Stakeholder Education:
Let's Start with the Customer

Gail Allen
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P182 Customer Behavior Webcast Series:
"You Ask, We Investigate"
November 1, 2016

facilitated by Rebecca Wingenroth
EPRI Technical Leader, Principal

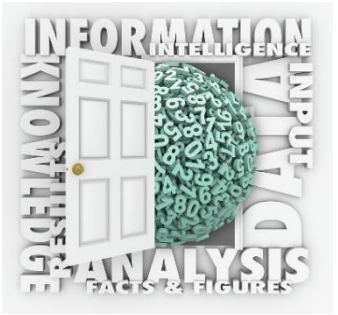
Housekeeping

- Thank you for participating in this Webex.
- As a courtesy to all of our participants, please place your phone on mute when not talking.
- Feel free to ask questions over the phone, or by using the “chat” feature on the Webex toolbar or by ‘raising your hand’.

P182 Customer Behavior Webcast Series: "You Ask, We Investigate"

Three webcasts in the series:

1. Expanding Customer-related Services in an Integrated Grid
   - Wed, Jul 27, 2016, 2pm Eastern



2. Customer Data Analytics: Applications and their Value
   - Wed, Aug 31, 2016, 2pm Eastern

3. Stakeholder Education, Let's Start with the Customer
   - Wed, Nov 2, 2016, 2pm Eastern

SAVE the DATE and Mark Your Calendar!

P182 Understanding Electric Utility Customers' Webex

January 11, 2017 at 2pm Eastern

Mark Your Calendar
Upcoming EPRI PDU Advisory Meetings in 2017

Program Meetings: February 13-15, 2017

Council Meetings: February 15-16, 2017

Hyatt Regency-Huntington Beach
21500 Pacific Coast Highway
Huntington Beach, Ca 92648
www.huntingtonbeach.hyatt.com

Group Rate: $239

Program Meetings: September 11-13, 2017

Council Meetings: September 13-14, 2017

Hyatt Regency Denver
650 Fifteenth Street
Denver, CO 80202
Hyatt Regency Denver

Group Rate: $225

Communication and Education: Update

1. Customer Engagement Model: seven key elements for customer education and communication.

2. Many utilities already utilizing online customer surveys.

3. KCP&L and EPRI partnered for online customer survey directed at customer understanding of grid, September 2016.

4. Topic highlighted at EPRI Communications Council, October 4th with overview of KCP&L's and Con Edison's processes.

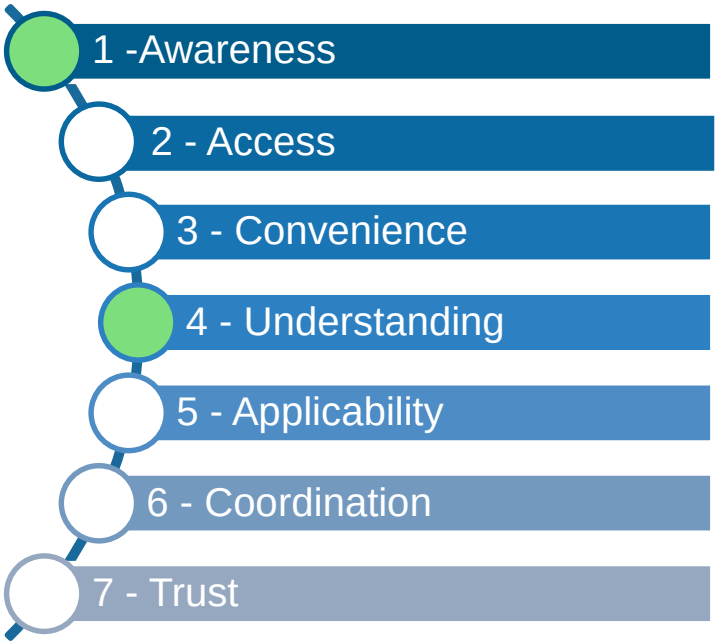
5. Results summarized in EPRI P182 "You Ask, We Investigate: Customer Webcast Series" Scheduled for November 1st, 2PM Eastern

Identified Stakeholders from EPRI Members

Stakeholders	P182 Understanding Electric Utility Customers	Communications Council
Residential Customers	✓	✓
Multi Family	✓	✓
Low Income	✓	✓
Commercial	✓	✓
Industrial	✓	✓
Municipal	✓	✓
Regulators	✓	✓
Utility Staff: (senior mgmt.; call center)	✓	✓
Vendors	✓	✓
Landowners	Not Identified	✓
Financial Community	Not Identified	✓
Consumer Advocate	✓	✓
Intervenors	✓	✓
Special Interest	✓	✓
Elected Officials/Community Leaders	Not Identified	✓

Highest priorities

Key Elements of Customer Engagement Model: EPRI Member Highest Priorities (voting results)



	P182 Understanding Electric Utility Customers Program	Communications Council
1 -Awareness	9	10
2 - Access	5	1
3 - Convenience	4	4
4 - Understanding	11	9
5 - Applicability	0	1
6 - Coordination	6	2
7 - Trust	1	5

Customer Advisory Panel

Testing Model Elements Survey

Data Collection 9/28-10/5/2016

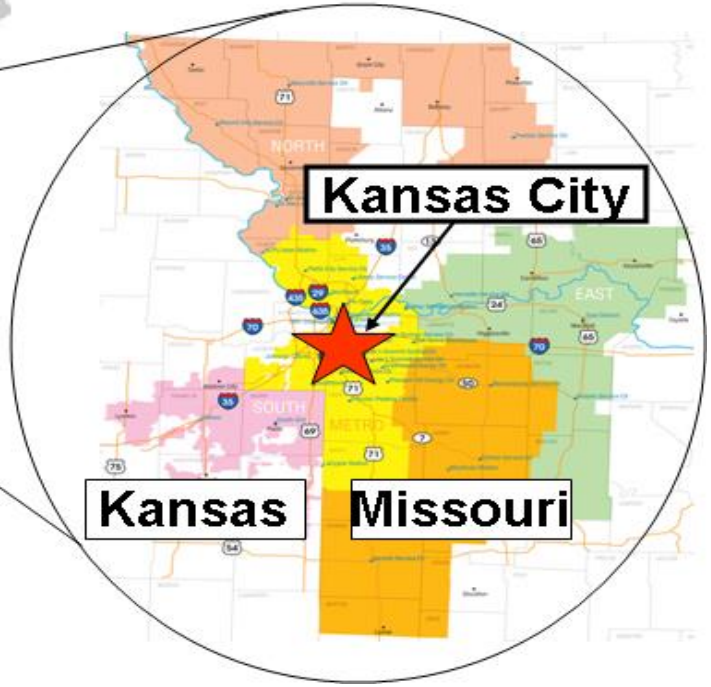
Gail Allen, Sr. Manager, Customer Intelligence

Kris McDaniel, Market Research Analyst, Customer Insights

Agenda

- KCP&L Overview and Customer Insight Team
- Research Report Summary
- Research Q & A's – "the grid"
- Research Q & A's – EPRI partner utility videos
- Panel Statistics

Company Overview



Key Statistics

Customers	**830,000 Mtr.**
Generation	**6,100 MW**

- **9** plant sites
- **26** generating units
- **10** peaking facilities

Dist. Subs	**315**
Dist. Circuits	**1600**
EV Charging Stations	**800+**

Employees	**3000**
Regulatory Jurisdictions	**2**

Customer Insights Team - Goals

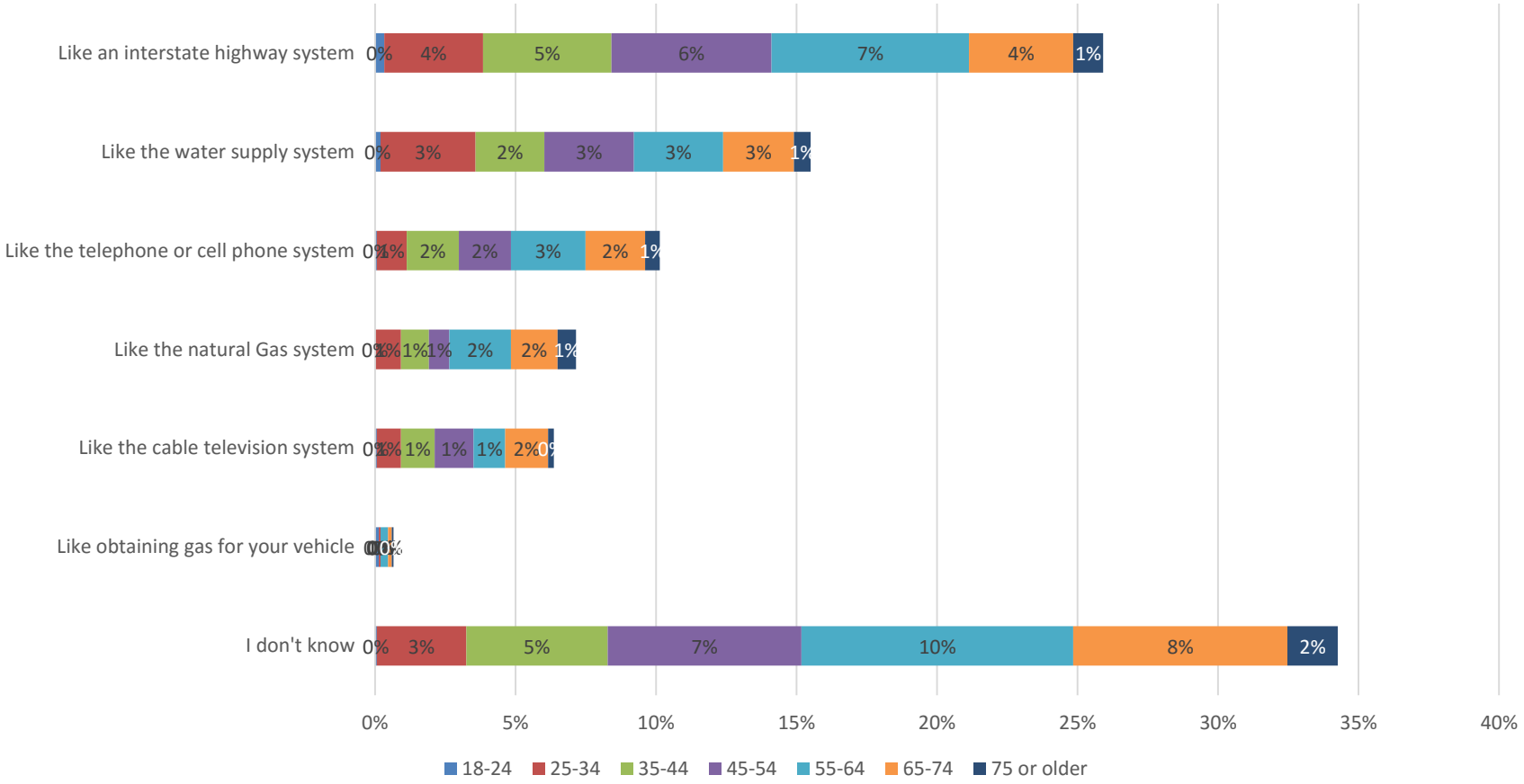
- Provide customer insights that will help our company maintain or improve customer satisfaction by keeping the customer a focus point for the company as we make strategic and operational decisions
- Increase Executive, Leadership Team, and Employee knowledge of the KCP&L customer
- Integrate customer data/findings into business plans throughout the company
- Maintain and/or increase customer satisfaction
- Improve customer experience
- Maximize KCP&L's customer research

Summary of EPRI–Focused Research

- Panelists understand the grid by comparing it most to the interstate highway system
- Panelists believe the electrical system is the most valuable compared to other systems they use
- Panelists found the ComEd video to be the most understandable
- Age, income, education, and territory had little to no impact on each question.

Panelists think of the electric grid working like the interstate highway system

Question: How would you best describe the way the electric grid works today?



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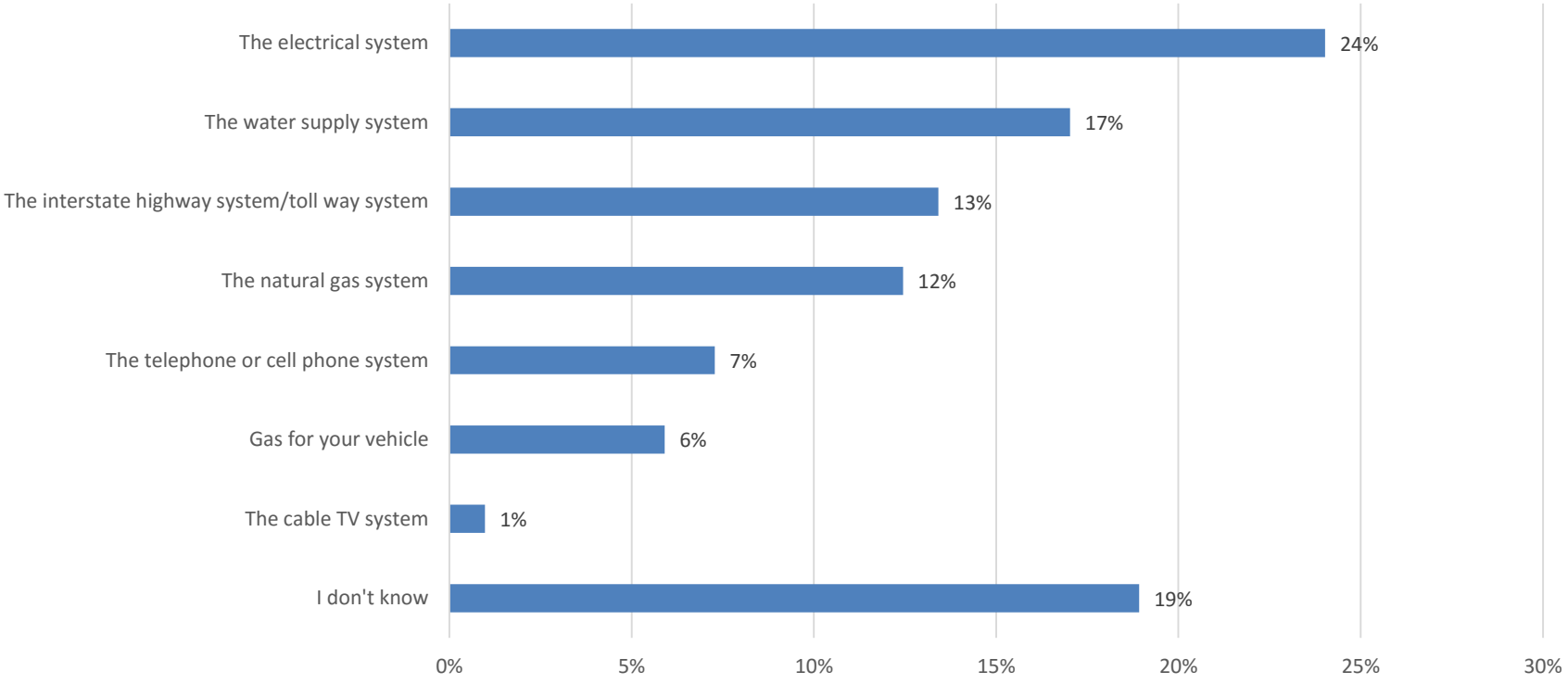
Panelists believe the electric system is provides the most value compared to other services

Question: Which of these systems do you think provides the most value for the price you pay?



*KCP&L experienced a large outage this summer which may be skewing results

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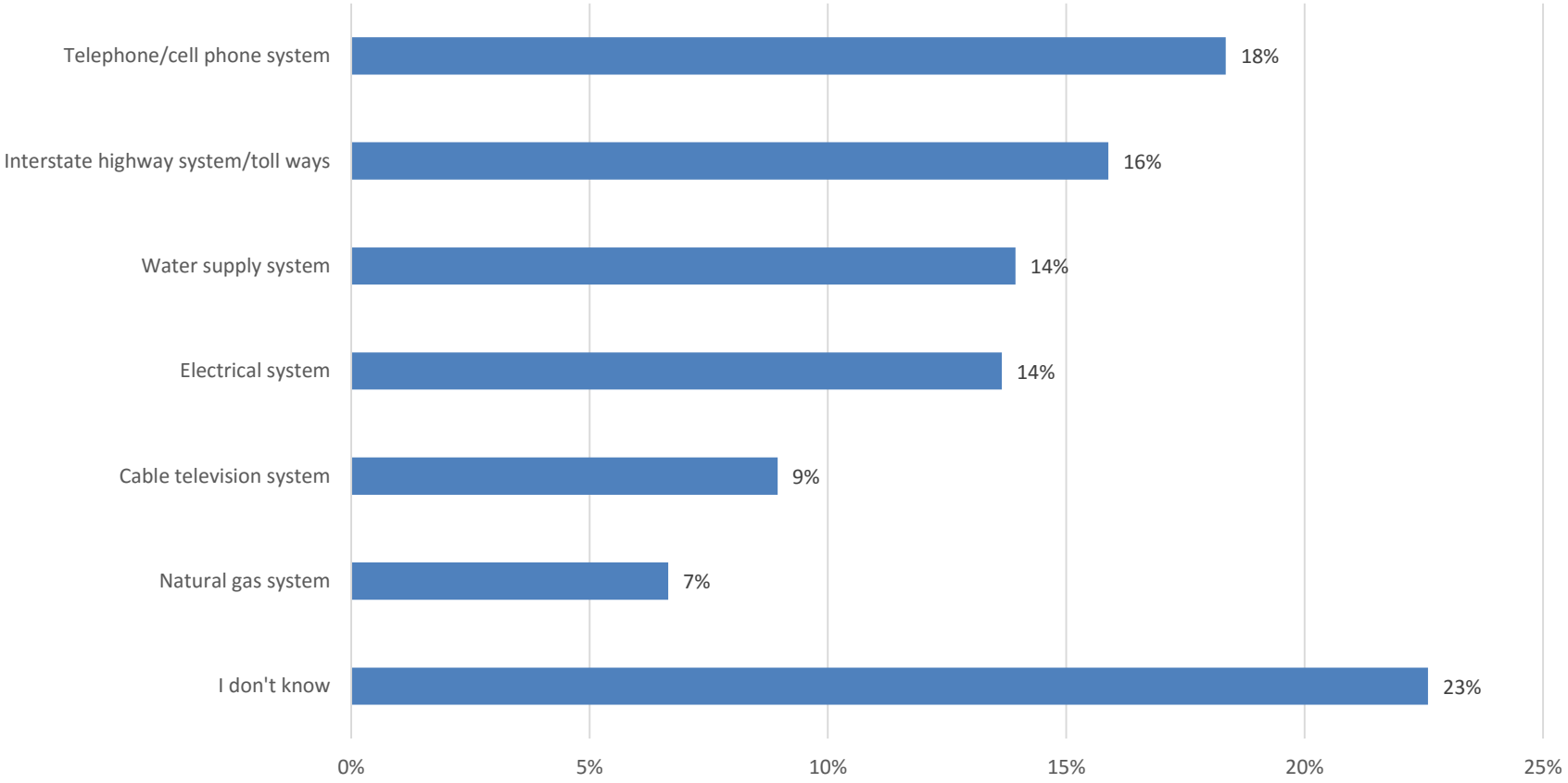
Panelists do not believe they understand the pricing of utilities

Question: Which of these systems do you understand the best as far as pricing?



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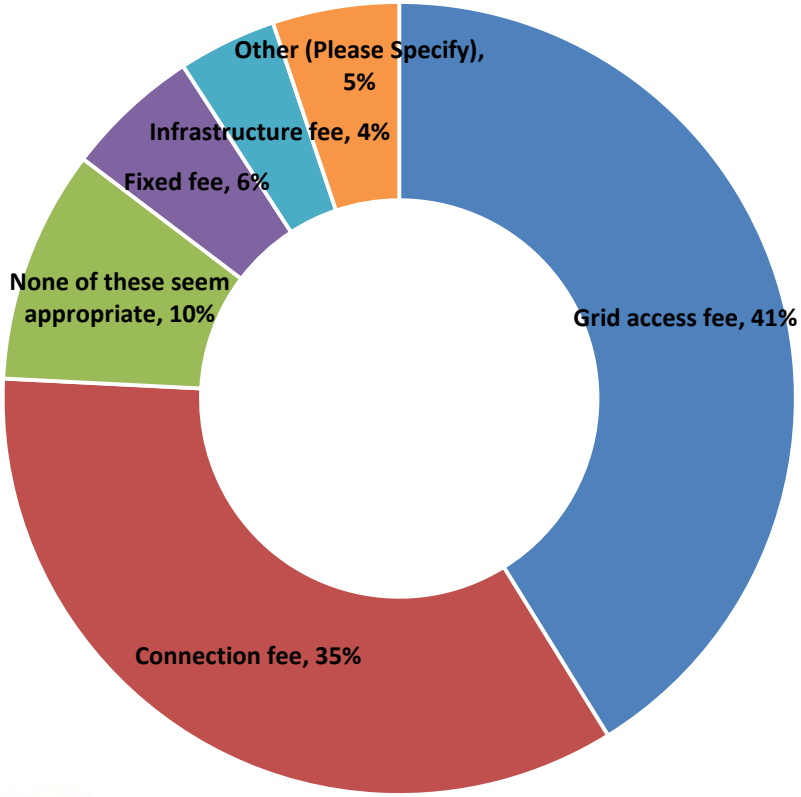
Panelists were undecided about the naming of the fee, however believed ‘Grid Access Fee’ was the best fit out of the choices provided

Question: Suppose you were considering purchasing solar panels for your home and you had to pay a fee for KCP&L to connect your solar to our larger electricity system known as the grid. Which of the following phrases describing the fee for this service would seem most understandable to you?



From ‘Other’ write-ins:

Account Setup Fee
Buy Back Fee
Connection fee
Gate fee
Grid Connection Fee (3)
grid expansion assistance
Grid Hook-up Fee
Grid Interconnection Fee
Grid Interface Fee
Interchange Fee
One time connection fee.
Safety code compliance inspection
Solar to Grid access fee
Solar Grid Connection Fee
Solar Panel Connection Fee (9)
Solar panel surcharge

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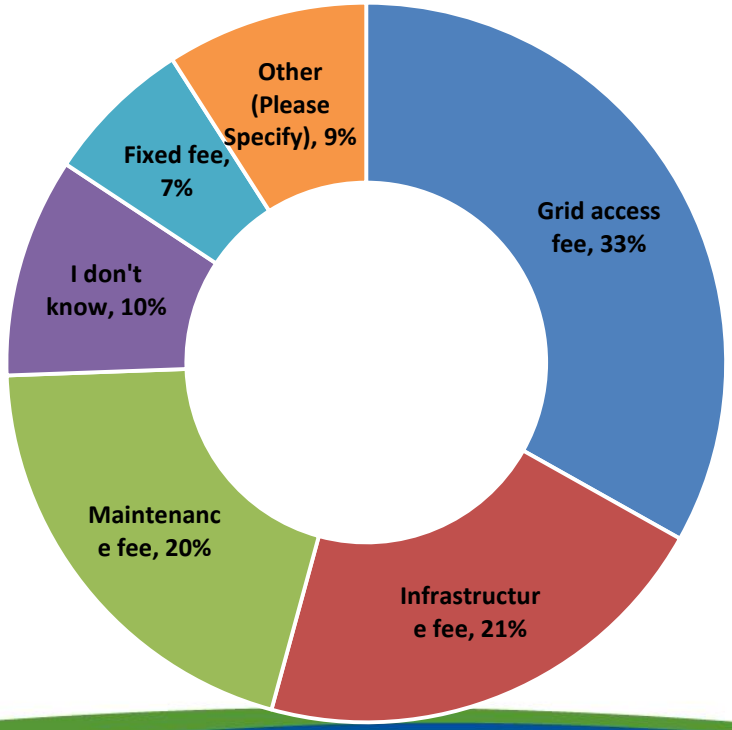
Panelists were undecided on the name of this fee, however ‘Grid access fee’ was the most selected

Question: Suppose you purchased a solar panel system for your home and you choose to sell your excess electricity back to the grid because you don’t plan on storing the electricity in batteries around your home. You plan to sell the unused energy gathered during the day back to the electric company, and purchase usage from them at night when the sun is not shining. In addition to the electricity used at night, there would also be a fee for being tied into the electric grid which helps maintain the system of poles and wires. Which of the following phrases describing the fee for this service would seem most understandable to you?



From ‘Other’ write-ins:

Availability Charge
Buy Back Fee (3)
Cooperative electricity fee
Customer Charge
Electrical System Access Fee
Energy Exchange Fee
Excess Electricity Fee (2)
Excess Grid access fee
Exchange Adjustment
Exchange Fee
Exchange Use Cost
Gathered Energy Fee
Grid access and maintenance fee (2)
Grid connection maintenance fee
Grid exchange fee
Grid expansion assistance
Grid Interconnection Fee (2)
Grid Maintenance Fee (5)
Grid surcharge
Grid Usage Fee (4)
Infrastructure Maintenance Fee
Interchange fee
Interconnect fee
Limited Usage Fee
Night Fee
Night grid fee
Night time access fee
Nightly Usage Fee
Off-Peak Access Fee
Panel transition fee
Peak electric exchange
Personal usage fee
Power Buy Back Fee
Sell back fee (2)
Solar fee
Solar Panel Garage Tax
Solar sell/pay fee
Solar transfer fee
Solar/Grid Exchange fee
Storage fee
Supplemental Power Production Fee
Transaction Fee
Twilight usage fee
Unused energy buyback
Unused energy fee
Usage fees

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ComEd's Hourly Pricing Rate Option Video was shown to panelists to rate.

Question: Please watch the following video. Once done, answer the question below the video.

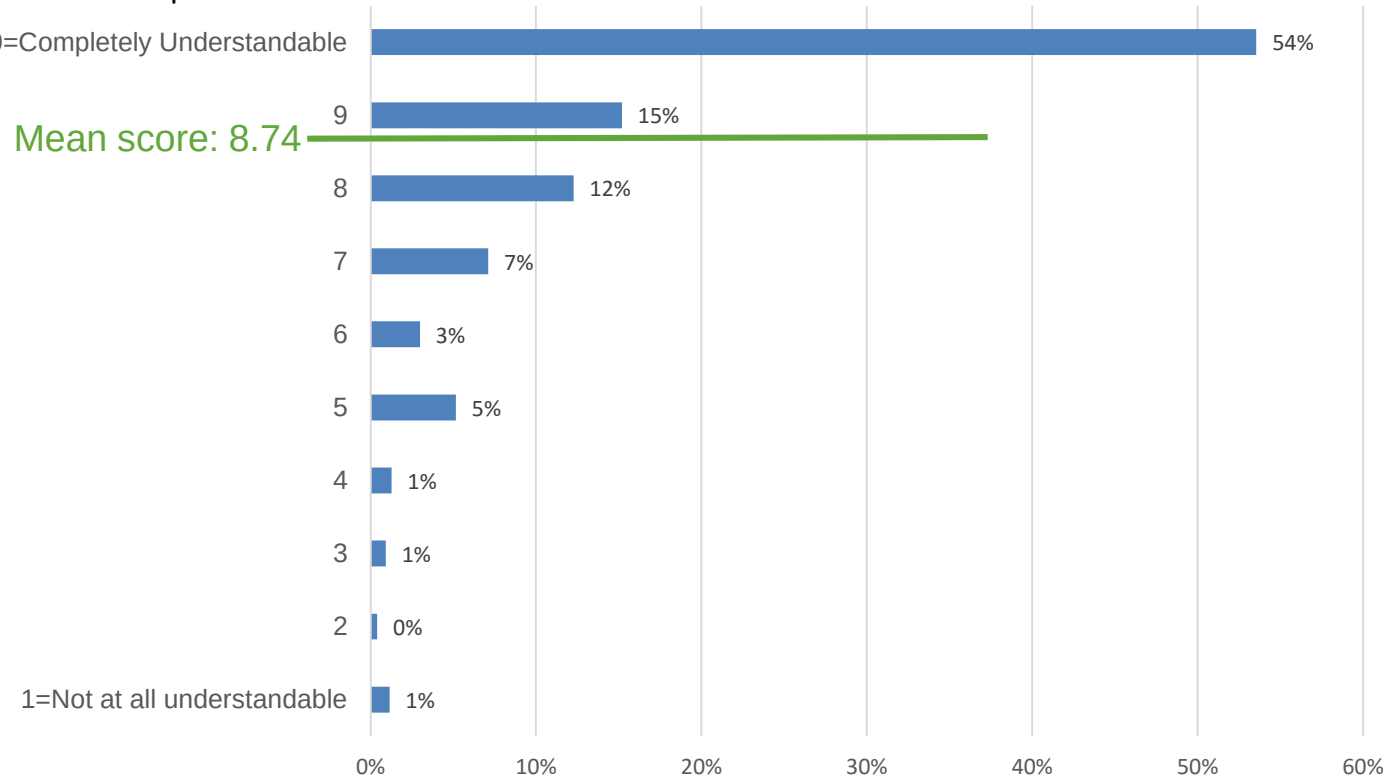
On a scale of 1-10, where 1 means you don't understand the video and 10 means you completely understand the video, how understandable is the concept in the video?

N=1744

Panelists found the video from ComEd to be the most understandable of all videos presented

Question: Please watch the following video. Once done, answer the question below the video.

On a scale of 1-10, where 1 means you don't understand the video and 10 means you completely understand the video, how understandable is the concept in the video?



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Arizona Public Service provided a video to explain how rates are set for the panelists to rate.

Question: Please watch the following video. Once done, answer the question below the video.

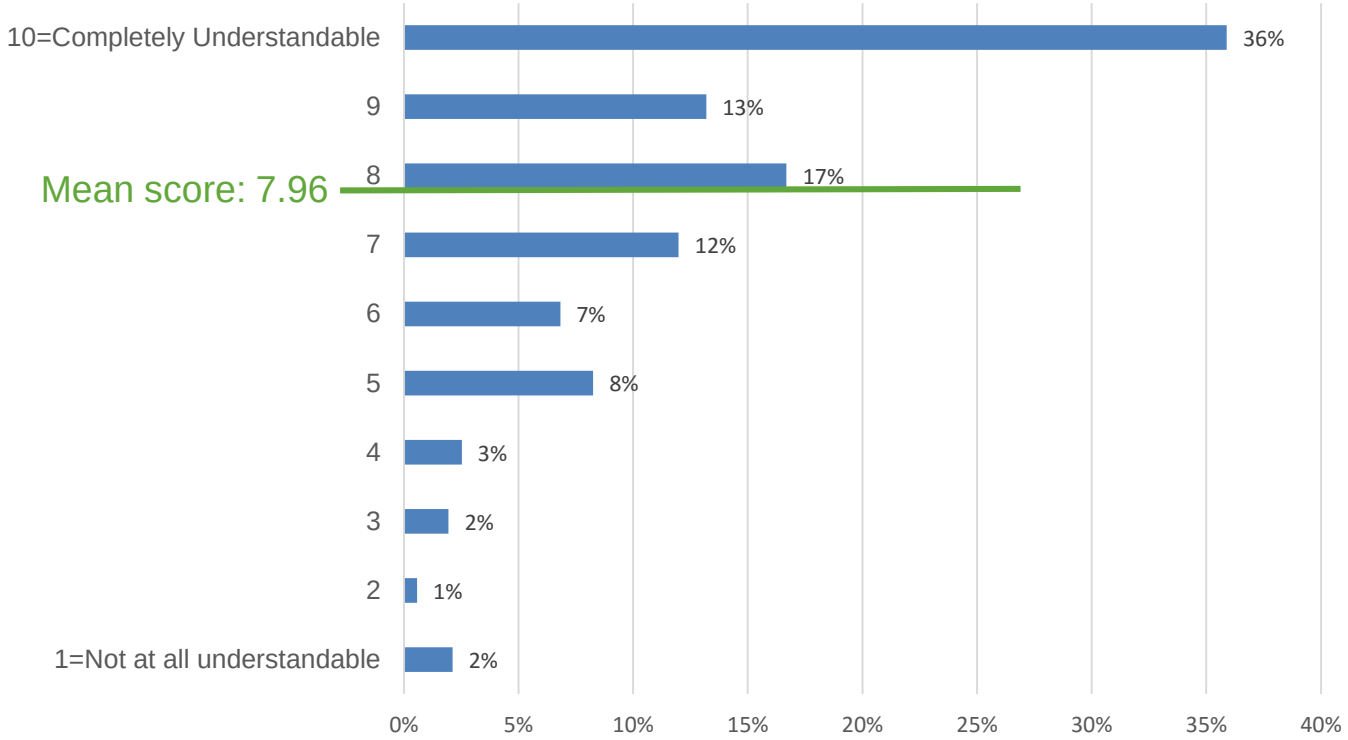
On a scale of 1-10, where 1 means you don't understand the video and 10 means you completely understand the video, how understandable is the concept in the video?

N=1744

Panelists found the video from APS understandable with a mean score of 7.96

Question: Please watch the following video. Once done, answer the question below the video.

On a scale of 1-10, where 1 means you don't understand the video and 10 means you completely understand the video, how understandable is the concept in the video?



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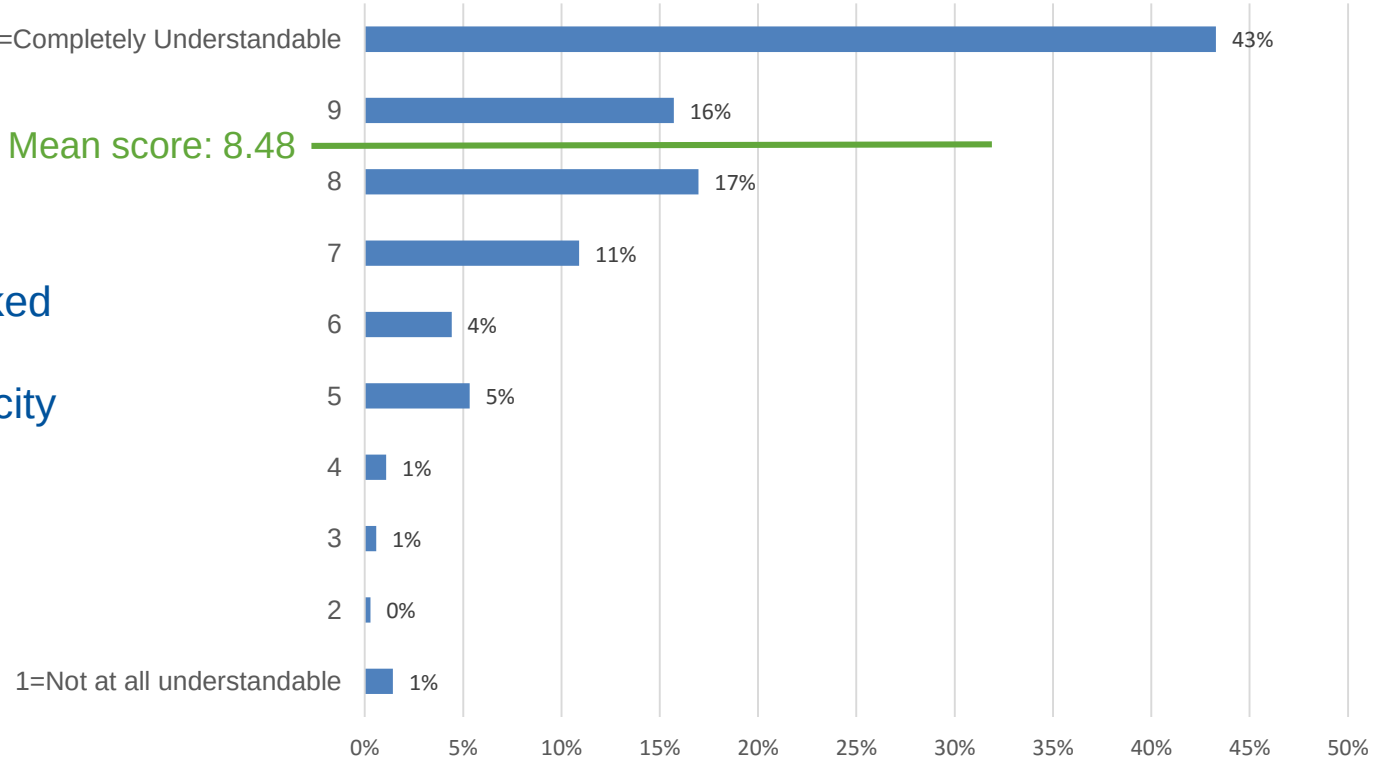
Panelists understood SRP's video, ranking it 2nd based on mean scores of the four informative items shown

Question: Please watch the following video. Once done, answer the question below the video.

On a scale of 1-10, where 1 means you don't understand the video and 10 means you completely understand the video, how understandable is the concept in the video?



Salt River Project asked us to rate a video on understanding electricity demand (unable to share due to video being unlisted)

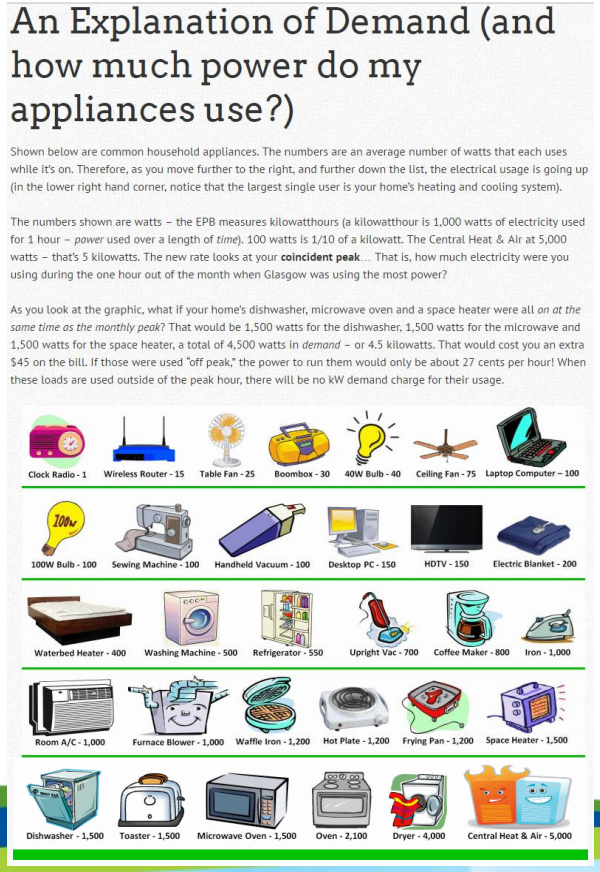
N=1744

https://www.youtube.com/user/SRPConnect

Showed an explanation of demand from Infotricity for the panelists to rate their understanding

Question: Please review the following information. Once done, answer the question at the bottom of the page.

On a scale of 1-10, where 1 means you don't understand the information above and 10 means you completely understand the information, how understandable is the concept in the information?



An Explanation of Demand (and how much power do my appliances use?)

Shown below are common household appliances. The numbers are an average number of watts that each uses while it's on. Therefore, as you move further to the right, and further down the list, the electrical usage is going up (in the lower right hand corner, notice that the largest single user is your home's heating and cooling system).

The numbers shown are watts – the EPB measures kilowatthours (a kilowatthour is 1,000 watts of electricity used for 1 hour – *power* used over a length of *time*). 100 watts is 1/10 of a kilowatt. The Central Heat & Air at 5,000 watts – that's 5 kilowatts. The new rate looks at your **coincident peak**… That is, how much electricity were you using during the one hour out of the month when Glasgow was using the most power?

As you look at the graphic, what if your home's dishwasher, microwave oven and a space heater were all *on at the same time as the monthly peak*? That would be 1,500 watts for the dishwasher, 1,500 watts for the microwave and 1,500 watts for the space heater, a total of 4,500 watts in *demand* – or 4.5 kilowatts. That would cost you an extra $45 on the bill. If those were used "off peak," the power to run them would only be about 27 cents per hour! When these loads are used outside of the peak hour, there will be no kW demand charge for their usage.

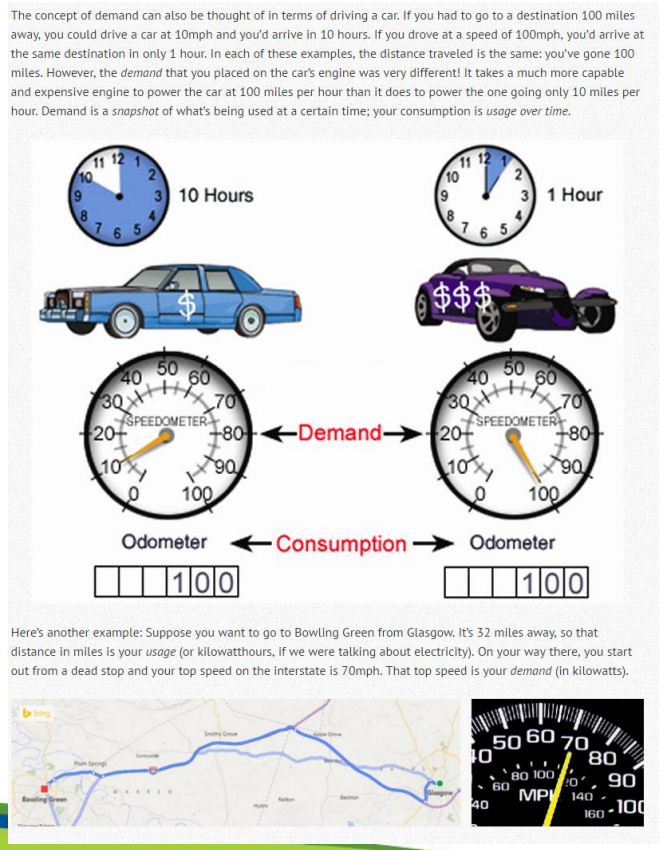
Clock Radio - 1 | Wireless Router - 15 | Table Fan - 25 | Boombox - 30 | 40W Bulb - 40 | Ceiling Fan - 75 | Laptop Computer – 100

100W Bulb - 100 | Sewing Machine - 100 | Handheld Vacuum - 100 | Desktop PC - 150 | HDTV - 150 | Electric Blanket - 200

Waterbed Heater - 400 | Washing Machine - 500 | Refrigerator - 550 | Upright Vac - 700 | Coffee Maker - 800 | Iron - 1,000

Room A/C - 1,000 | Furnace Blower - 1,000 | Waffle Iron - 1,200 | Hot Plate - 1,200 | Frying Pan - 1,200 | Space Heater - 1,500

Dishwasher - 1,500 | Toaster - 1,500 | Microwave Oven - 1,500 | Oven - 2,100 | Dryer - 4,000 | Central Heat & Air - 5,000



The concept of demand can also be thought of in terms of driving a car. If you had to go to a destination 100 miles away, you could drive a car at 10mph and you'd arrive in 10 hours. If you drove at a speed of 100mph, you'd arrive at the same destination in only 1 hour. In each of these examples, the distance traveled is the same: you've gone 100 miles. However, the *demand* that you placed on the car's engine was very different! It takes a much more capable and expensive engine to power the car at 100 miles per hour than it does to power the one going only 10 miles per hour. Demand is a *snapshot* of what's being used at a certain time; your consumption is *usage over time*.

10 Hours | 1 Hour

$ | $$$

SPEEDOMETER ← Demand → SPEEDOMETER

Odometer ← Consumption → Odometer

1 0 0 | 1 0 0

Here's another example: Suppose you want to go to Bowling Green from Glasgow. It's 32 miles away, so that distance in miles is your *usage* (or kilowatthours, if we were talking about electricity). On your way there, you start out from a dead stop and your top speed on the interstate is 70mph. That top speed is your *demand* (in kilowatts).

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http://www.infotricity.org/index.php/an-explanation-of-demand/

Infotricity ranked lower on understandability out of the four utilities information

Question: Please review the following information. Once done, answer the question at the bottom of the page.

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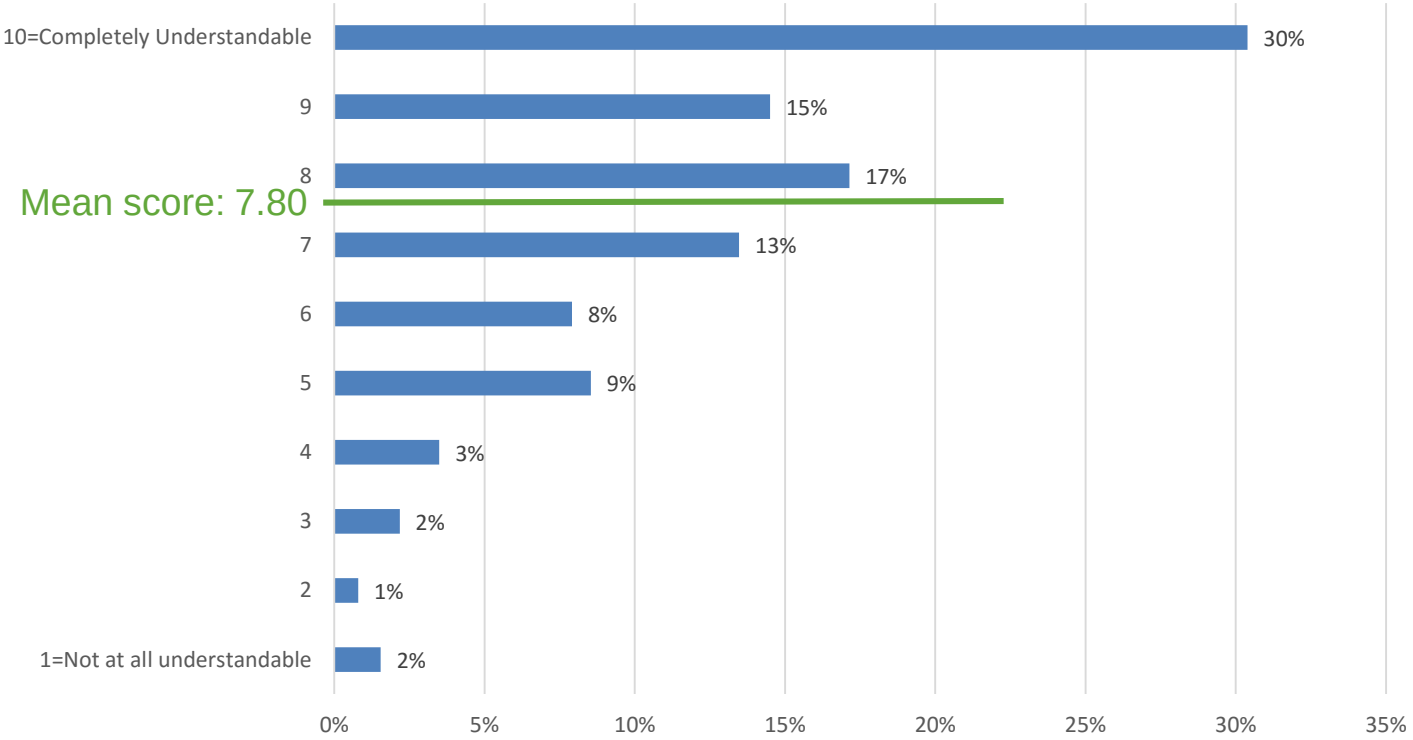

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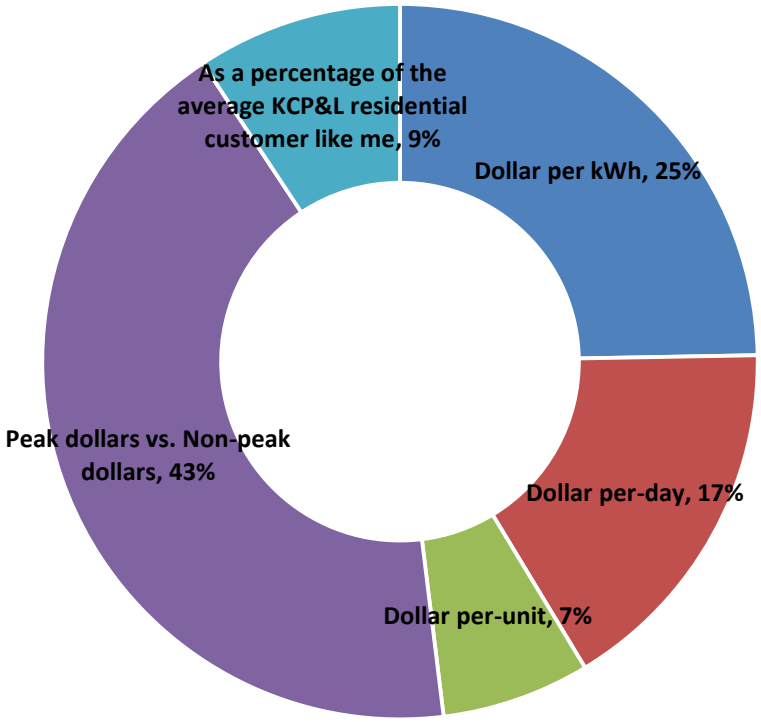
Panelists would like to see peak dollars versus non-peak dollars to understand their energy usage

Question: What would be the most understandable way to measure how much energy you're using?

Those 45-64 are twice as likely to be more interested in seeing peak dollars vs. non-peak dollars compared to Dollar per kWh



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KCP&L
energizing life

P182 Members and Communications Council Invited to:

1. Conduct KCP&L/EPRI customer online survey and share results.
2. Collaborate on **future customer online surveys** (2-3 times a year)
   - Determine whether to conduct existing or new surveys
   - Determine topic areas of interest (i.e. grid, pricing, websites, environmental issues, AMI, etc.)
3. Collaborate on ***benchmarking*** analysis of utility online customer surveys or processes.
4. Collaborate on historic online surveys, with EPRI providing a **database of results** by topic.
5. Consider **other communication channels** to collaborate and conduct research (i.e. social media, focus groups, bill inserts, etc.)

EPRI contact: Becky Wingenroth

wingenroth@epri.com

Next Steps:

1. P182 Members and interested Communications Council members will receive an email to determine priorities and interests.

2. Results to be distributed after member input collection.

3. Invitation to conference call/webex for interested parties to plan for 2017 activities.

4. Update at P182 Understanding Electric Utility Customers meetings in February.

EPRI contact: Becky Wingenroth

wingenroth@epri.com

Further Q&A

Together…Shaping the Future of Electricity

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