

# ***The 2015 National Energy and Utility Affordability Conference***

Engaging Low Income Consumers Around The Smart Grid

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Smart Grid Consumer Collaborative

## *Snapshot: Who We Are*

- ▶ *501(c)(3) nonprofit formed in March 2010*
- ▶ *Driven by the mission to advance a consumer-friendly, consumer-safe smart grid*
- ▶ *Membership organization comprised of 120+ utilities, technology vendors and nonprofit affiliates*
- ▶ *We work by listening, educating, and collaborating*



## Spotlight on Low Income Consumers II



April 10, 2014

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## Motivations and Emotions of Engaged Consumers



OCTOBER 2014

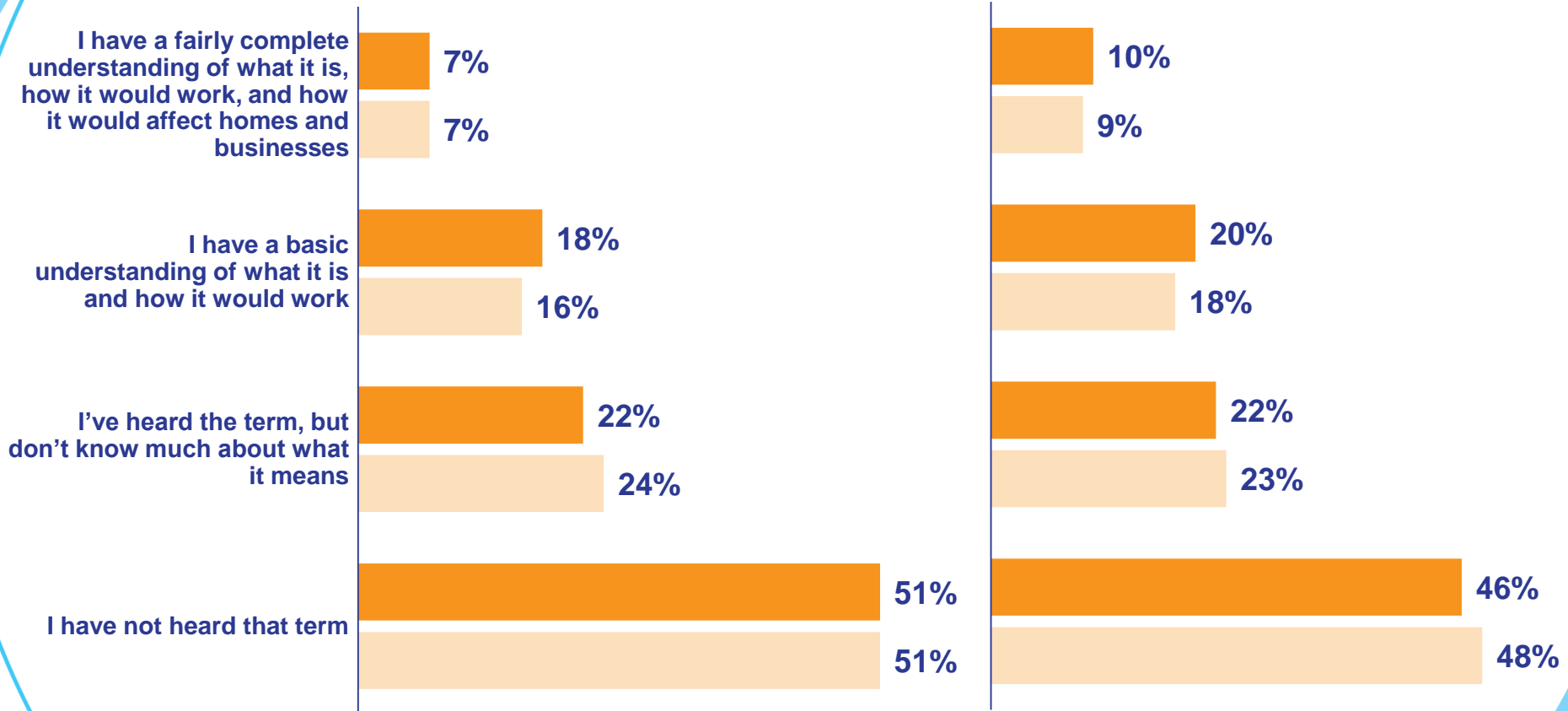
# *Energy Management Technology*

# Have heard the term “Smart Meter” and “Smart Grid”

## Current Level of Knowledge of...

### Smart Grid

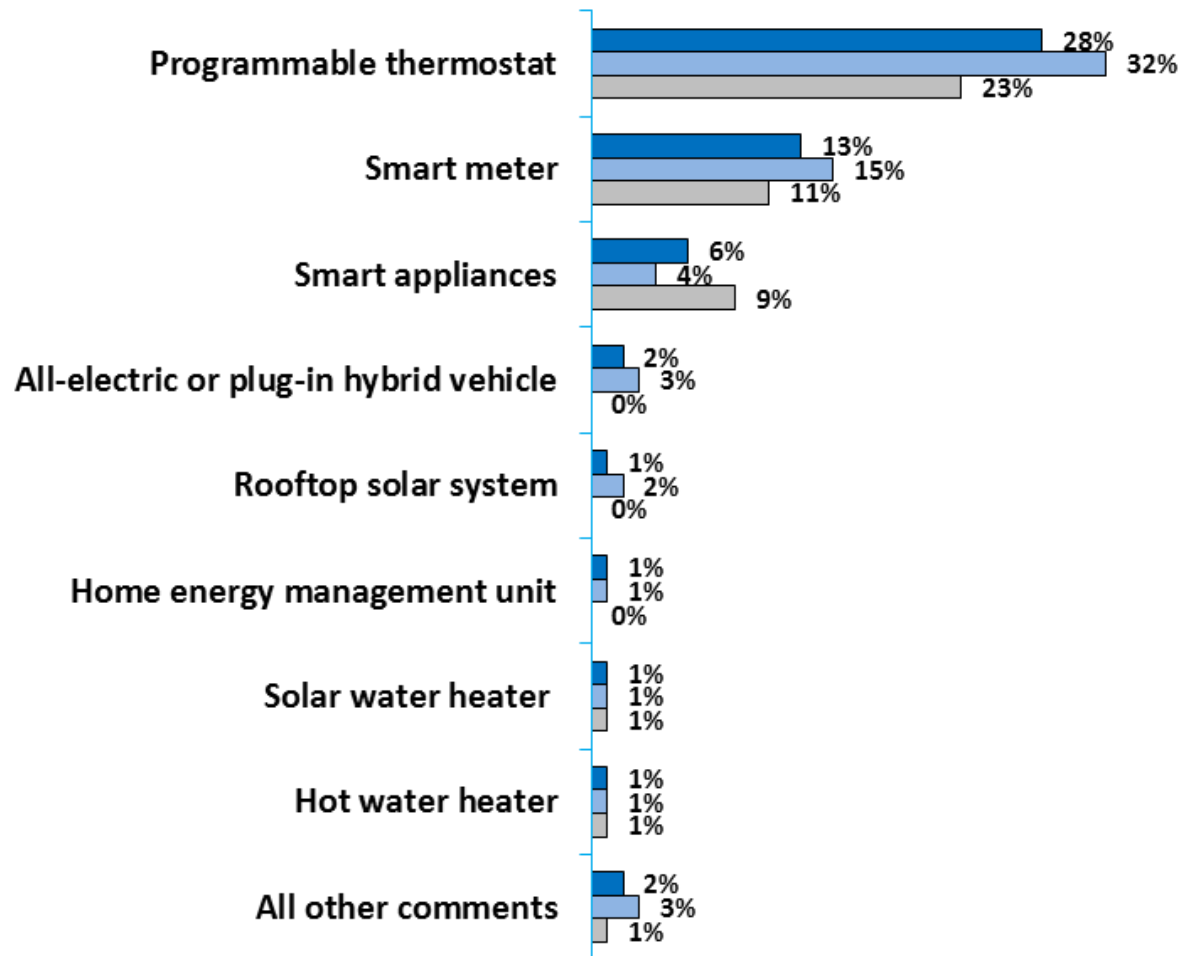
### Smart Meter



■ Wave 5 n = 1,004  
■ Wave 1 n = 1,234

# Under Half the Low Income Consumers Report Using Some Type of Smart Grid-Related Technology

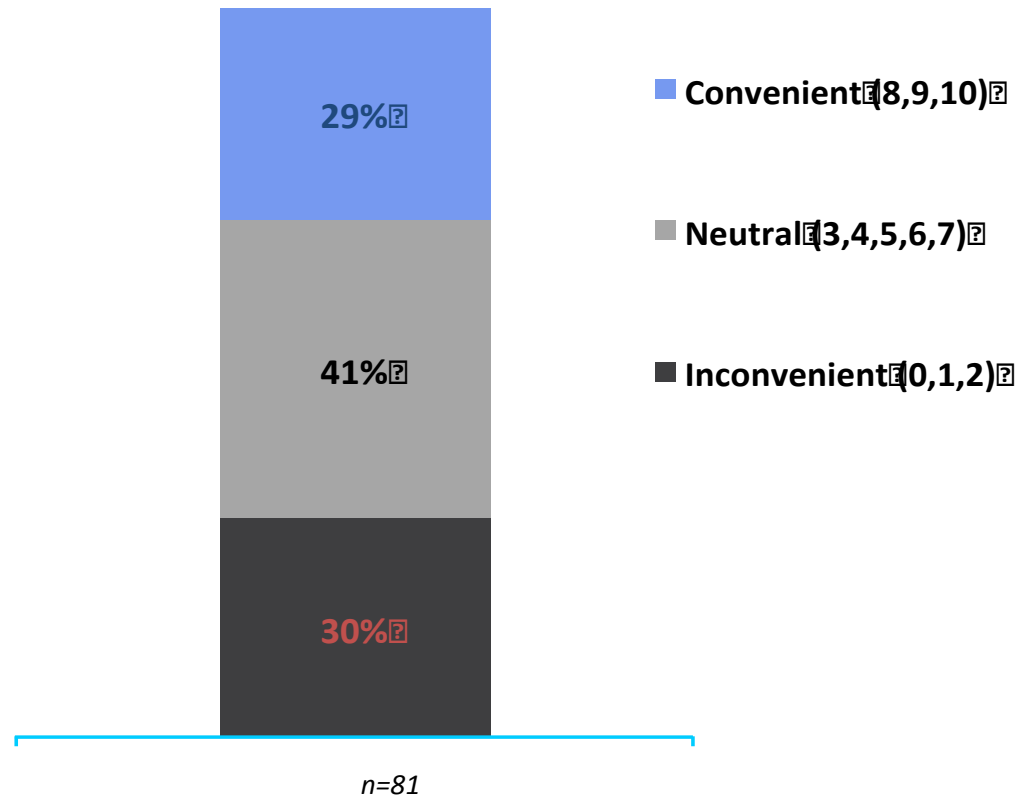
**Devices Installed or Used (%)**



Total: n=525; Owners: n=292; Renters: n=233

# How Convenient is Smart Grid Technology to Manage Household Energy Usage?

Low income consumers are split on whether smart grid technology is convenient to use



## Does Information Help Reduce Energy Usage?

Some have reduced usage based on information from smart meters and energy management technology

	Total Sample	Homeowners	Renters
Yes, information has reduced household energy usage	25%	17%	37%↑
<i>n</i>	76	46	30



# Low Income Consumers Focus on Reliability and Value Multiple Benefits

Low income consumers say the most important smart grid and smart meter benefit: **Prevents some outages and reduces the length of others.**

All seven smart grid and smart meter benefits tested are important to at least 74% of low income consumers.

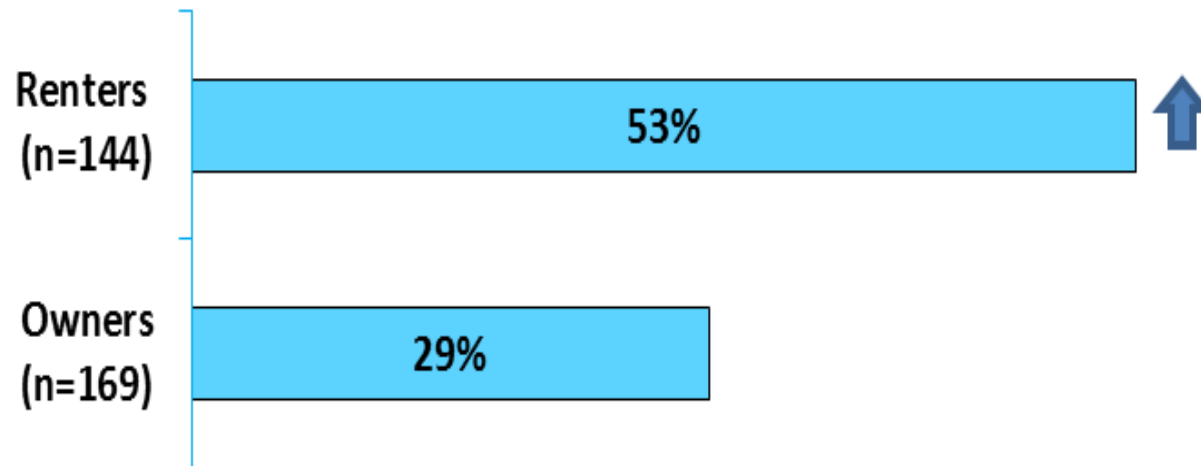
- Smart grid reduces greenhouse gas emissions
- A smart grid senses problems and reroutes power automatically.
- Smart grid and smart meters make it easier for utilities to offer new kinds of rate plans to help customers manage energy usage and cost.



# *Energy Efficiency*

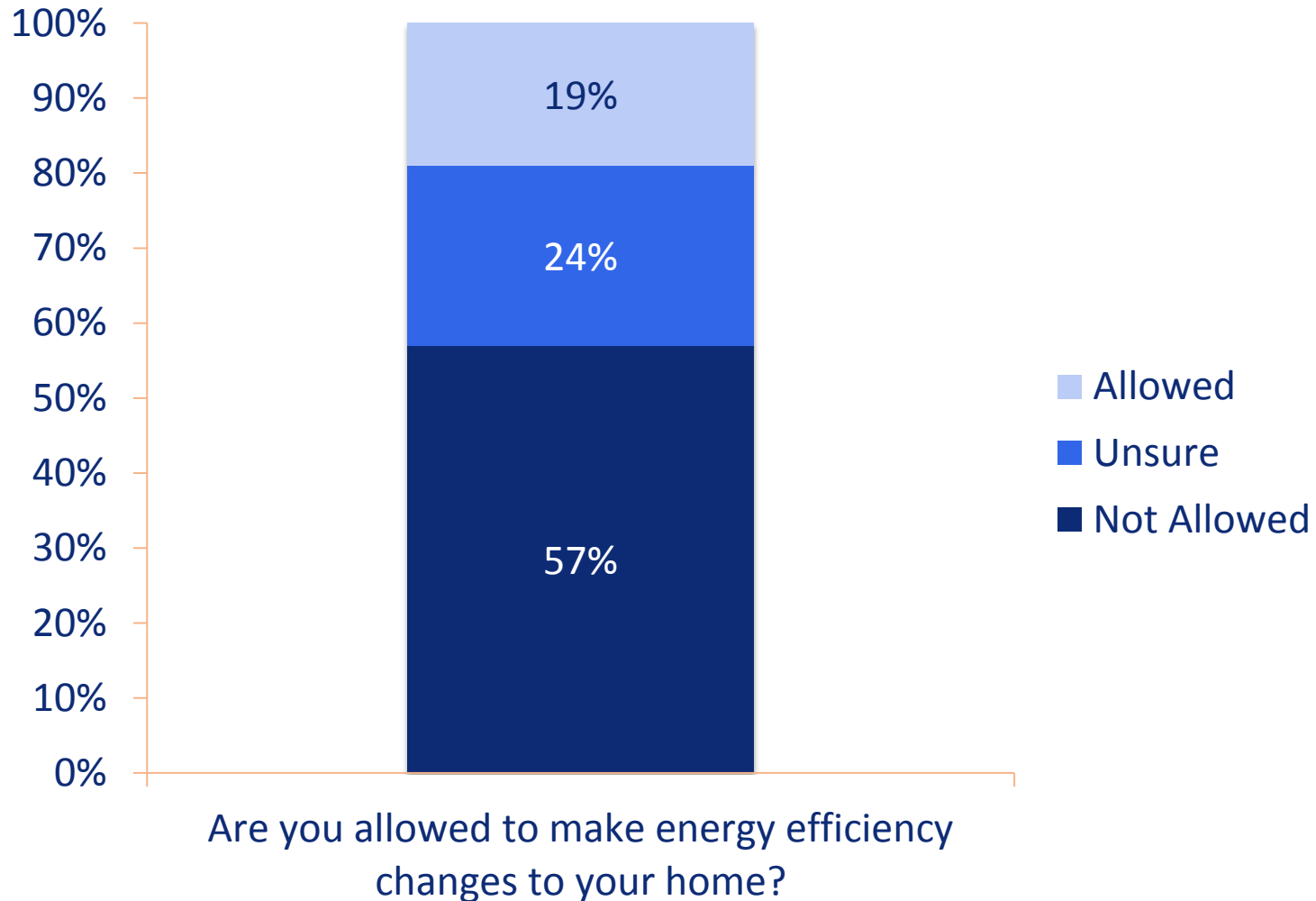
## Renters More Often Participate in Energy Efficiency Programs than Homeowners

Participation in Energy Efficiency Programs  
(Renters vs. Owners)



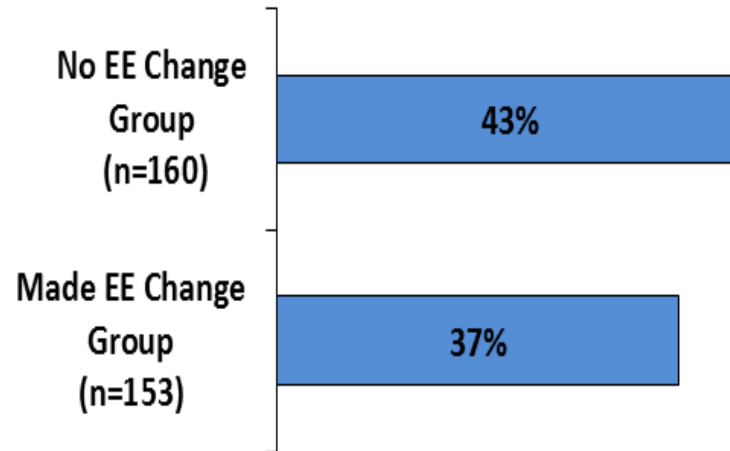
Base: those aware of programs

## But Renters Face More Barriers to Energy Efficiency than Homeowners



## Participation in Programs Has Limited Impact on Making Changes to Increase Energy Efficiency

### Signed Up or Participated in Energy Efficiency (EE) Programs (Those Who Made EE Change vs. No EE Change)



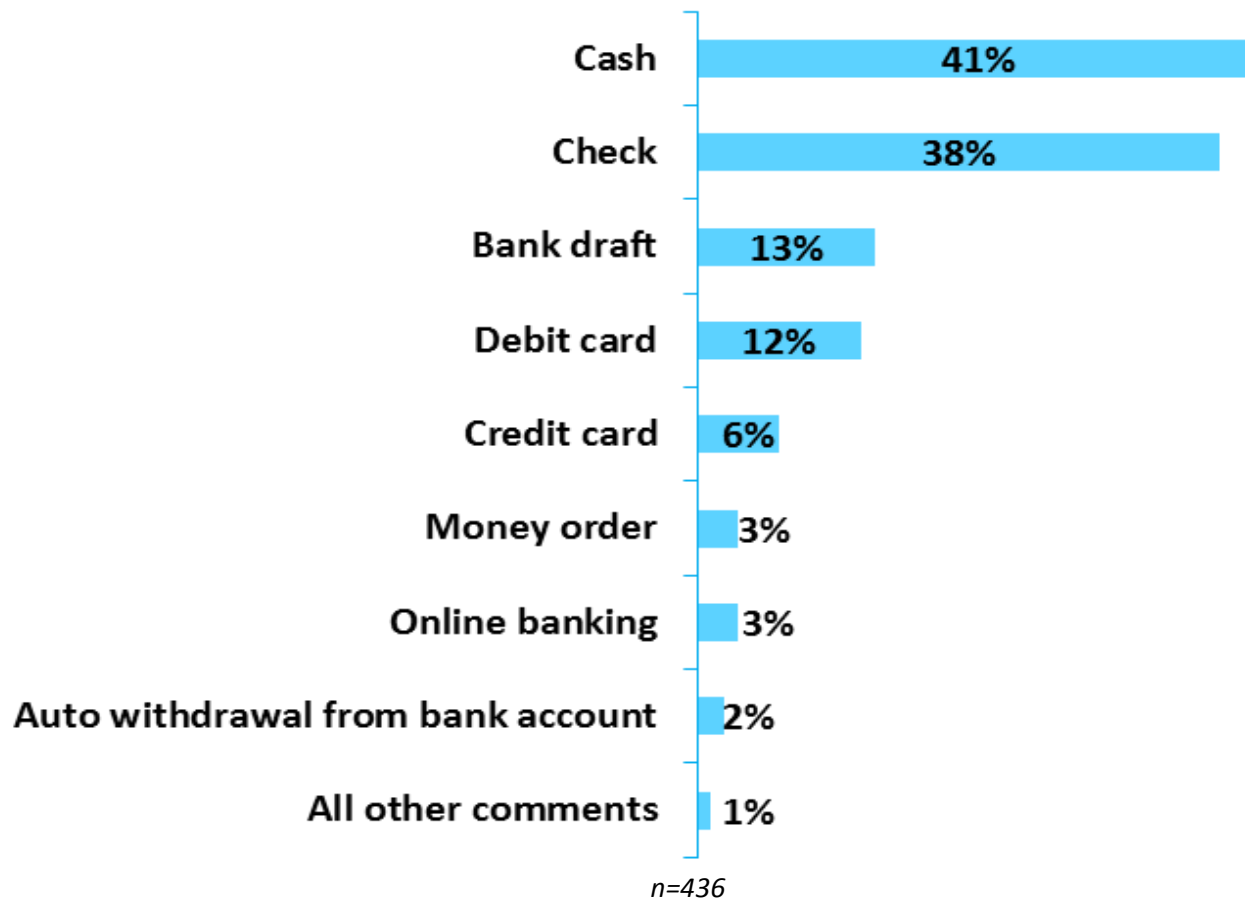
U3 Have you or your household signed up for or participated in one or more of these energy efficiency programs?

U5 Have you made any changes to your home, your appliances, insulation, or other areas to increase your household's energy efficiency?

# *Payment Methods and Challenges*

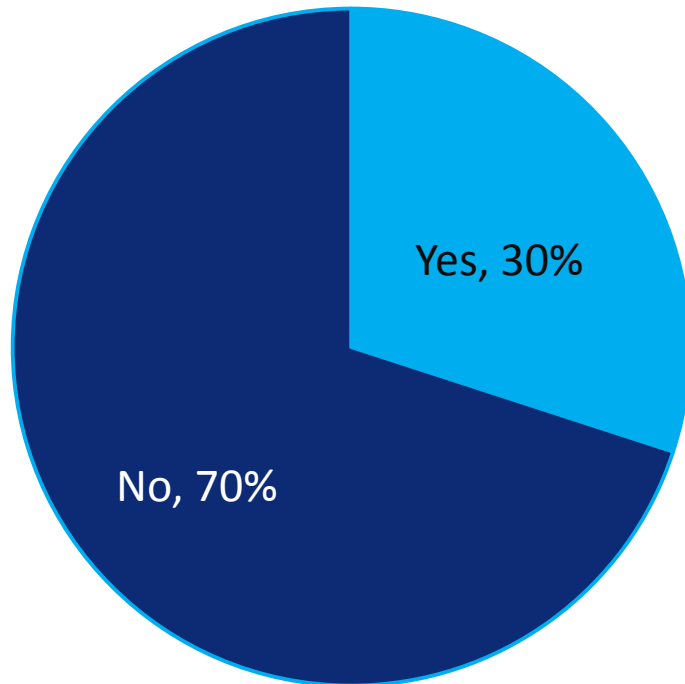
# Most Low Income Consumers Pay their Utility Bill by Cash or Check

### Typical Method of Payment of Utility Bill

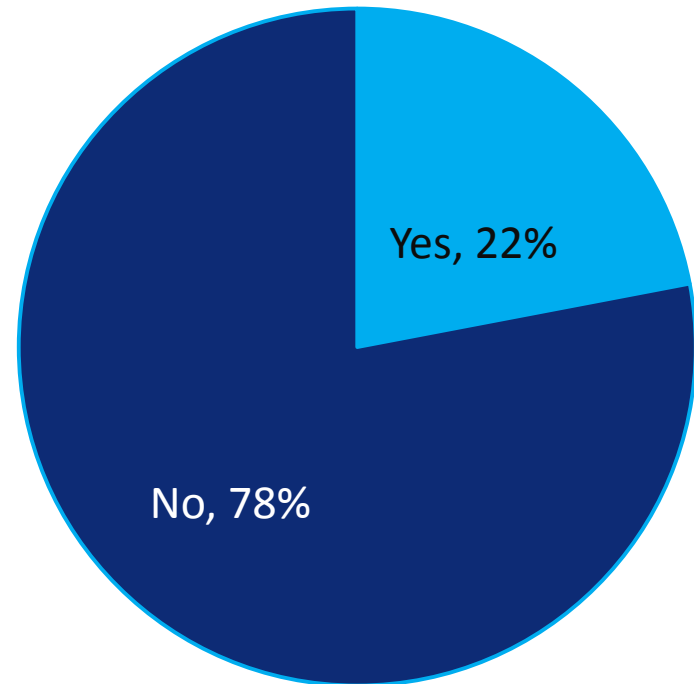


# Substantial Minorities of Households Have Payment Challenges

Unable to Pay Full Amount of Utility Bill at Least Once in Past Year



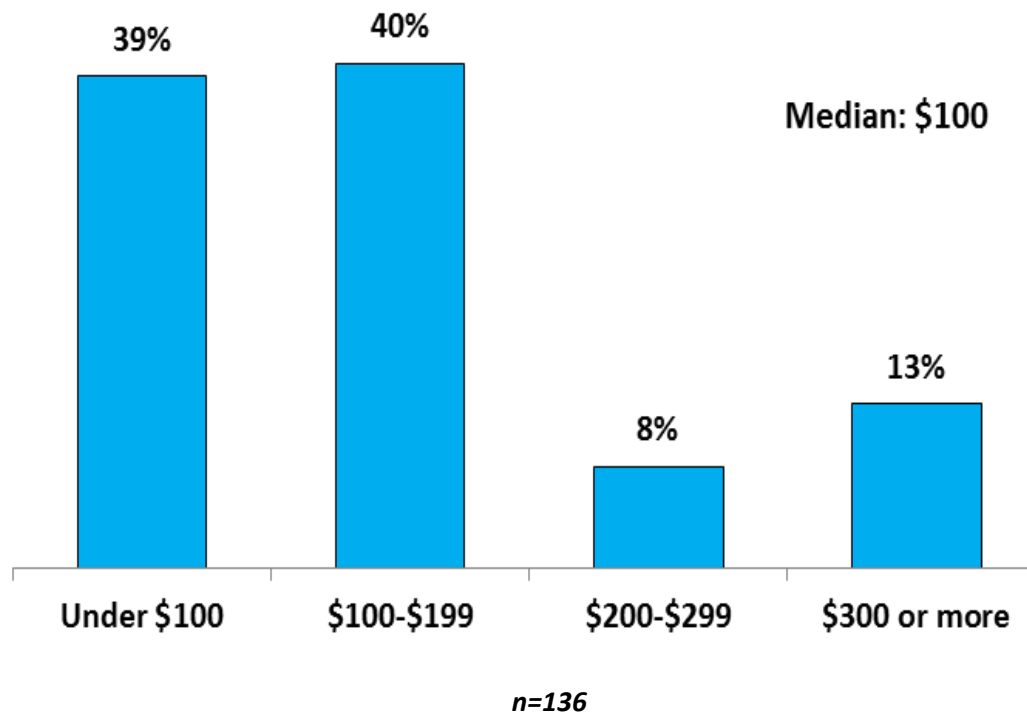
Missed Any Utility Bill Payments in Past Year





## Low Income Consumers' Payment Shortfall Was Usually Under \$200

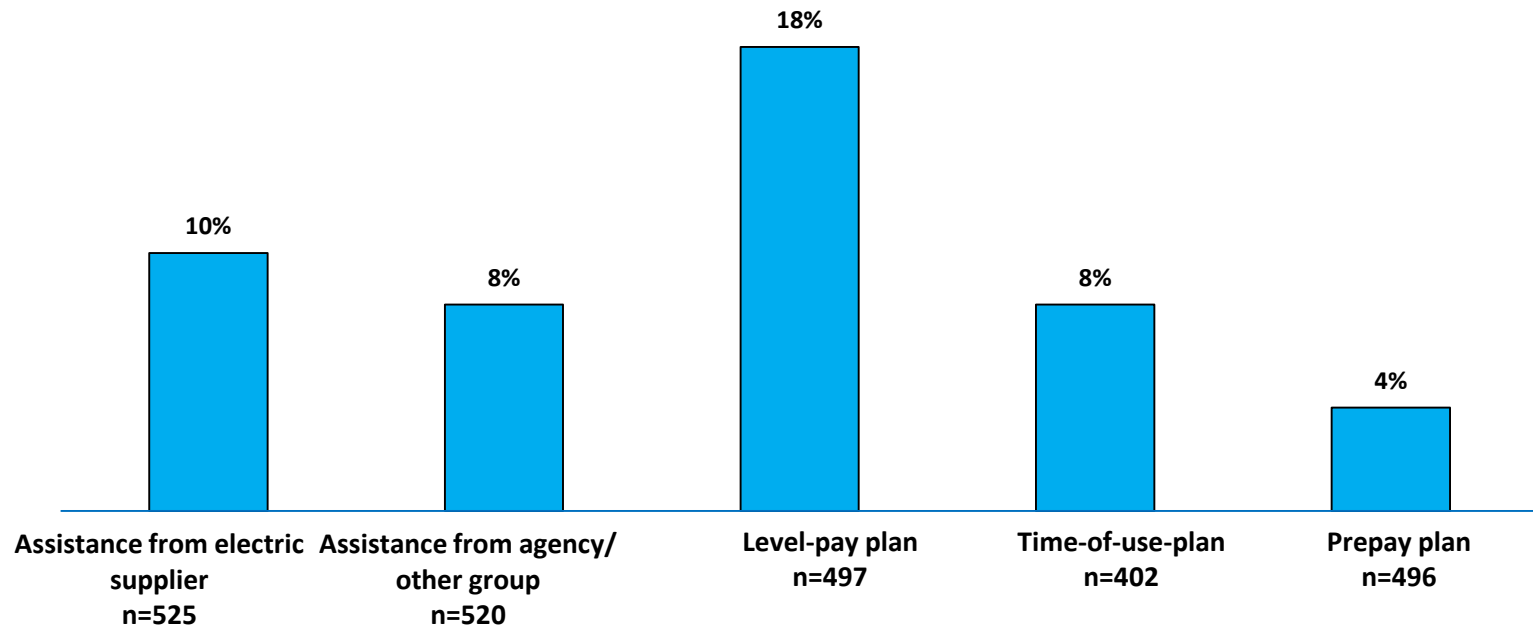
### Low-Income Consumers' Average Payment Shortfall on Electricity Bill Per Month



P14 So that we can compare your household to others in the same situation around the U.S. what would you say is the average number of dollars you were unable to pay per month when your household could not pay the entire monthly electric bill?

# The Vast Majority of Low Income Consumers Are Not Receiving Assistance or Using Programs To Help Manage Energy Costs

## Assistance, Payment, and Pricing Plans through Utility



P1 Does your household receive any kind of financial assistance or discounts from your electricity supplier for your energy use?

P1A Does your household receive any kind of financial assistance from an agency or any other group besides family members or the electricity company to help pay for your electricity use?

P6 Do you or your household use a pre-pay plan, in which you pay up front for the amount of electricity you intend to use

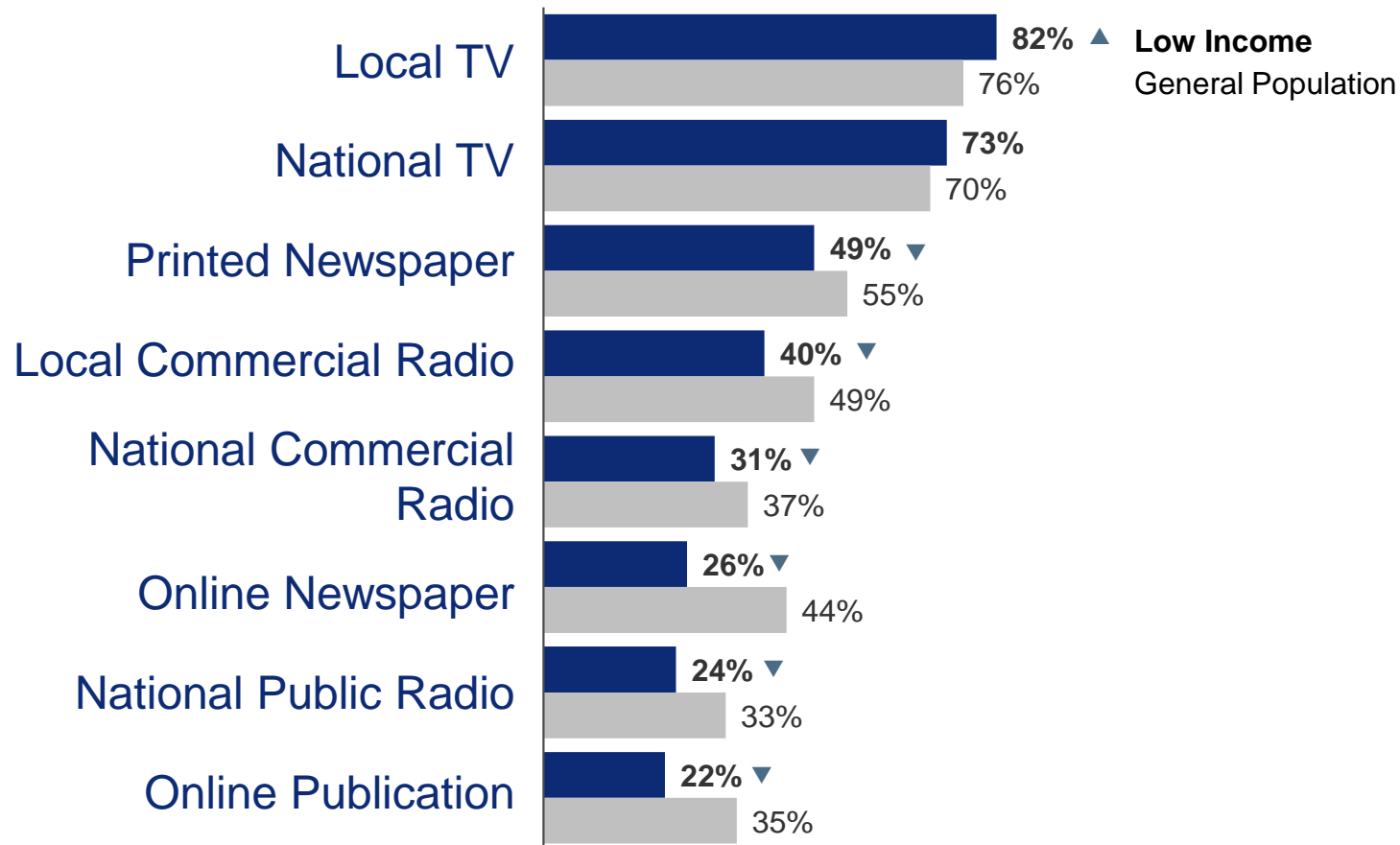
P7 To the best of your knowledge are you on a "time of use" program...?

P11 Are you on a payment plan where your monthly electricity bill is evened out, so that you pay the same amount every month regardless of the season?

***The “Digital Divide”:  
Understanding low-income communication  
preferences and behaviors***

# Preferred News Sources

## News Sources Used on a Regular Basis



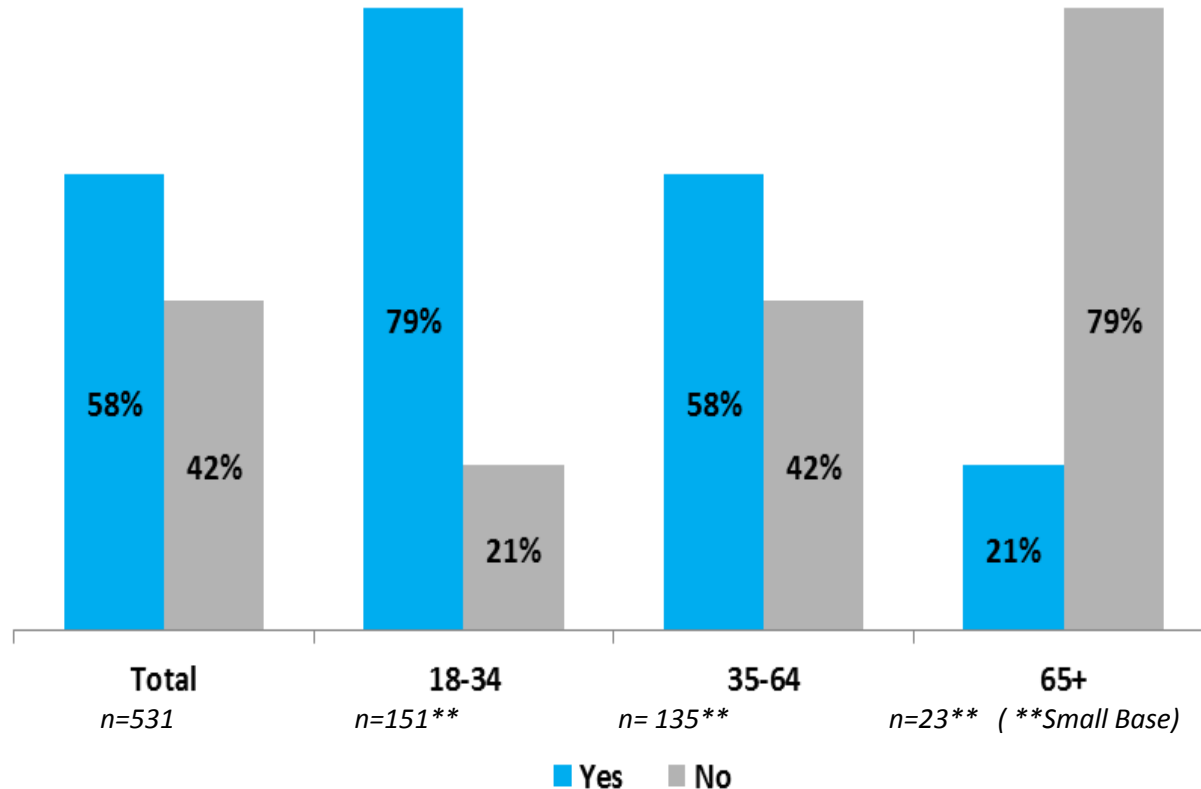
## About Three Quarters Have Accessed the Internet in the Past 6 Months, But Age is a Key Driver

### Accessed the Internet In the Past 6 Months

	<b>TOTAL</b>	<b>18-34 years</b>	<b>35-64 years</b>	<b>65+ years</b>
<b>Have accessed the internet in the past 6 months</b>	<b>77%</b>	<b>91%</b>	<b>77%</b>	<b>53%</b>
<b>Have not accessed the internet in the past 6 months</b>	<b>23%</b>	<b>9%</b>	<b>23%</b>	<b>47%</b>
<i>Base</i>	<i>531</i>	<i>190</i>	<i>233</i>	<i>108</i>

## Most 18-34 Year Olds Text, Most 65 or Older Do Not

### Send or Receive Text Messages (SMS) (% by Age)



# *Implications*

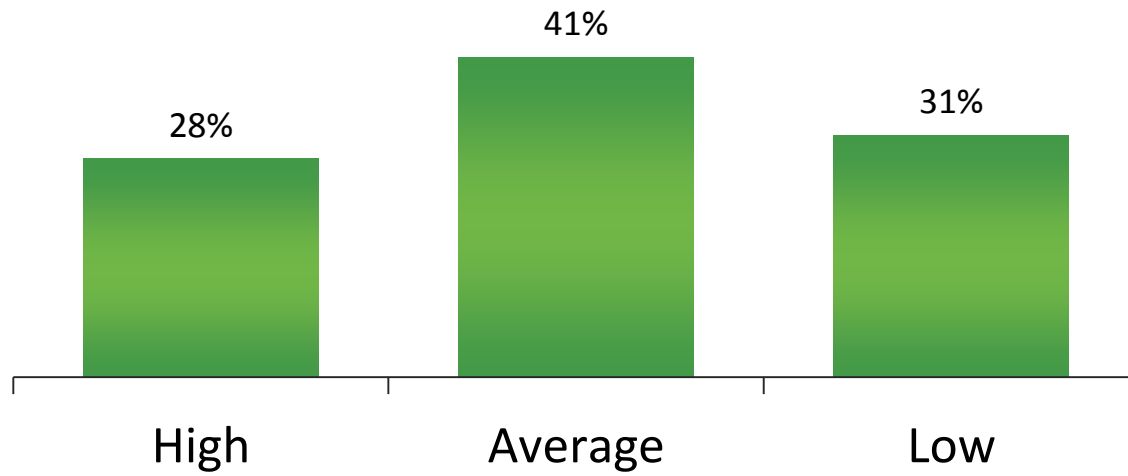
- 1. There is a great need for effective educational outreach.***
- 2. Participation rates in EE programs among low-income consumers can and should be improved.***
- 3. The needs of older low-income consumers need more attention.***



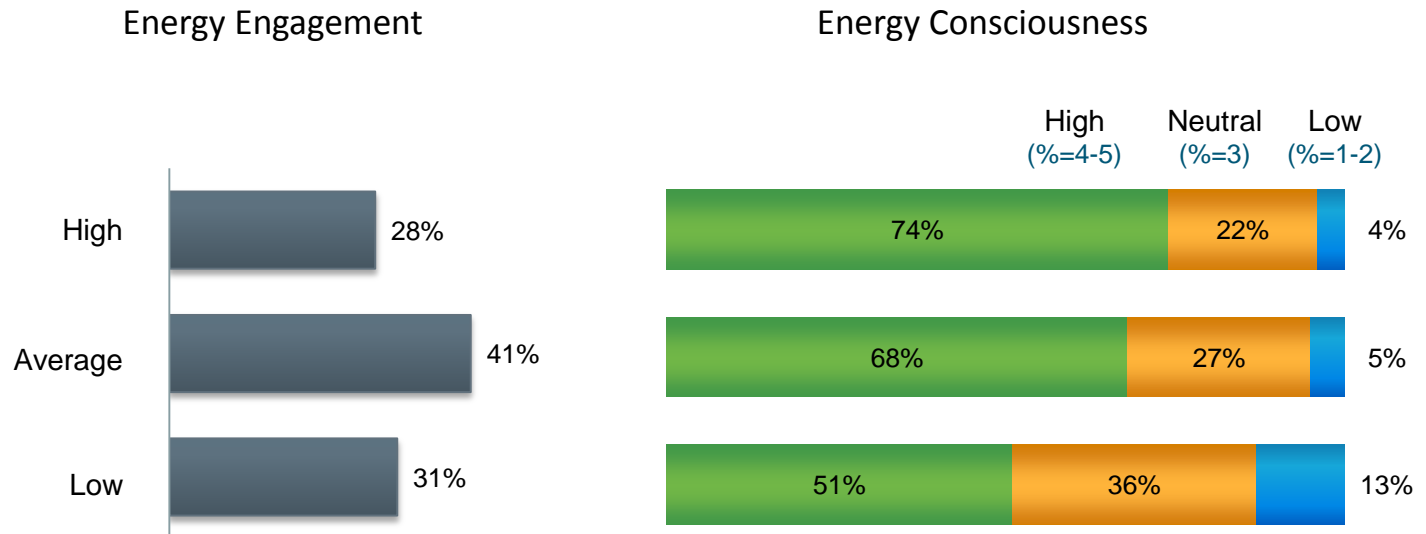
## Motivations and Emotions of Engaged Consumers



## Engagement Level Breakout



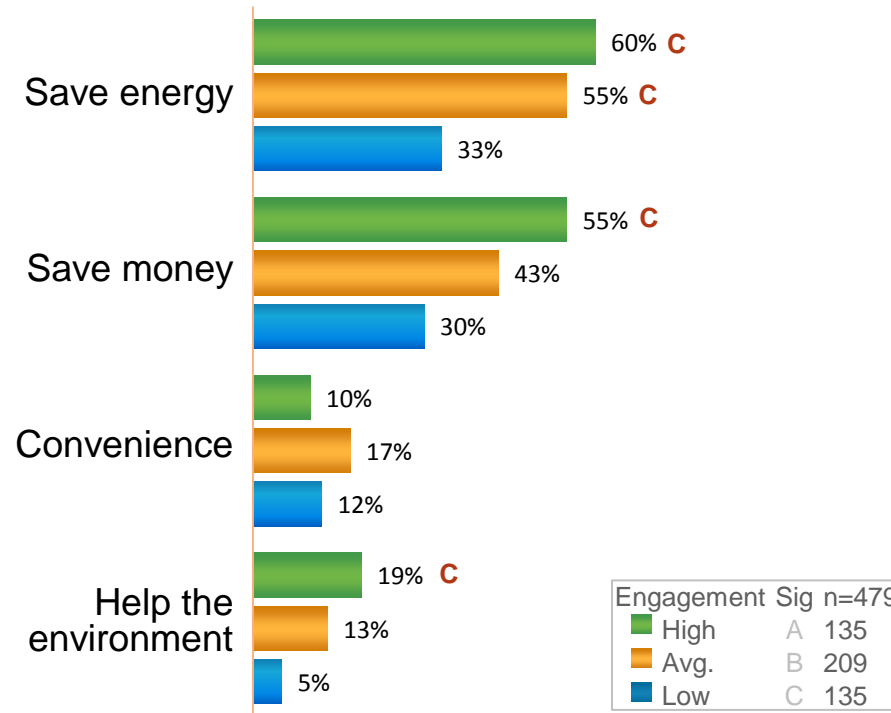
# Energy Consciousness Doesn't Predict Engagement



# Purchase and Participation Drivers

## Reason for Products Purchased

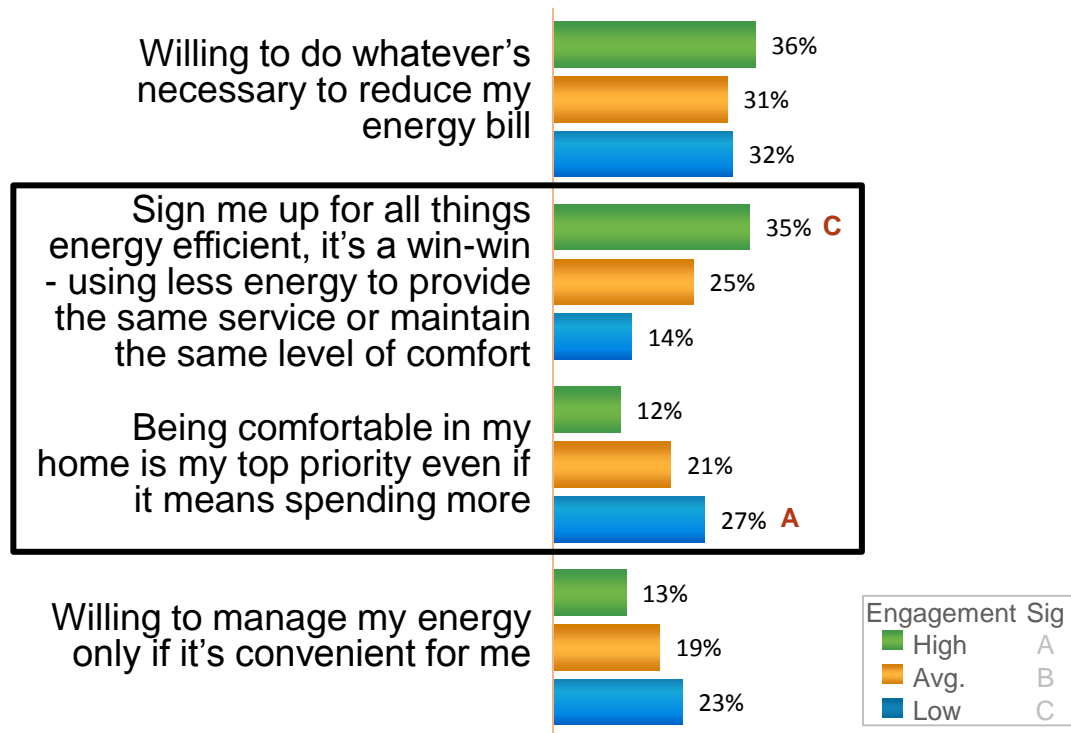
Top mentions among those who have purchased energy management products



A/B/C indicates a significant difference between the three engagement groups

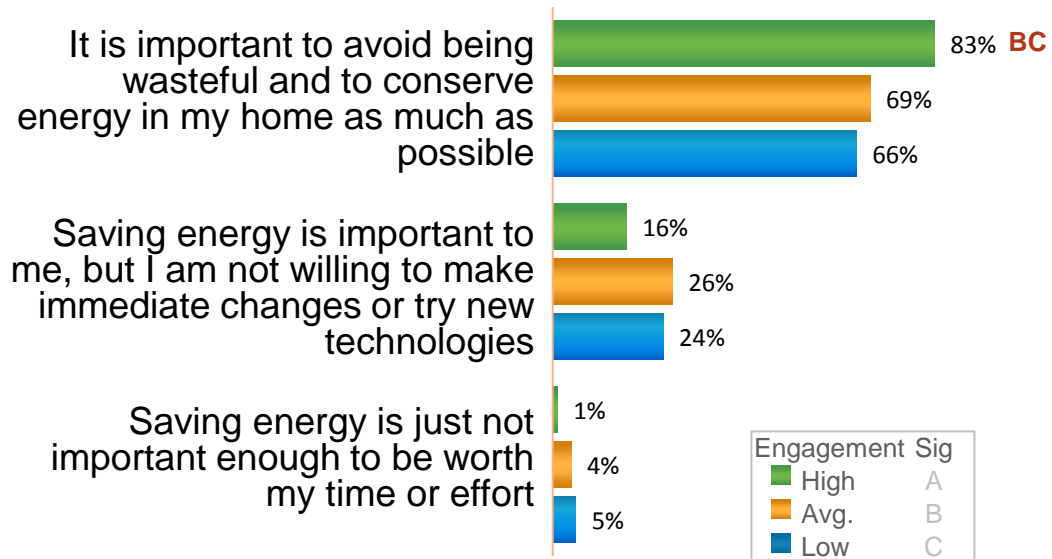
# Consumer Motivations

## Attitude Toward How Energy Affects You Personally



# Consumer Motivations

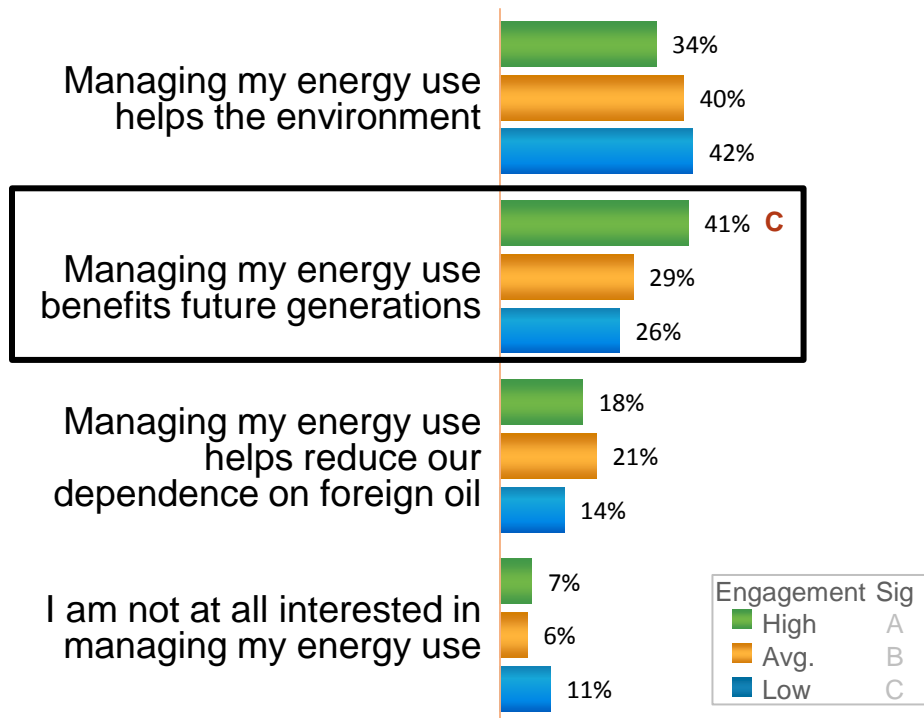
## Attitude Toward Energy Conservation



A/B/C indicates a significant difference between the three engagement groups

# Consumer Motivations

## Attitude Toward Energy Management



A/B/C indicates a significant difference between the three engagement groups

## Top Motivations by Engagement

	High Engagement	Average Engagement	Low Engagement
1	<i>It is important to avoid being wasteful and to conserve energy in my home as much as possible</i>	<i>It is important to avoid being wasteful and to conserve energy in my home as much as possible</i>	<i>It is important to avoid being wasteful and to conserve energy in my home as much as possible</i>
2	<i>Managing my energy use benefits future generations</i>	<i>Managing my energy use helps the environment</i>	<i>Saving energy is important to me, but I am not willing to make immediate changes or try new technologies</i>
3	<i>Managing my energy use helps the environment</i>	<i>Saving energy is important to me, but I am not willing to make immediate changes or try new technologies</i>	<i>I am willing to do whatever's necessary to reduce my energy bill</i>

*Engagement, Regardless of Motivation,  
Creates Positive Emotions*

How do your energy-saving actions make you feel?

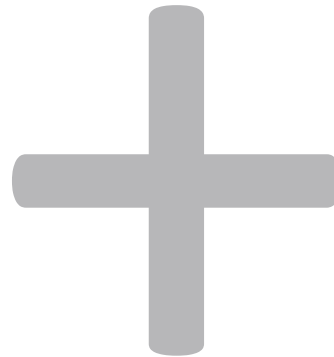




## Creating Engagement

*Low engagement consumers respond to:*

Easy-to-use/convenient  
programs & products

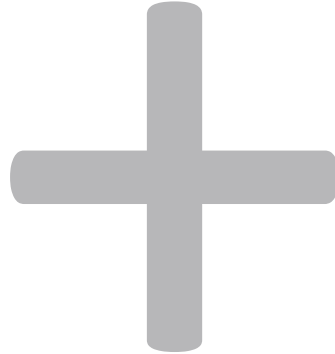


Present-oriented  
benefits

## Deepening Engagement

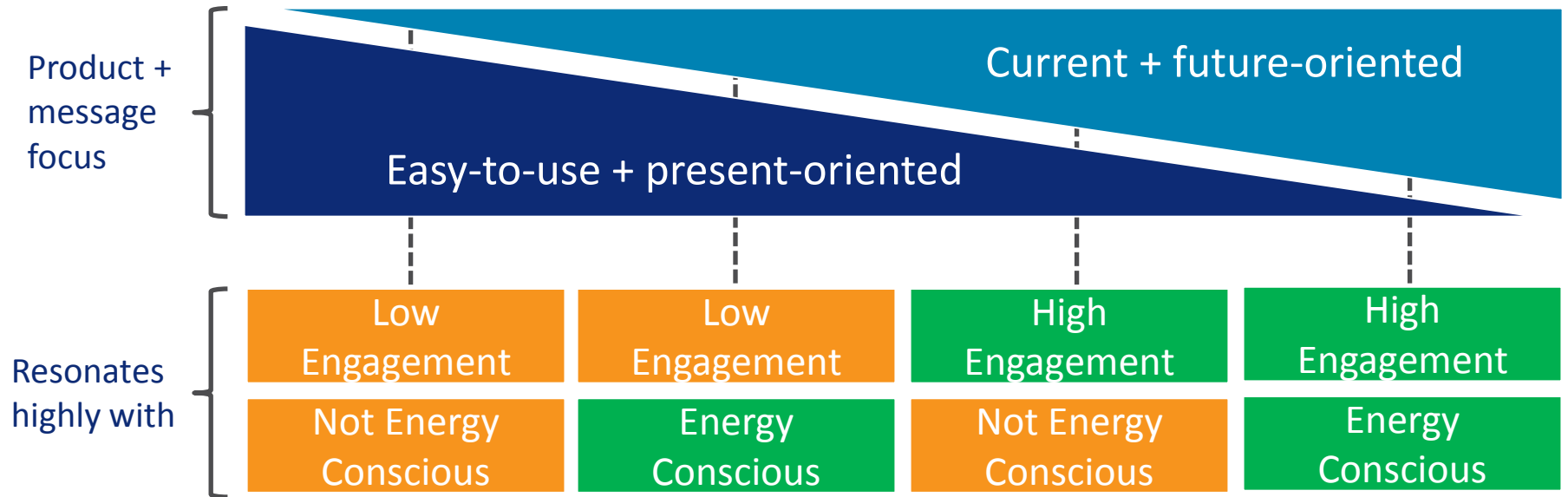
*High engagement consumers respond to:*

Current programs  
& products



Future-oriented  
benefits

## Moving Consumers Along the Spectrum



# Implications

- 1. All consumers generally consider themselves “energy conscious” and report that they will “do whatever it takes” to reduce their energy bill**
- 2. The next level of responses yields more insight:**
  - a. High-engagement consumers tend to be more future-oriented in their motivations**
  - b. Low-engagement consumers tend to be more present-oriented in their motivations**
- 3. Life stage factors play a part in at least some consumers’ ability to engage with current programs and products**



SmartGrid  
consumer  
collaborative

listen, educate, collaborate



## Smart Grid Consumer Collaborative

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