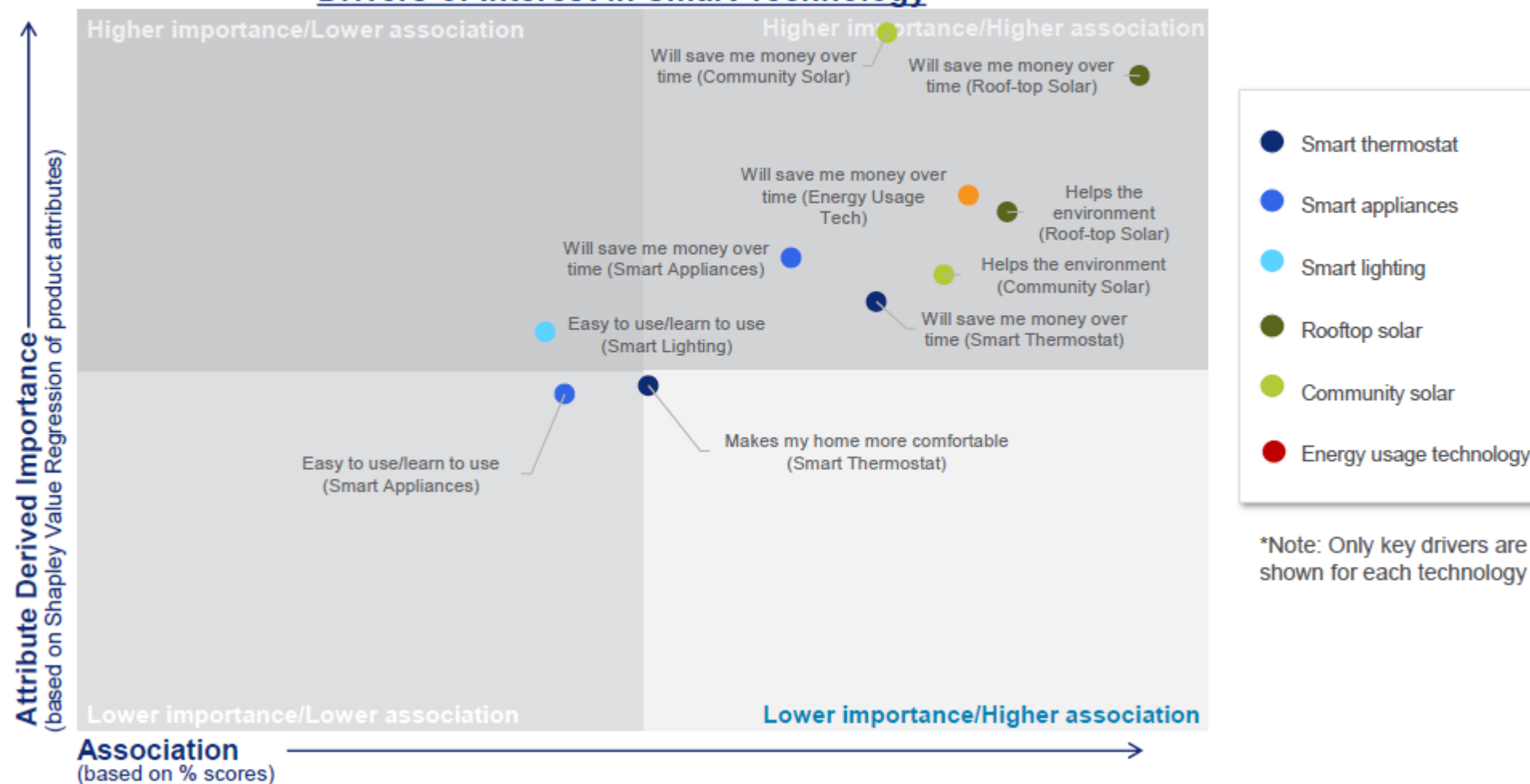
## Four actionable takeaways to address barriers

- 1. Begin with the common value.** I'm concerned about how pollution impacts my personal health and the health of my family.
- 2. Remove the common barrier.** Saving energy makes my home uncomfortable or is inconvenient.
- 3. Address affordability.** All four of our personas say, to some degree, that energy efficiency measures are not worth the trouble because their electric bills are affordable.
- 4. Appeal to community spirit.** A lot of individual actions within a community can make a big difference collectively.

# What drives interest in smart technology?

“Will save me money” is a key driver for almost all technologies.

## Drivers of Interest in Smart Technology



\*Note: Only key drivers are shown for each technology

# Other attributes that drive consumer interest

## SMART THERMOSTAT



- Increases the value of my home
- Easy to get assistance
- Affordable
- Helps the environment

## SMART APPLIANCES



- Helps the environment
- Fun to use/trendy
- Improves the air quality in my home
- Makes my home more comfortable

## SMART LIGHTING



- Will save me money over time
- Fun to use/trendy
- Easy to set up
- Helps the environment
- Makes my home more comfortable

## ROOFTOP SOLAR PANELS



- Easy to use
- Increases the value of my home
- Reduces the burden on the electricity grid
- Affordable

## ENERGY MANAGEMENT TECHNOLOGY

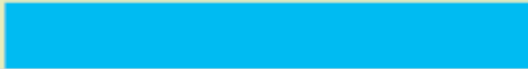










- Helps the environment
- Easy to use
- Fun to use/trendy
- Makes my home more comfortable



# Where do consumers learn about saving energy?

Figure 13 : Sources of Savings Information

			Low Income	Moderate Income
My electricity provider		59%	54%	62%
Friends/family		28%	30%	27%
Government websites		16%	15%	17%
Non-profit organization websites		13%	14%	12%
Social media		10%	13%	9%
My landlord or property manager <i>*(Renters Only)</i>		10%	8%	11%
Community organizations		9%	12%	8%
A trusted contractor		6%	6%	6%
Other, please specify		9%	10%	9%

# Obstacles to accessing financial assistance

Figure 15: Barriers to Financial Assistance on Upgrades

		Low	Moderate
My household does not meet the income threshold to qualify	32%	19%	38%
There was too much red tape/confusion on how to get the assistance/discount	17%	19%	17%
It was difficult to find more information	16%	17%	16%
It was unclear how much money/what discount my household would receive	15%	10%	17%
There were too many additional costs	12%	7%	14%
My household applied too late/the funds ran out	10%	15%	8%
The assistance/discounts do not provide enough money	10%	14%	8%
My household already has the upgrade/technology being offered	9%	3%	11%
Learning how to use new technology is too challenging	7%	5%	8%
My household had to provide money upfront to get the assistance/ discount	5%	1%	6%
Other, please specify	21%	21%	21%

"Renting and can't make changes"  
"No need for it"

## 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.

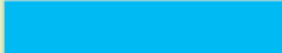








# COVID-19: Concerns about household expenses

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%



- Lower-income consumers share many of the same values as consumers with higher incomes
- The difference with lower-income consumers is their ability to take action to achieve their energy-related values.
- While reaching these consumers takes more effort and requires enlisting a wider group of messengers, it is well worth it.

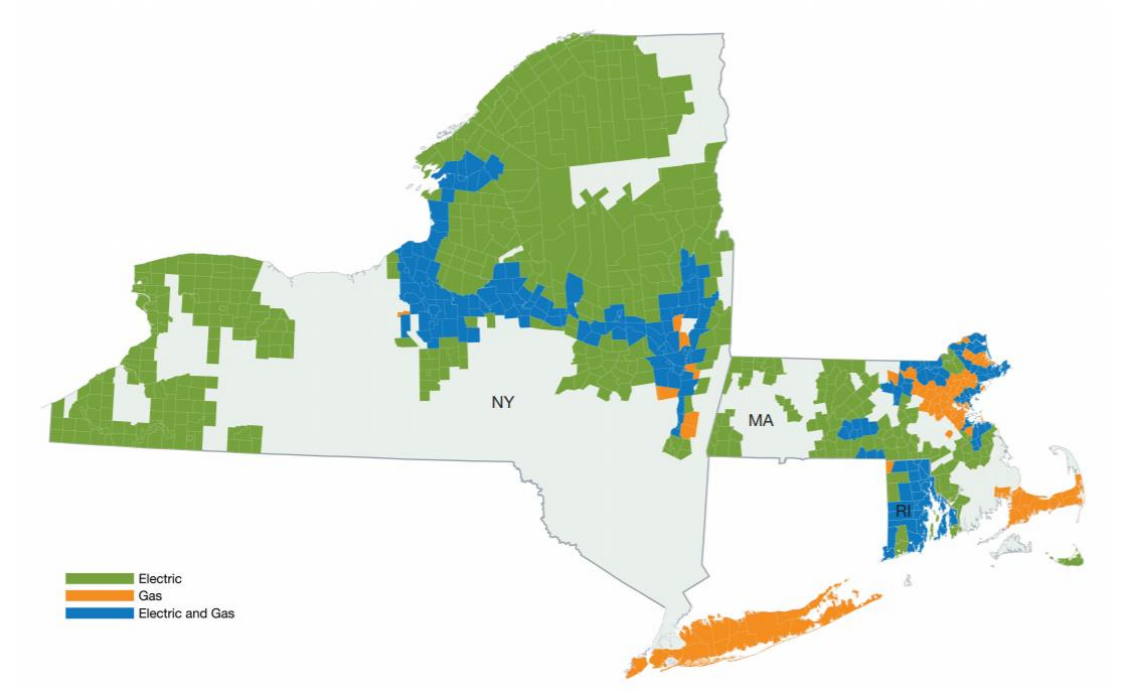
## Background



### Lead Analyst, Market Intelligence, National Grid


- 10+ years of experience in market research fulfilling passion of knowing why people do what they do and turning those insights into action
- Led research for clients in a wide range of industries, helping them to become better, faster and more predictive about what consumers want
- Found a strong fit with championing the customer voice in the energy sector, first at Con Edison and currently at National Grid
- Manages National Grid's online customer insight panel which keeps the customer top of mind in making data-driven decisions and enhancing customer experiences
- A voice of customer resource for the Income Eligible customer segment, providing support that is critical during the current pandemic

# nationalgrid



***Capture their stories:***  
Understanding our lower  
income customers as  
people first opens up  
opportunities to better  
serve them



A close-up, slightly blurred photograph of a person's hand resting on a desk. The hand is positioned over several sheets of paper, which appear to be financial or administrative documents. To the right of the hand, a silver and black calculator is visible. The background is dark and out of focus, suggesting an office environment. The overall tone is professional and focused.

"We are committed to helping our customers through the difficult times and uncharted challenges associated with this pandemic."

- *Badar Khan, National Grid, US President*



# Spotlight on: Financial Assistance Webinars



## Please Join: Utility Financial Assistance Webinar

### Programas de Ayuda Financiera para Servicios Públicos

The COVID-19 pandemic has created many new and stressful situations for all of us. We understand these are challenging times, and we're here to help. National Grid is raising awareness around financial assistance programs available to income-eligible customers. Even if you have never qualified before, you may be eligible for financial assistance now.

Please join one of our upcoming free webinars to learn more about:

- Discount Rates
- Payment Arrangements
- Budget Plans
- Ways to Pay
- Energy Efficiency
- Fuel Assistance Grants

Please register for one based on your preferred language:

Tuesday, November 17  
7:00 PM  
English

REGISTER

Wednesday, November 18  
7:00 PM  
Spanish

REGISTER

This event requires registration ahead of time. Thank you!

For more information about assistance solutions, please visit [www.nrg.com/assistance](https://www.nrg.com/assistance)



A view across our service territory

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Marketing levers to pull in communication

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Validates underway efforts and initiatives

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Shows awareness and education still a major opportunity

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Application to National Grid's personas

## Background

### Community Projects Manager, Puget Sound Energy



- Has worked at Puget Sound Energy for over eight years. In her current role as a Community Projects Manager in the Clean Energy Solutions Department, she predominantly focuses on the development and deployment of PSE's Low-Income Electric Vehicle Pilot Projects and PSE's Green Power Community Support Grants
- Prior to entering into the Clean Energy Solutions Department, she worked in HR, Thermal Generation, Board Relations, and Enterprise Risk Management
- Holds a B.A. from the University of Washington in urban, social and political geography, a minor in environmental studies and a certificate in data visualization

**Serving our low-  
income customers**








# PSE serves approximately 1.1 million electric and 840,000 natural gas customers in Washington State

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# PSE Up & Go Electric: Low Income

	Use case	Primary population served	Est. launch year
	Low-income weatherization	Low-income households receiving weatherization or other social services	2020 and 2021
	Tribal transportation	Community members whose mobility needs are not met by traditional transportation services	2021
	School bus	Income-eligible children	2021
	Non-emergency medical transportation	Those without transportation to medical appointments	2021
	Community car share	Individuals or groups whose mobility needs are not met by traditional bus services	2020 and 2021



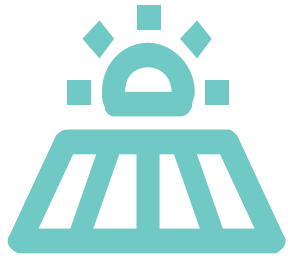
# Green Power Community Support Grants

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# Community Solar: Income-eligible

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Enable **low-income customers to share in the benefits** of renewables

# Crisis Affected Customer Assistance Program



[RESIDENTIAL](#)[BUSINESS](#)


[\\$ PAY BILL](#)[SIGN IN](#)[OUTAGES](#)

[Account & Billing](#)[Safety & Outages](#)[Customer Service](#)[Efficiency & Green Options](#)[Construction Services](#)[Who We Are](#)

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Assistance programs

[Español](#) | [Русский](#) | [中文](#)



### CACAP PROGRAM INFORMATION

- > What is CACAP?
- > Is the CACAP program for Residential or Small Business customers?
- > How will I receive the funds?
- > I see other programs listed, can I apply for these?
- > If I receive LIHEAP, HELP or both can I qualify for CACAP?
- > Do I qualify for any other PSE programs?



### HELP AND WEATHERIZATION PROGRAMS

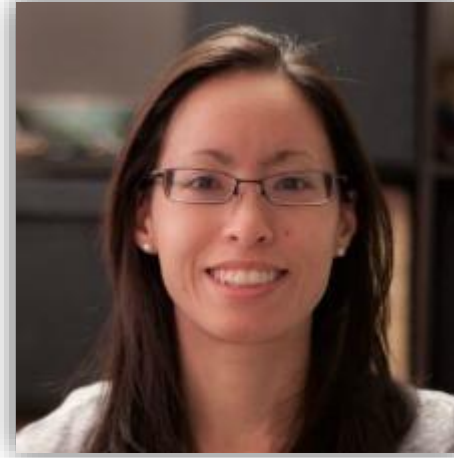
- > What is PSE HELP?
- > What is PSE Weatherization Assistance?

# Questions?

You will receive links to the research and a copy of today's slides at the email address you used to register.



**Nathan Shannon**  
**Deputy Director**  
**Smart Energy Consumer Collaborative**



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