

# RROIR Customer Survey Key Findings

April 16, 2013

Final Draft

Prepared for:



Prepared by:

# Research Objectives

- Joint IOU (PG&E, SCE, SDG&E) survey to obtain customer input into alternative electric rate plans as part of the Residential Rates OIR
- Establish a quantitative understanding of customer preferences for new rate plan options
  - Structures: TOU, tiered, flat
  - New charges: Fixed and demand charges
  - Price variations: Different tier and period price per kWh
- Determine importance / relevance of
  - Rate plan characteristics such as understandable, stable, choice
  - Customer energy use experience, bill review behavior and attitudes toward energy conservation and peak shifting
  - Tolerance for bill change / appetite for bill savings
  - Customer education



# Methodology

HINER & Partners conducted an online survey during March / April of 2013 with ~5,300 electricity customers:

- SCE, SDG&E and PG&E sample (4,283):
  - **“Core”** - representative of IOU populations (2,132)
  - **“Unexposed”** subgroup (606) - similar to Core, but not provided educational information about rate structures during survey
  - Supplemental SCE, SDG&E and PG&E **“Subgroups”** (1,545):
    - **Additional Spanish-speaking** customers (232)
    - **Solar** customers (665)
    - Customers with **High Engagement** in utility programs (480)
    - **Alternatively Recruited Low-income** customers (168)
- Other Jurisdiction **“Subgroups”** (1,021):
  - California: **Riverside, LADWP, SMUD** (621)
  - Outside California (400):
    - **Arizona Public Service (APS) / Salt River Project (SRP)** (200)– high opt-in to TOU rates
    - **Hydro One** – All customers defaulted to TOU (200)



# Methodology

- Sample quotas were used for the Core and Unexposed groups to match population age and income from census data
  - Core and Unexposed data was weighted to match: (1) population education, and (2) utility household decision-maker gender (60% female/40% male)
  - Other subgroups were not weighted
- Sample provided by
  - Research Now: Core sample plus Unexposed and Other Jurisdiction subgroups
  - uSamp: Additional Spanish-speakers
  - IOUs: High Engagement and Solar
  - Knowledge Networks: Alternatively recruited low-income
- Survey pilot conducted with ~100 Core sample respondents
  - Lowered average survey complete time from ~40 minutes to 28 minutes (Spanish-speakers less than 30 minutes)
  - Lowered “quit” rate from 75% to 30%
  - 46% enjoyed completing the survey / 44% Neutral / 10% did not
- Completed interviews were reviewed for inconsistencies and 3% were removed
- No noticeable difference in results between online and alternative recruitment of low-income customers



*Customer Satisfaction and Knowledge About Rates*

*Interest in Taking Action to Reduce Energy Bills*

*Customer Education*

*Important Factors When Choosing a Rate Plan*

*Rate Preferences (Conjoint Analysis Results)*

*Interest in Switching*

*Willingness to Risk Bill Impacts*

*Effect of Bill Protection (Try Before You Buy)*

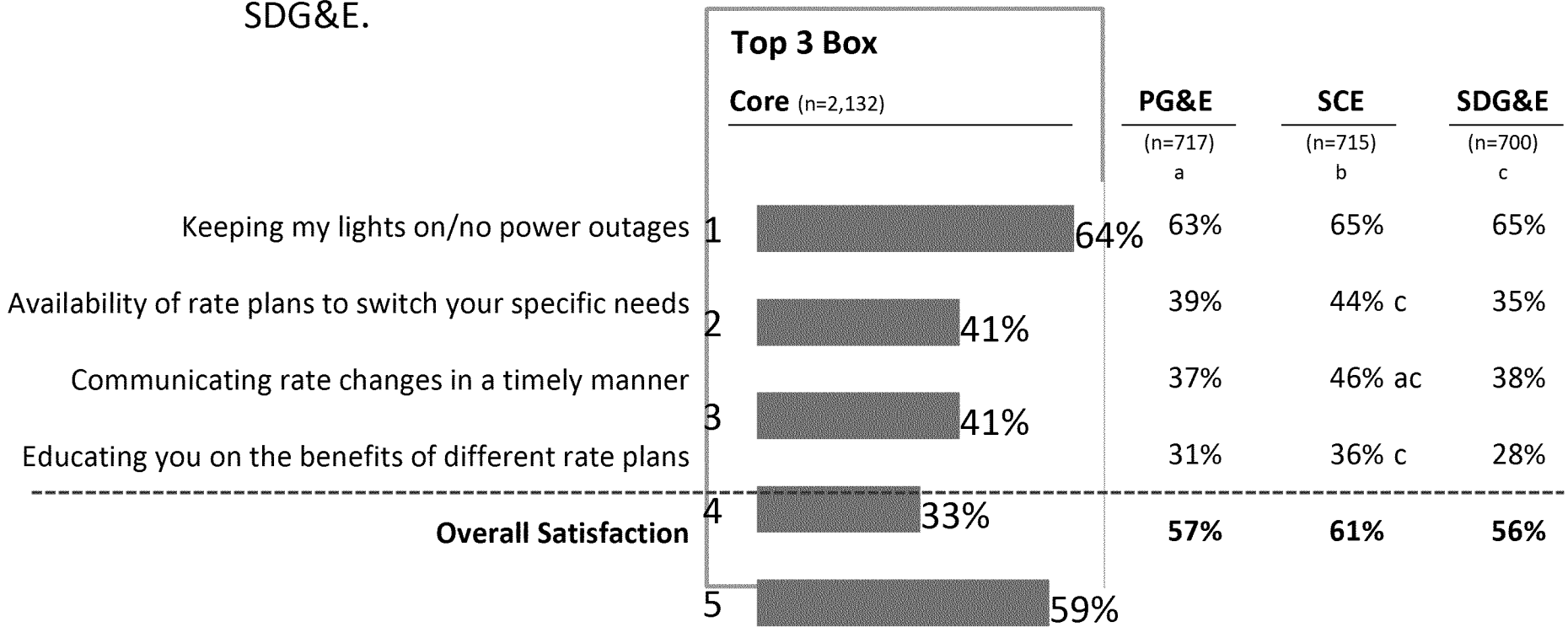
## Results



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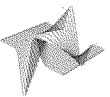
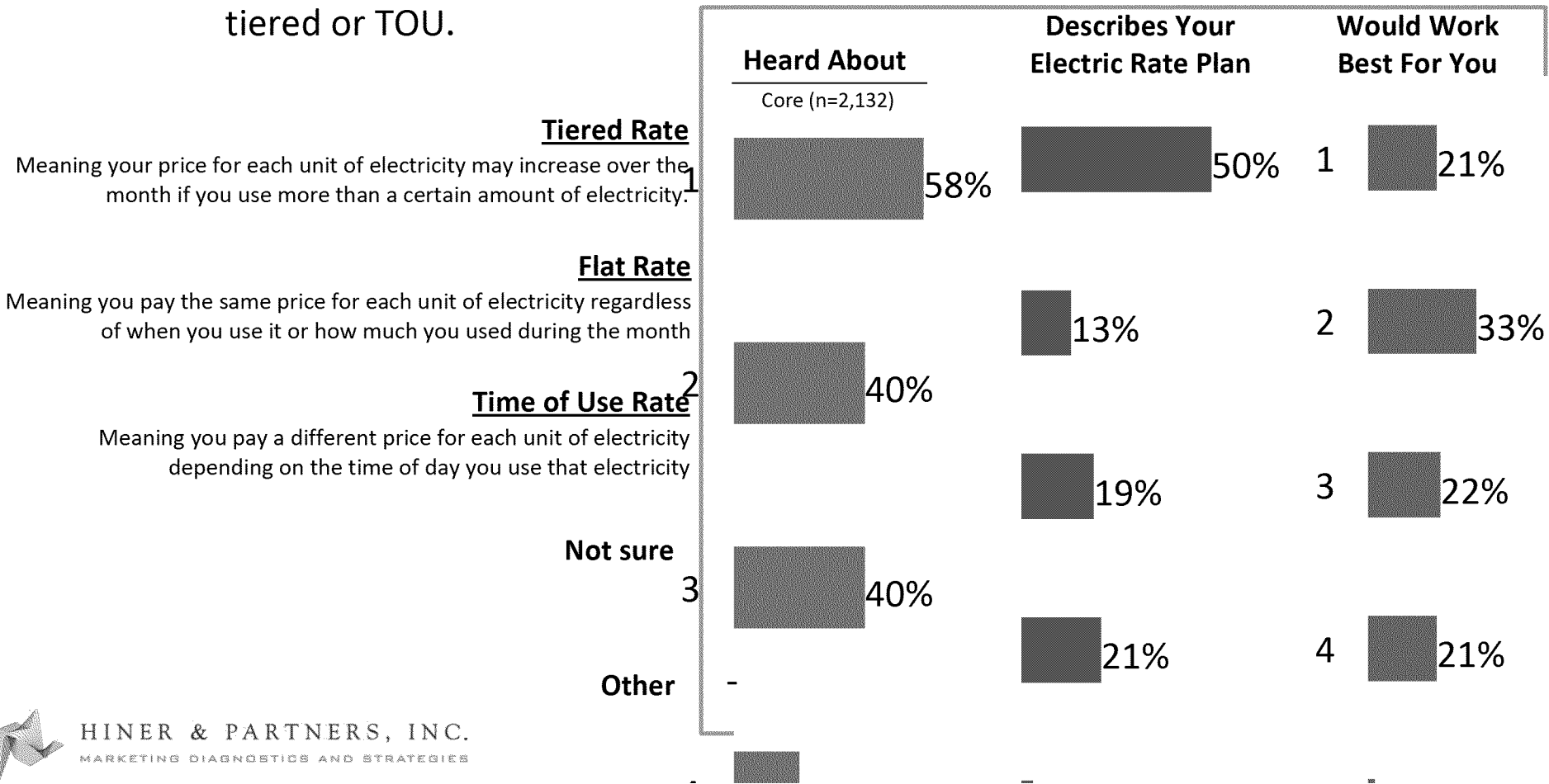
# Customer Satisfaction with Rates

- California IOU customers give their utility company high marks for “keeping the lights on” but they are less satisfied concerning rate options and education.
  - SCE received higher satisfaction scores across all these measures than PG&E or SDG&E.



# Customer Knowledge About Rates

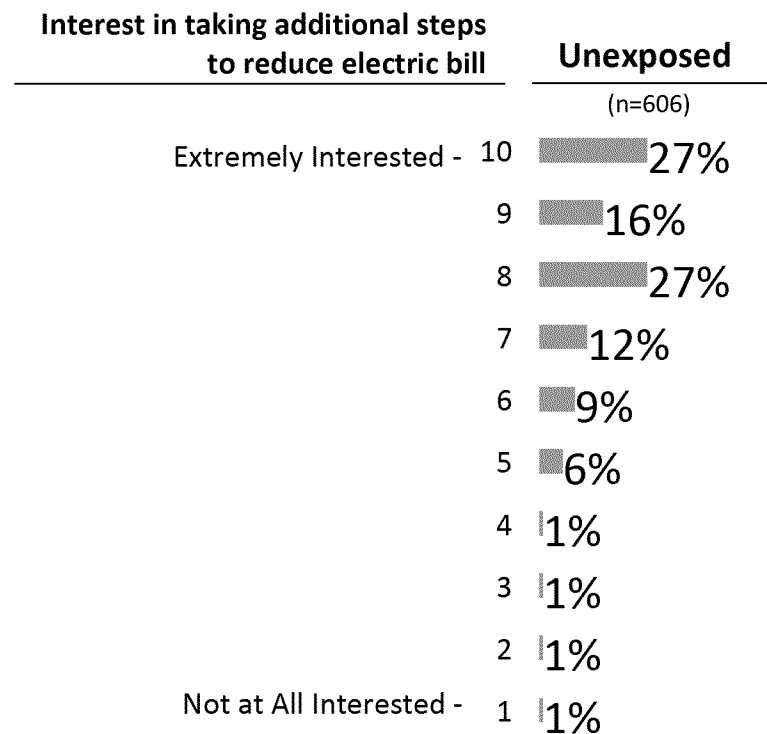
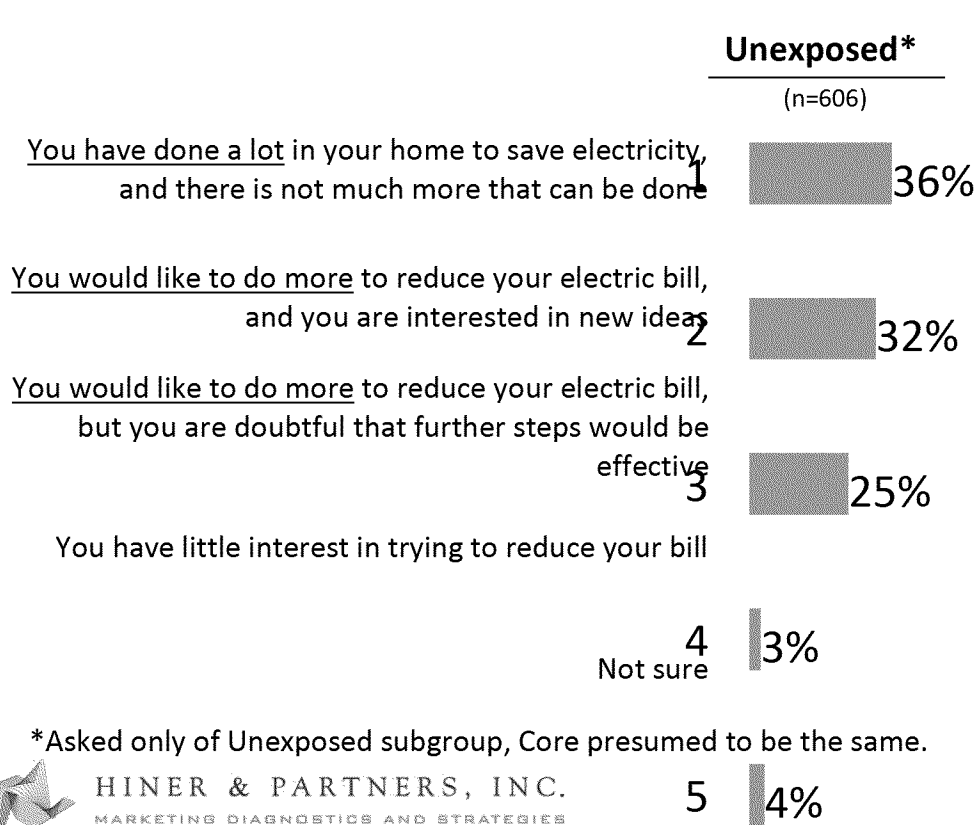
- Customer awareness of existing rates is modest at best, especially about the tiered rates most currently have.
  - Initial beliefs (prior to exposure to rate education) about which rate would work best are diffuse, though more customers lean toward a flat rate than tiered or TOU.



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# Interest in Taking Action to Reduce

- Before being provided rate education, nearly all customers had some degree of interest in taking action to lower their electric bill, and a majority have a strong interest.
  - This could suggest that most customers would seek a rate that could help them reduce their electric bill, even if the rate requires them to take action.



\*Asked only of Unexposed subgroup, Core presumed to be the same.



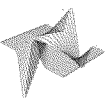
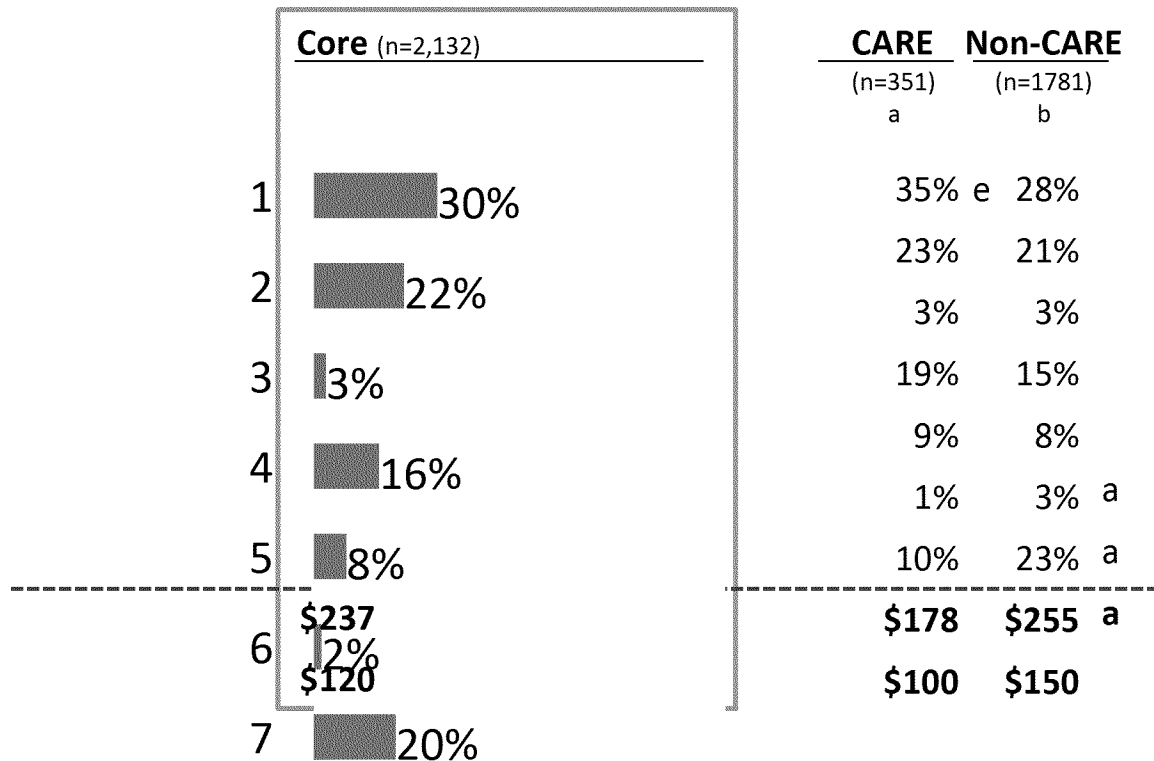
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# Savings Needed to Prompt Switching

- On an annualized basis, the amount of savings customers say they would need to prompt them to switch to another rate ranges widely
  - 70% of the Core sample say they would need more than \$100 (65% of CARE vs. 72% Non-CARE respondents)
  - The median is \$120/year or \$10/month. Compared to the median self-reported summer energy bill of \$90, this represents about 11%.



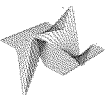
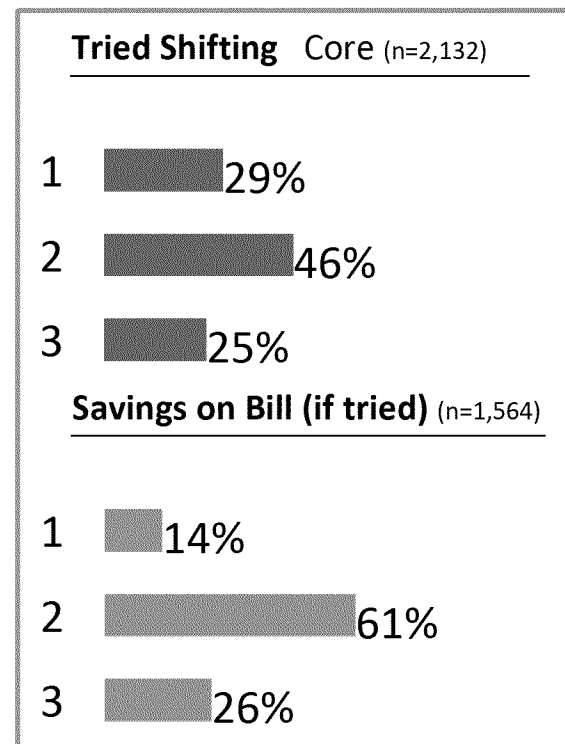
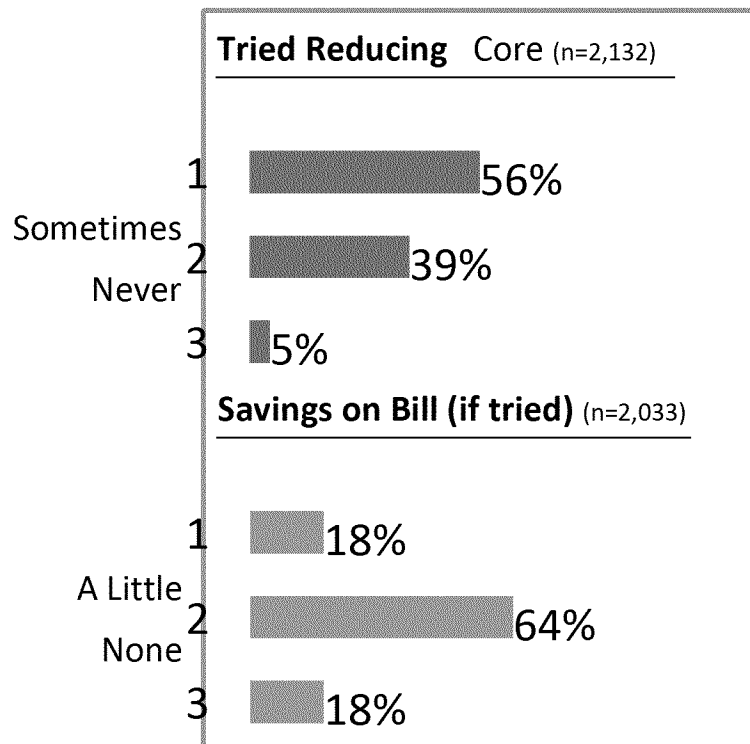
# Rate Plan Option Education

- In the survey, all but the Unexposed respondents were provided information about different rate structures and components
  - Electricity Usage
  - Rate Structures
    - Flat rate plans
    - Tiered rate plans
    - Time-of-Use rate plans
  - Rate Structure Components
    - Price per kilowatt-hour (kWh)
    - Monthly service fees
    - Demand charges
  
- Additionally, respondents answered questions about previous and future actions that could be taken in their homes to reduce and shift electricity use.
  
- The Unexposed group went immediately into rating importance of specific factors when choosing rates, and then the conjoint decision tasks.



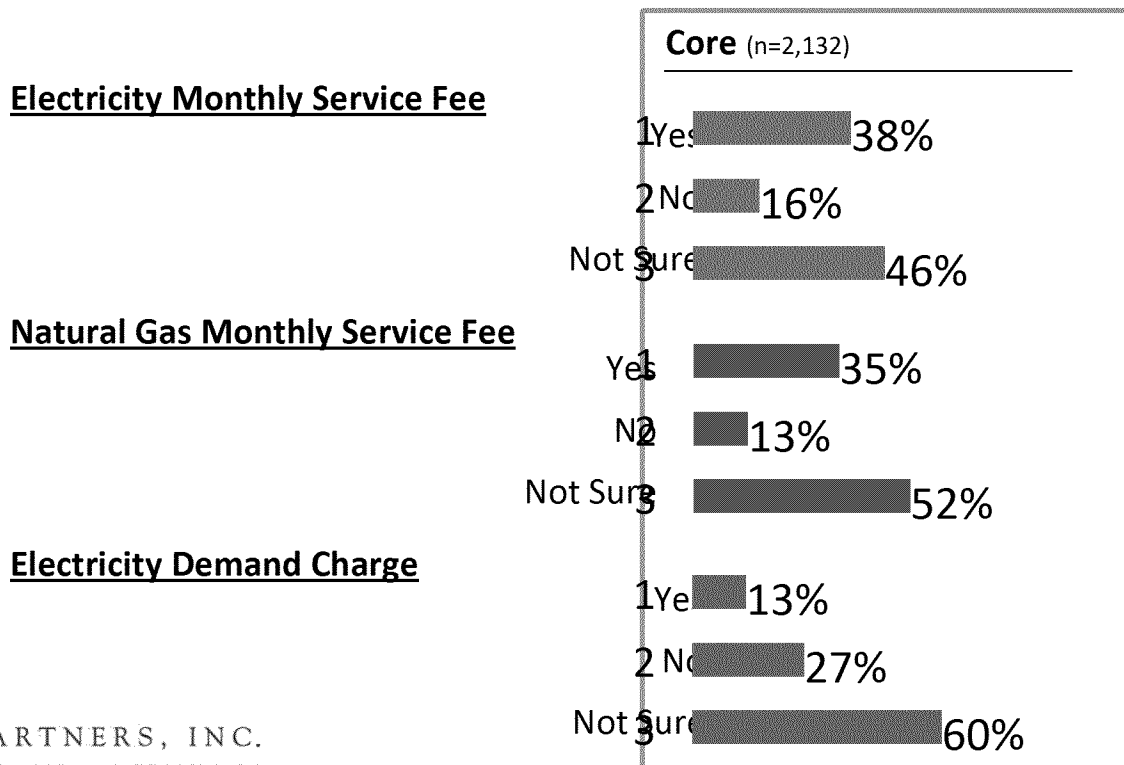
# Education: Energy Use Behavior

- 95% have tried to save money on their bill by reducing their energy use
- 75% have tried to save money by shifting their electricity use
  - Despite most customers knowing they are not on a TOU rate, many believe they have saved money by shifting.



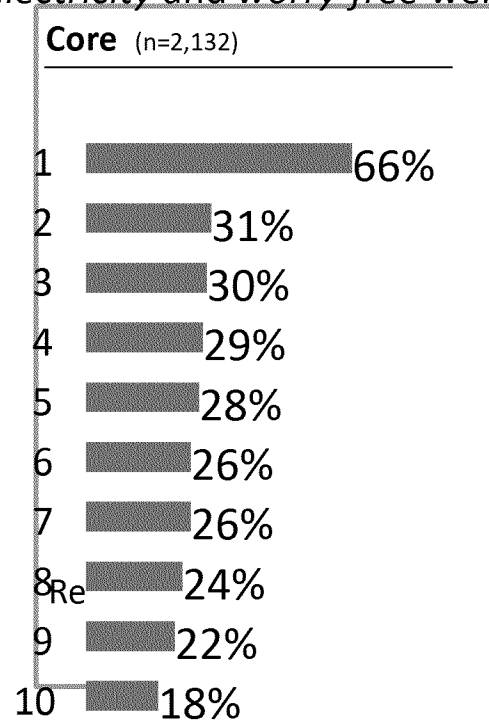
# Education: Monthly Service Fee & Demand Charges

- Customers were asked if they currently have a monthly service fee or demand charge.
  - About one in three believed that they currently have a monthly service fee for electricity and natural gas, while fewer (13%) believed they have a demand charge.
  - Still, the top answer for current service and demand charges was “not sure.”



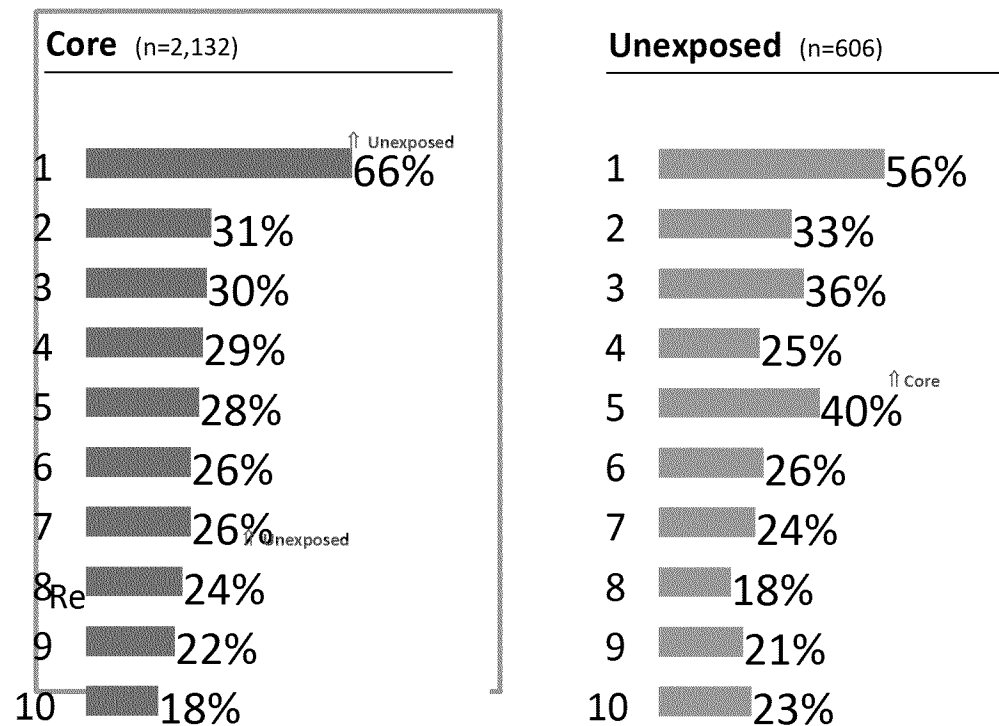
# Important Factors When Choosing Rates

- Unsurprisingly, *saving money* is the number one driver of rate choice which is consistent with customers' willingness to take action to save money on their bill.
  - To a lesser extent, customers want *stable, simple, works for me, and predictable*.
  - Many factors were fairly equal in importance
  - *Reflects cost of electricity and worry-free* were the least important



# Important Factors When Choosing Rates

- “Unexposed” customers had slightly different preferences
  - Valued *predictable* more than the Core sample, and *saving money* and *understandable* a bit less.
  - Could imply that education increases appreciation for understanding rates and boosts expectation for taking action to saving money.



# Rate Preferences: Choice Exercise

## Choice Set Example.

- Respondents given thirteen choice sets each with three different rate plan options (~82,000 choices made by Core sample)

**Q 14 - Please carefully look at all three rate plans and pick the rate plan that you prefer the most.**

Rate Type	Flat Rate	Time of Use - 3 Periods	3 Tiered
	Price.....\$0.24	Off Peak Price .....\$0.09 Part Peak Price.....\$0.22 On Peak Price .....\$0.46	T1 Price.....\$0.20 T2 Price.....\$0.24 T3 Price.....\$0.29
Monthly Service Fee	\$10.00	\$0.00	\$0.00
Demand Charge	\$5.00	\$2.00	None



# Rate Plan Attributes and Levels

Attributes	Levels				
Type	2 TIER	3 TIER	TOU 3	TOU 2	Flat
Monthly Service Fee	\$0.00	\$5.00	\$10.00	\$15.00	
Demand Charge	\$0.00	\$2.00	\$5.00		
Price per kWh	All Low	Wide Spread	Narrow Spread	All High	

Detail: Price per kWh	All Low	Wide Spread	Narrow Spread	All High
<b>2 TIER</b>	\$0.12	\$0.16	\$0.15	\$0.18
	\$0.14	\$0.20	\$0.17	\$0.19
<b>3 TIER</b>	\$0.10	\$0.11	\$0.18	\$0.20
	\$0.12	\$0.20	\$0.22	\$0.24
	\$0.16	\$0.29	\$0.26	\$0.29
<b>TOU 3</b>	\$0.12	\$0.09	\$0.16	\$0.18
	\$0.13	\$0.22	\$0.20	\$0.24
	\$0.16	\$0.46	\$0.24	\$0.26
<b>TOU2</b>	\$0.12	\$0.08	\$0.18	\$0.22
	\$0.14	\$0.30	\$0.20	\$0.26
<b>Flat Rate</b>	\$0.12	\$0.16	\$0.20	\$0.24





# Rate Plan Preferences: Conjoint Analysis

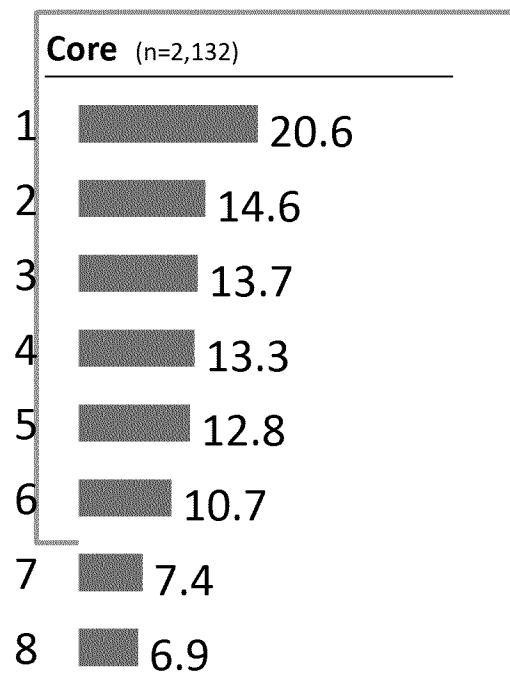
Using Conjoint Analysis, the Choice Set responses were analyzed resulting in:

- **Ratings of Attribute importance (e.g., Monthly Service Fee)**
  - Ratings represent the influence on respondent choice that an Attribute has relative to other Attributes and sum to 100%
  - Ratings can be compared directly, for example, an Attribute with an importance rating of 20% has twice the positive or negative impact on choices as an Attribute with a rating of 10%
- **Scoring of preference for each Level within an Attribute (e.g., \$0, \$5, \$10 Monthly Service Fee)**
  - Utility values (or “part-worths”) represent overall preference for each Level within an Attribute relative to other Levels and are distributed on a scale centered on 0
  - Utility values that are further apart indicate stronger difference in preference between Levels
  - Utility values clustered near 0 indicate weaker difference in preference between Levels
- **Full Choice Preference Simulator**
  - Enables comparison of fully specified rate options to determine customer share of preference for each rate option
  - Rate options are specified using the pre-defined Attributes and Levels allowing analysis of change in customer preference due to changes in a particular Attribute and/or Level



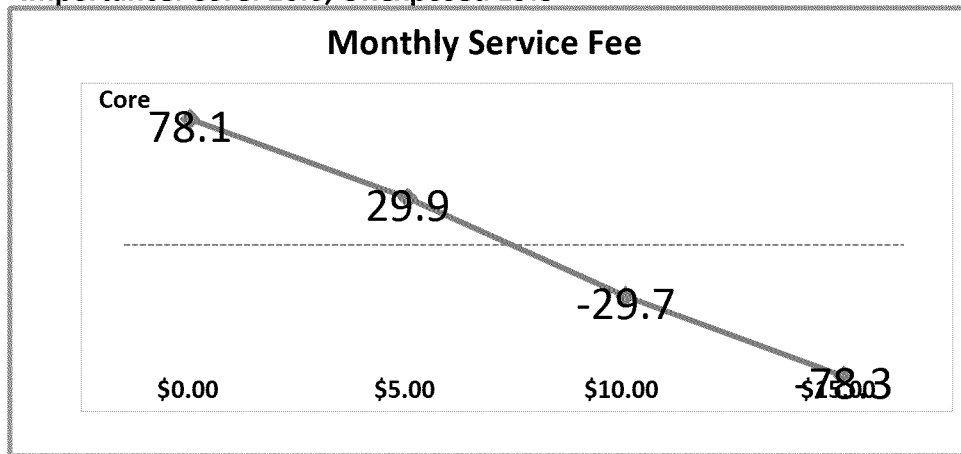
# Rate Preferences: Attribute Importance

- Attribute importance ratings show the “monthly service fee” had more influence on rate choices than any other attribute – whether or not there was a monthly service fee had the most impact on respondent rate plan choice.
- Following the monthly service fee, customers’ choices were influenced heavily by the price per kWh associated with the different rate structures rather than by the rate structure itself.

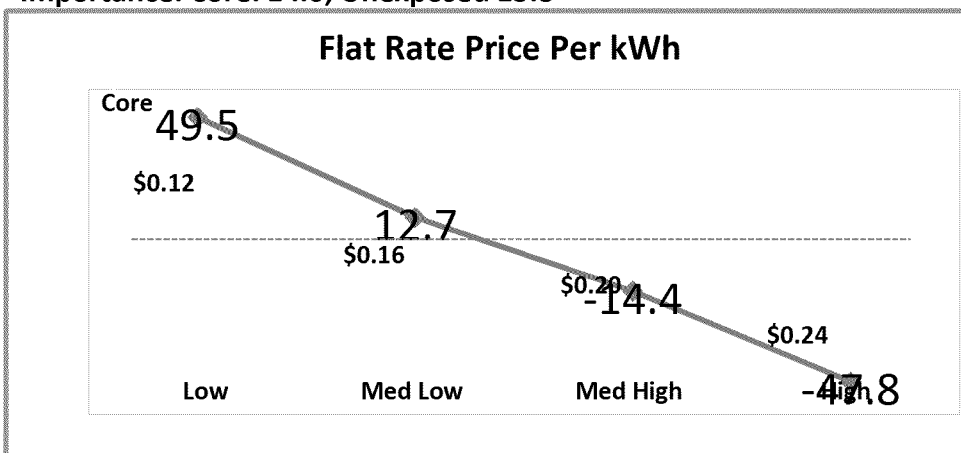


# Rate Preferences: Utility Values

Importance: Core: 20.6, Unexposed 19.8



Importance: Core: 14.6, Unexposed 13.8



## Monthly Service Fee

- Most important attribute in all rate plan selection
- Utility values are linear
  - Indicates negative impact on preference, but similar whether going from \$0.00 TO \$5.00, or from \$5.00 to \$10.00.

## Flat Rate Price Per kWh

- Very important attribute in Flat Rate rate plan selection
- Gaps between \$0.12 and \$0.16, and \$0.20 and \$0.24, are larger than the gap between \$0.16 and \$0.20
  - Indicates relative indifference to rate changes in the midrange (\$0.16 to \$0.20) compared to rate changes at higher and lower prices per kWh



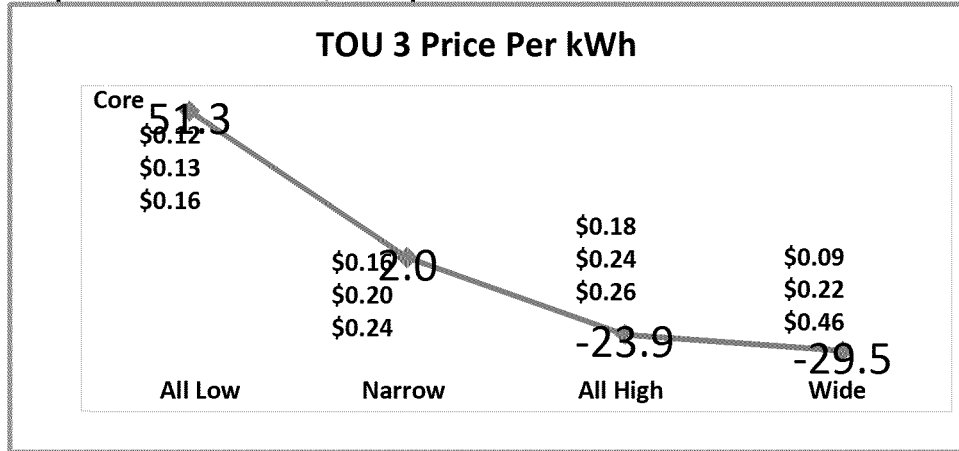
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# Rate Preferences: Utility Values

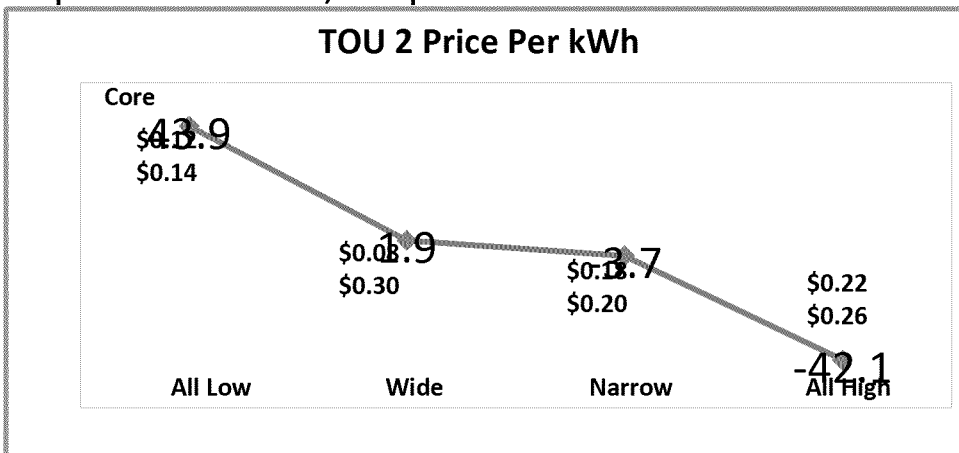
Importance: Core: 13.7, Unexposed 14.6



## TOU 3 Price Per kWh

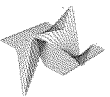
- Very important attribute in TOU 3 rate plan selection
  - Relatively strong preference for “all low” price per kWh level declining for other price per kWh levels
- Lowest preference for “wide range” which brings both highest potential bill savings and increase
  - Indicates high level of risk aversion for TOU 3 rate plan option.

Importance: Core: 13.3, Unexposed 14.1



## TOU 2 Price Per kWh

- Very important attribute in TOU 2 rate plan selection
- Nearly equal values for both wide and narrow price per kWh levels
  - Indicates that customers largely indifferent between the two
- Wide price per kWh level for TOU 2 may be preferred over narrow for TOU 3
  - Indicates that a simpler step TOU rate could better overcome risk aversion



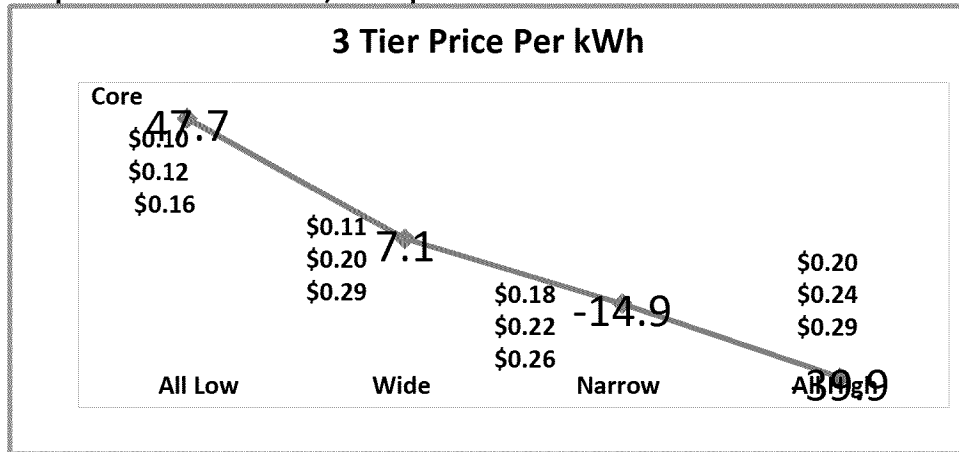
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# Rate Preferences: Utility Values

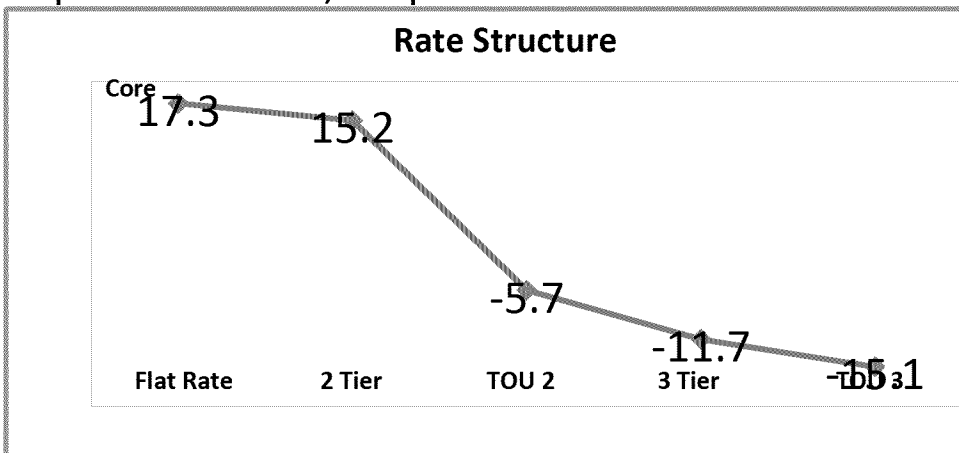
Importance: Core: 12.8, Unexposed 13.4



## 3 Tier Price Per kWh

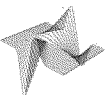
- Very important attribute in 3 Tier rate plan selection
- Higher utility given to wide price per kWh level than to narrow (similar to TOU 2) but with a larger gap
  - Indicates greater preference for steeper rather than narrow tier price per kWh differentials in a 3 Tier rate

Importance: Core: 10.7, Unexposed 10.9



## Rate Structure

- Important attribute rate plan selection, but not as important as price per kWh structure
- Highest and nearly equal utility values given to Flat and 2 Tier rate structures with much lower utility given to TOU 2, 3 Tier, TOU 3.
  - Indicates preference for Flat and 2 Tier rate plans.
  - Indicates preference of TOU 2 rate to 3 Tier rate



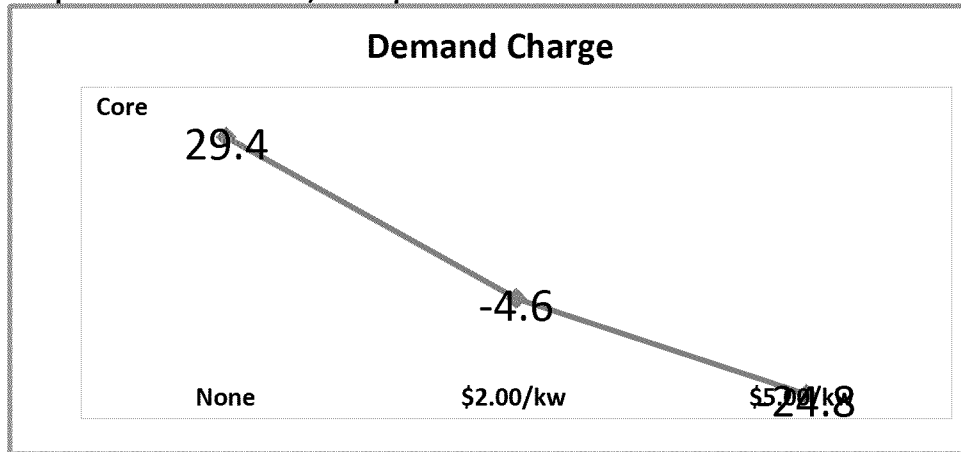
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# Rate Preferences: Utility Values

Importance: Core: 7.4, Unexposed 6.4



Importance: Core: 6.9, Unexposed 7.1



## Demand Charges

- Less important attribute in rate plan selection
- Possible that concept was confusing and respondents did not understand that it varies based on kW demand levels, which made demand charges appear low relative to monthly service fee.

## 2 Tier Price Per kWh

- Less important attribute in 2 Tier rate plan selection
  - Indicates kWh price differential between tiers less of an influence than the 2 Tier rate itself
- Difference in price per kWh between the low and high levels relatively narrow compared to the 3 Tier and TOU rates
  - Indicates potentially strong preference for a 2 Tier rate with relatively high tier prices



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# Rate Preferences: Simulation Example

- The example below demonstrates the effect of varying rate attributes on customer “Preference Share.”
  - 3 Tiers with no added fees was preferred by 60% over other options with added fees
  - Flat option is most preferred, followed by TOU 3, when added fees are dropped

## Hold Out\* Task (all respondents reviewed)

Rate Structure	Price Per kWh	Monthly Service Fee	Demand Charge	Preference Share
Flat	\$0.24	\$10.00	\$5.00	12%
TOU 3	\$0.09, \$0.22, \$0.46	\$0.00	\$2.00	29%
3 TIER	\$0.20, \$0.24, \$0.29	\$0.00	\$0.00	60%

## Simulator: Hold Out Task With No Monthly Service Fee or Demand Charge

Rate Structure	Price Per kWh	Monthly Service Fee	Demand Charge	Preference Share
Flat	\$0.24	\$0.00	\$0.00	43%
TOU 3	\$0.09, \$0.22, \$0.46	\$0.00	\$0.00	36%
3 TIER	\$0.20, \$0.24, \$0.29	\$0.00	\$0.00	21%



# Simulations: Effect of Monthly Service Fee

- Uneven monthly service fees affect customer preference share.

## Simulation C2

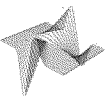
Rate Structure	Price Per kWh	Monthly Service Fee	Demand Charge	Preference Share
2 Tier	\$0.15, \$0.17	\$5.00	\$0.00	59%
TOU 3	\$0.09, \$0.22, \$0.46	\$0.00	\$0.00	41%

## Simulation C1

Rate Structure	Price Per kWh	Monthly Service Fee	Demand Charge	Preference Share
2 Tier	\$0.15, \$0.17	\$5.00	\$0.00	80%
TOU 3	\$0.09, \$0.22, \$0.46	\$5.00	\$0.00	20%

## Simulation C5

Rate Structure	Price Per kWh	Monthly Service Fee	Demand Charge	Preference Share
2 Tier	\$0.15, \$0.17	\$0.00	\$0.00	89%
TOU 3	\$0.09, \$0.22, \$0.46	\$5.00	\$0.00	11%

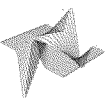




# Simulations: Effect of Monthly Service Fee

- A larger monthly service fee on the 2-Tier rate could drive more customers to a TOU rate with no monthly service fee.

Simulation C3				
Rate Structure	Price Per kWh	Monthly Service Fee	Demand Charge	Preference Share
2 Tier	\$0.15, \$0.17	\$10.00	\$0.00	41%
TOU 3	\$0.09, \$0.22, \$0.46	\$0.00	\$0.00	59%



# Simulations: Effect of Demand Charge

- Even a small demand charge affects preferences.

## Simulation C1

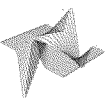
Rate Structure	Price Per kWh	Monthly Service Fee	Demand Charge	Preference Share
2 Tier	\$0.15, \$0.17	\$5.00	\$0.00	80%
TOU 3	\$0.09, \$0.22, \$0.46	\$5.00	\$0.00	20%

## Simulation C7

Rate Structure	Price Per kWh	Monthly Service Fee	Demand Charge	Preference Share
2 Tier	\$0.15, \$0.17	\$5.00	\$2.00	69%
TOU 3	\$0.09, \$0.22, \$0.46	\$5.00	\$0.00	31%

## Simulation C8

Rate Structure	Price Per kWh	Monthly Service Fee	Demand Charge	Preference Share
2 Tier	\$0.15, \$0.17	\$5.00	\$0.00	88%
TOU 3	\$0.09, \$0.22, \$0.46	\$5.00	\$2.00	12%



# Simulations: Change in Tiered Rate Plan

- Price per kWh is more impactful than rate structure.

## Simulation A1

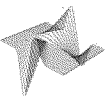
Rate Structure	Price Per kWh	Monthly Service Fee	Demand Charge	Preference Share
3 Tier	\$0.11, \$0.20, \$0.29	\$5.00	\$0.00	79%
TOU 3	\$0.09, \$0.22, \$0.46	\$5.00	\$0.00	21%

## Simulation C1

Rate Structure	Price Per kWh	Monthly Service Fee	Demand Charge	Preference Share
2 Tier	\$0.15, \$0.17	\$5.00	\$0.00	80%
TOU 3	\$0.09, \$0.22, \$0.46	\$5.00	\$0.00	20%

## Simulation C9

Rate Structure	Price Per kWh	Monthly Service Fee	Demand Charge	Preference Share
2 Tier	\$0.18, \$0.19	\$5.00	\$0.00	74%
TOU 3	\$0.09, \$0.22, \$0.46	\$5.00	\$0.00	26%



# Simulations: Low vs. High price/kWh Levels

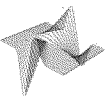
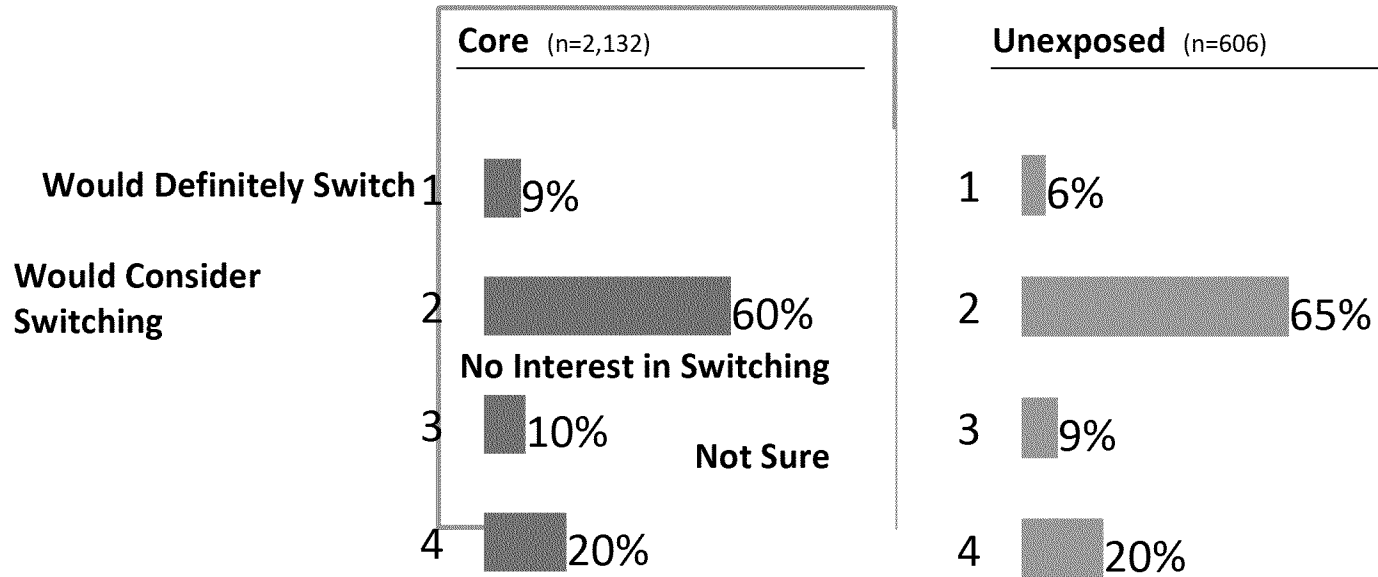
- Preferences for a monthly service fee with low price per kWh levels varies by rate structure.

Simulation #	Rate Structure	Price Per kWh (\$)	Monthly Service Fee	Demand Charge	Preference Share
D1-5	2 Tier	.12, .14	\$5.00	\$0.00	46%
D1-5	2 Tier	.18, .19	\$0.00	\$0.00	54%
D2-5	3 Tier	.10, .12, .16	\$5.00	\$0.00	73%
D2-5	3 Tier	.20, .24, .29	\$0.00	\$0.00	27%
D3-5	TOU 2	.12, .14	\$5.00	\$0.00	72%
D3-5	TOU 2	.22, .26	\$0.00	\$0.00	28%
D4-5	TOU 3	.12, .13, .16	\$5.00	\$0.00	66%
D4-5	TOU 3	.18, .24, .26	\$0.00	\$0.00	34%
D4-10	TOU 3	.12, .13, .16	\$10.00	\$0.00	44%
D4-10	TOU 3	.18, .24, .26	\$0.00	\$0.00	56%



# Interest in Switching

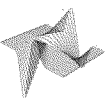
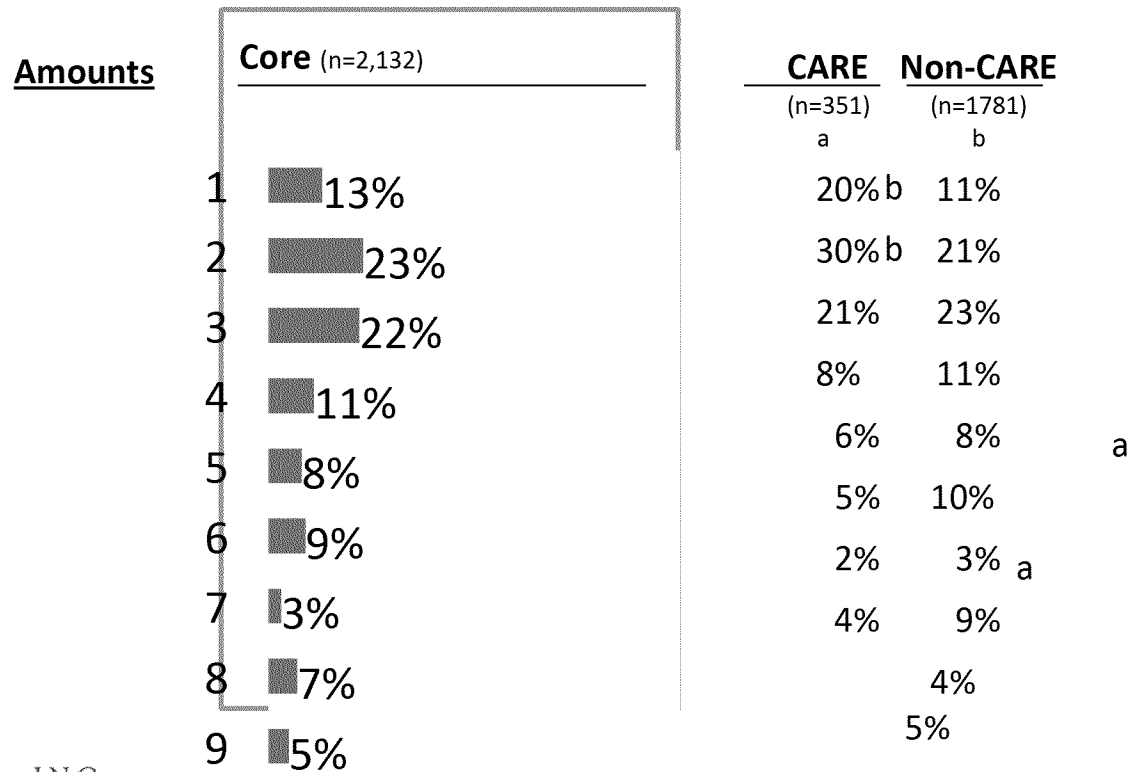
- After choosing a preferred rate plan option thirteen times, respondents were asked how likely they would be to actually switch from their current rate plan.
  - Only 10% of the Core had no interest in switching from their current rate, indicating 90% were open to considering a new rate.
  - 9% of the Core would definitely switch versus 6% of the Unexposed, suggesting that education can strengthen customer intent to switch to a new rate.



# Tolerance for Bill Increase

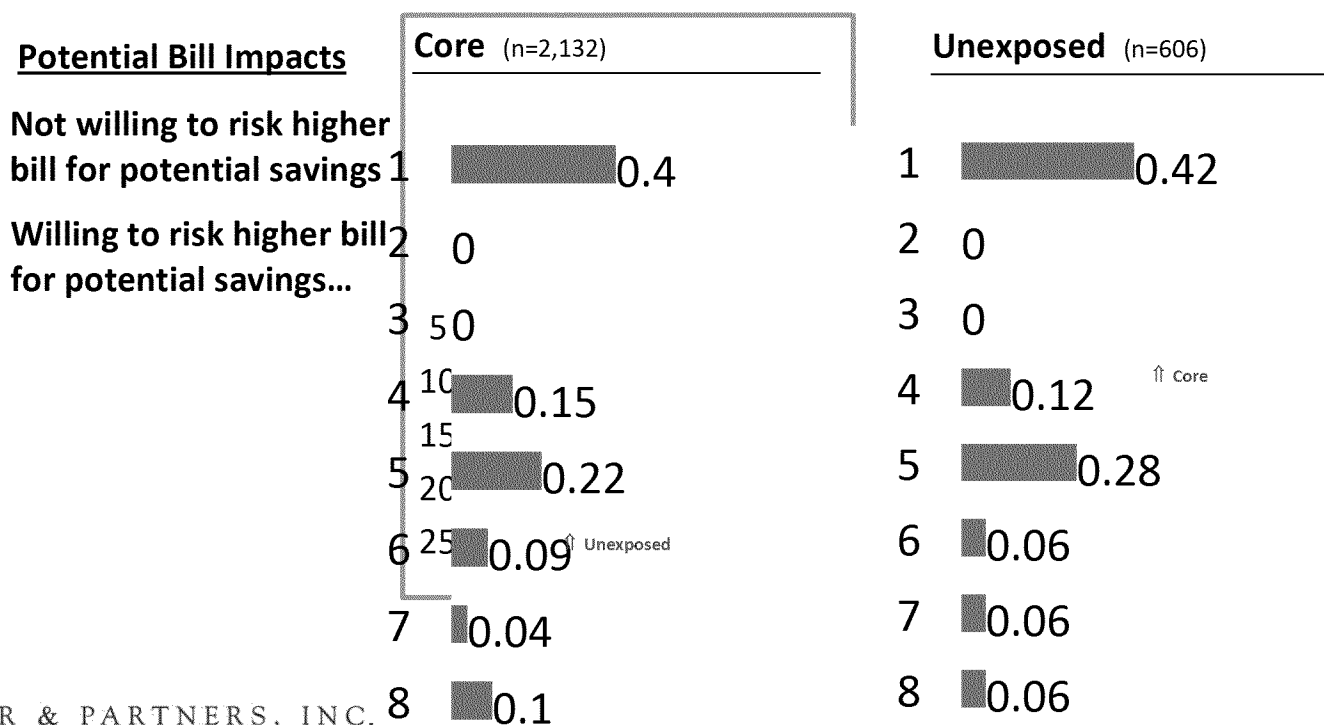
About one-third (36%) of the Core a monthly bill increase of less than \$20 gets their attention. The median is in the \$20-\$29 range, which compared to the median summer electric bill of \$90 is in excess of 20%.

- CARE customers react to lower amounts but their median summer bill (\$60) is much lower as well, so they also respond to changes in excess of 20%.



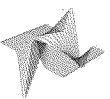
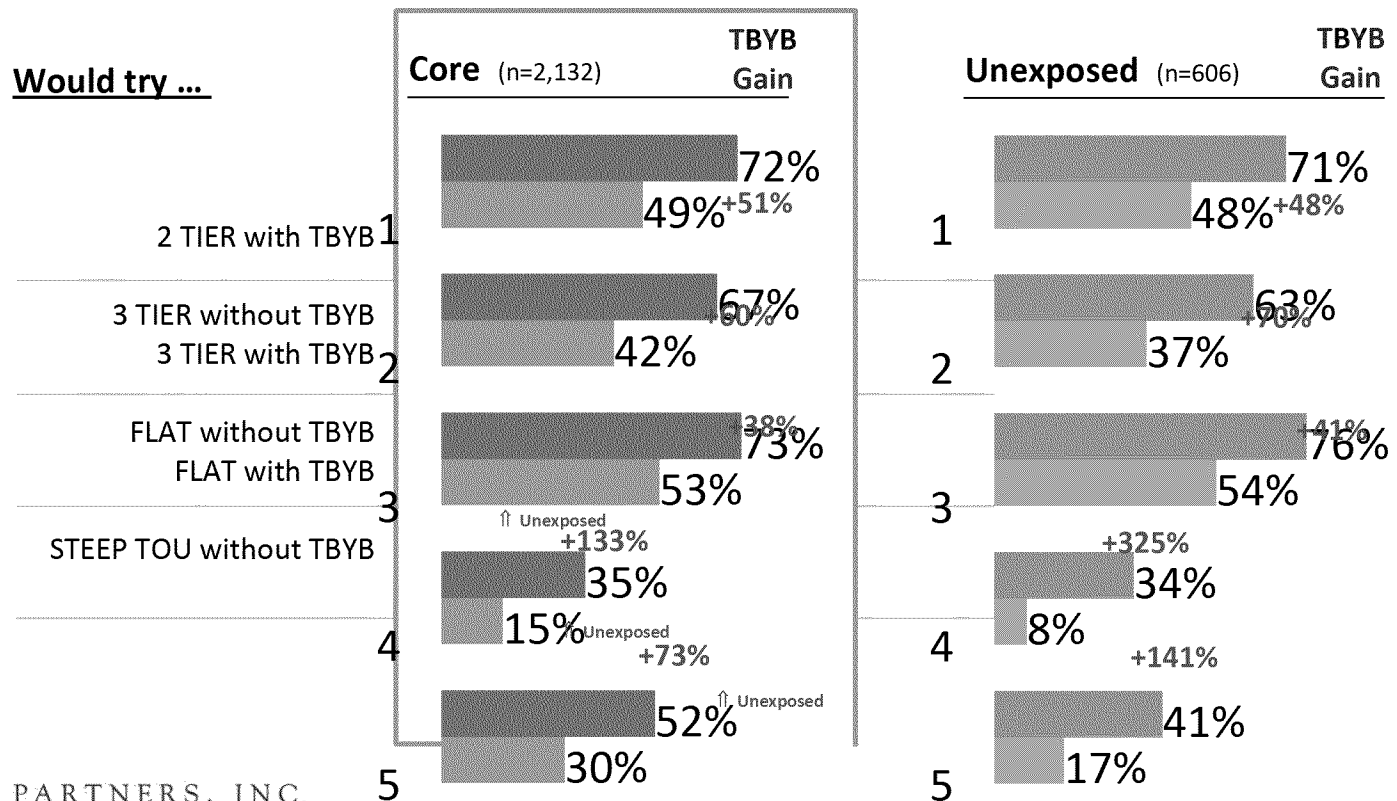
# Willingness to Risk Bill Impacts

- Customers are split concerning their willingness to assume more bill risk
  - The majority (40%) are clearly risk averse
  - About one in four (23%) were willing to risk +/- 15% or more.
  - Fewer (18%) of the Unexposed were willing to risk +/- 15% or more, further indication of the impact of education on willingness to try a new rate.



# Effect of Bill Protection

- Bill protection (e.g., Try-Before-You-Buy) could help overcome risk aversion
  - TBYB was especially effective in increasing willingness to try TOU rates
  - TBYB was especially effective in encouraging Unexposed to try TOU rates

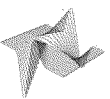


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# Jurisdictions Outside CA

	CA IOU Core	SRP / APS	Hydro One
<b>Progress Transitioning Customers</b>			
Migration Approach	None	Opt-in over time	Completing Default of all Res Customers
On TOU Rate	<5%	30-40%	~100%
<b>Attitude and Acceptance of TOU Rates</b>			
Aware of TOU rates	40%	85%	90%
Believe they are on a TOU rate	19%	64%	84%
Think TOU is the best rate	22%	55%	50%
Believe they saved money by shifting	74%	75%	76%
<b>Satisfaction (Top 3 Box)</b>			
Availability of Meaningful Rate Plan Options	41%	63%	23%
Timely Rate Change Communications	41%	51%	28%
Rate Plan Education	33%	48%	19%
Keeping the Lights On	64%	80%	41%
Highly Satisfied with Utility	59%	76%	37%



# Rate Plan Option Education

- There were some slight differences in rate plan characteristic preferences for the Unexposed respondents that were not provided information on rate plan options versus the Core group:
  - “Saving money” and “Understandable” were somewhat less important
  - “Predictable” was somewhat more important
- The Core group was more certain about switching to a new rate than the Unexposed group, implying rate education can reduce customer inertia:
  - 9% of the Core group would definitely switch compared to only 6% of the Unexposed group
- The Unexposed respondents were similar in risk aversion to potential bill increases but were less likely to be willing to take a relatively large risk than the Core group:
  - Not willing to risk a higher bill for a lower bill
    - Core: 40%
    - Unexposed: 42%
  - Willing to risk +-25%
    - Core: 10%
    - Unexposed: 6%
- “Try Before You Buy” had a much larger impact on Unexposed respondents willingness to try a new TOU rate plan, especially a steep TOU rate plan
  - Core: increased 133% from 15% to 35%
  - Unexposed: increased 325% from 8% to 34%



# CARE / FERA

- Although CARE customers are somewhat more risk averse than non-CARE customers, they are more likely to take action to save or shift energy, and the majority (63%) are willing to consider new rate options
  - CARE customers are likely to take action
    - 80% believe they have been successful in reducing their bill by shifting
    - 78% think they can shift more in the future
  - CARE customers are more risk averse than non-CARE customers, but 63% still willing to consider new rate options
    - More likely to be completely risk averse (49% versus 39% non-CARE)
    - Somewhat less likely to consider new rate options (63% versus 72% non-CARE)
- Consistent with their rate preferences, CARE customers are more likely to say they would prefer a tiered rate than the non-CARE Core, and less likely to prefer a TOU rate
- CARE customers tend to be more satisfied with their IOU regarding rate options and rate communications than the rest of the Core sample population



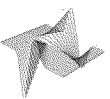
# Spanish Speakers

- Spanish-speakers are the most favorable sub-group toward their utility, though Hispanics do tend to give higher ratings in surveys in general.
- Not unexpectedly, they are less knowledgeable about current rates, especially concerning Time-Of-Use. This could be why they tended not to chose TOU when asked (near the beginning of the survey) which rate would work best.
- They reported trying to save money on their bill by reducing and shifting in proportions similar to the Core, but are more likely to say they have been successful in reducing their bill by doing so.
- The importance they placed on factors for choosing a rate plan differed from the Core as well – with Spanish-speakers placing less importance on *stable, simple, and predictable*, and more on *green, fair, and reflects the cost of electricity*.
- Following the survey questions designed to educate respondents, Spanish-speakers conjoint choices were quite similar to the core, although they indicated greater willingness to switch rates, and to take on more risk in order to save than the Core.



# Engaged Customers

- Not surprisingly, SmartRate and PG&E Solar customers were much more aware of TOU rates than the Core group
  - All SmartRate customers are on a “time-varying rate” so are familiar with rates that vary by time of day
  - ~45% of PG&E’s solar customers are on a TOU rate
- However, both groups were less satisfied than the Core group about their rate plan options, communications and education
  - SmartRate customer satisfaction with the SmartRate program itself is high
- There were some large differences in rate plan characteristic preferences compared to the Core group:
  - Both SmartRate and Solar customers placed higher importance on “Reflects Cost of Electricity”
  - SmartRate customers placed even more importance on “Saving Money”
  - Solar Customers placed higher importance on “Works for Me” and “Green”
- Engaged customers were also less risk averse than the Core
  - Fewer respondents unwilling to risk a bill increase for the potential of a bill decrease
  - More respondents willing to try TOU rates (steep and mild)



# Other CA Jurisdictions

	CA IOUs	SMUD	LADWP	Riverside
Monthly Service Fee >\$1	No	\$10	No	\$8
Think There is a Monthly Service Fee	38%	29%	31%	49%
Demand Charge	No	No	No	\$10 - \$60
Think There is a Demand Charge	13%	7%	7%	17%
<b>Satisfaction (Top 3 Box)</b>				
Availability of Meaningful Rate Plan Options	41%	45%	19%	47%
Timely Rate Change Communications	41%	51%	30%	47%
Rate Plan Education	33%	39%	13%	35%
Keeping the Lights On	64%	76%	57%	76%
Highly Satisfied with Utility	59%	73%	45%	73%

- Even though SMUD and Riverside have Monthly Service Fees, respondent awareness was relatively low
- SMUD and Riverside respondents similar to the Core group in satisfaction levels except for
  - SMUD respondents were more satisfied with rate plan option education and communications
- LADWP customers were the most dissatisfied across all measures
- Minor differences in rate plan characteristic preferences compared to the Core group
  - SMUD respondents placed more importance on “Works for Me” and “Reflects Cost of Electricity”
  - LADWP respondents place more importance on “Green”



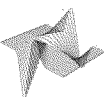
# Other CA Jurisdictions

- Regarding their current knowledge about the different rate structures, SMUD customers are more likely to know about different rate structures than the Core, while LADWP are less likely. Riverside customers are similar to the Core. Among the three, Riverside customers are the most likely to believe TOU would work for them.
- All three muni customer groups are similar to the Core in terms of those who say they tried to save money by reducing or by shifting, but they are less likely to believe they actually did save money.
- Consistent with relatively similar factors, their rate preferences are similar to the Core as well.
- Riverside customers are more likely to say they would switch rates than the Core, yet all three muni customer groups have risk tolerance that is similar to the Core.



# Seniors

- Seniors are among the more knowledgeable of customers
  - Greater awareness of Tiered and TOU rates
  - More likely to know they have a tiered rate compared to those 44 or younger
  - Less likely to believe they currently have a service charge for either electric or gas service
- Seniors who try to save money on their bill by reducing or shifting are less likely than younger customers to believe they have been successful
- Seniors place higher importance on rates that are *simple, understandable, and reflect the cost of electricity* than do younger customers
  - Those 44 or younger place higher importance on *stable, green, and fair*
- Seniors are also less likely to switch rate plans
  - Only 3% said they would definitely switch, compared to 9% of those 45-64, and 13% of those 44 and younger
  - They are more risk averse, especially compared to those 44 or younger
  - They are less swayed by TBYB





# Households with Disabled Member

- Households with a disabled member have similar current rate knowledge as other households, yet
  - Disabled households are more likely to say they would switch from their current rate
  - More likely to think that a flat rate would work best for them
- Though households with a disabled member have similar rates of trying to save money on their bill by reducing or shifting than other households, they are more likely to believe their efforts have paid off with savings on their bills

- 26% of respondents reported someone in their household having some level of disability

	<b>Core</b> (n=2,132)	<b>PG&amp;E</b> (n=717)	<b>SCE</b> (n=715)	<b>SDG&amp;E</b> (n=700)
		a	b	c
<b>Chronic disease</b>	<b>34%</b>	42% bc	28%	27%
<b>Mobility</b>	<b>26%</b>	22%	30%	21%
<b>Hearing</b>	<b>14%</b>	15%	14%	13%
<b>Vision</b>	<b>12%</b>	13%	10%	13%
<b>Psychological</b>	<b>11%</b>	9%	13%	8%
<b>Cognitive</b>	<b>5%</b>	6%	3%	9%
<b>Other</b>	<b>9%</b>	8%	11%	10%
<b>Prefer Not to Answer</b>	<b>21%</b>	18%	22%	28%



# Conclusions

- Because customer satisfaction with rate plan options and rate education is modest at best, many customers are likely to respond favorably to
  - New rate plan options that “fit” their household situation
  - Communications about rate plans
  
- Understanding of current rate plan and awareness of rate plan options is poor, however
  - Customers were able to make thoughtful rate choice decisions without rate education
  - Rate education and bill protection can both help overcome risk aversion and encourage adoption of alternative rate plan options



# Conclusions

- The majority of customers want rate options that can help them save money on their bill and they understand the need to take action to change their energy use behavior
  - Respondents are very familiar with shifting load, and many are willing to try a TOU rate that works for them
  - However, overall rate preferences leaned toward a less risky flat rate followed by a mild 2-tier rate
- 70% - 75% would consider switching, but customer inertia factors are in play
  - Awareness and understanding of rate plan options
  - Bill savings expectations
  - Risk tolerance
  - Attractiveness of relative rate plan attributes
- There is a sizable group of customers that are willing to risk a bill increase for the potential of a bill decrease
  - The challenge is designing a TOU rate plan option that is appealing enough to encourage migration from the standard rate



# Conclusions

## ➤ Rate Attributes and Levels:

- Monthly service fees can heavily impact customer choice of rate plans
- Customers are influenced more by price per kWh levels and differentials associated with the alternative rate structures than by the rate structures themselves
  - Customers believe price per kWh levels have more impact on their bills than any particular rate structure
  - Overall rate structure preference was: 1) Flat, 2) 2-Tier, 3) TOU 2, 4) 3-Tier and 5) TOU 3
  - Customers may be willing to consider a variety of rate structures focusing on the kWh price levels and monthly service fees

## ➤ Rate Structures:

- Tiered rate structures
  - Greater preference for steeper rather than narrow tier price per kWh differentials in a 3 Tier rate
  - kWh price differential between tiers less of an influence than the 2 Tier rate itself
  - Price per kWh levels become less important for a 2-tiered rate, but this may be a reflection of the fairly narrow range in levels tested
- TOU rate structures
  - A 2-period TOU rate structure is preferred slightly more than a 3 tiered rate, all other attributes equal
  - Respondents largely indifferent between wide and narrow price differentials in the TOU 2 rate
  - Wide price per kWh level for TOU 2 may be preferred over narrow for TOU 3 - a simpler steep TOU rate could better overcome risk aversion



*Sample Detail*

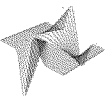
*Age, Income, Gender*

*Education, Ethnicity*

*Number in Household, Employment Status*

*Someone with a Disability, Own or Rent, Type of Home*

## Respondent Characteristics



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# Sample (Unweighted)

Core IOU	PG&E	SCE	SDG&E	Total
English	666	665	650	1981
Spanish	51	50	50	151
<b>Total</b>	<b>717</b>	<b>715</b>	<b>700</b>	<b>2,132</b>

Supplemental IOU Groups	PG&E	SCE	SDG&E	Total
Unexposed	203	202	201	606
Low Income Phone/Mail Recruits	69	70	29	168
Spanish Speakers	--	197	35	232
Solar	228	228	209	665
High Engagement	254	--	226	480
<b>Total</b>	<b>752</b>	<b>697</b>	<b>902</b>	<b>2,151</b>

Other Jurisdictions	SMUD	LADWP	Riverside	Total
Inside CA	212	202	207	<b>621</b>

Other Jurisdictions	Hydro One	Arizona	Total
Outside CA	200	200	<b>400</b>

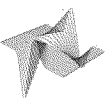


# Respondent Characteristics: Core

Respondent demographics are shown here and on the following charts.

- Quotas were used to match age and income to the population. Weighting was used to match education and gender. Weighting was completed within each utility, which modified some of the age and income proportions, as shown below.
- In sum, the sample is a close approximation to the population.

Age	Core	PG&E	SCE	SDG&E	Income	Core	PG&E	SCE	SDG&E
	(n=2,132)	(n=717)	(n=715)	(n=700)		(n=2,132)	(n=717)	(n=715)	(n=700)
		a	b	c			a	b	c
18 to 24	6%	8% b	3%	7% b	Less than \$30,000	32%	37% bc	30%	25%
25 to 34	17%	19%	16%	16%	\$30K to < \$75K	38%	34%	41% a	45% a
35 to 44	16%	16%	17%	16%	\$75,000 or more	29%	29%	29%	30%
45 to 54	13%	11%	14%	17% a	<b>Gender</b>				
55 to 64	29%	29%	31%	28%	Female	60%	60%	60%	60%
65 to 74	14%	14%	15%	11%	Male	40%	40%	40%	40%
75 or older	4%	4%	4%	4%					



# Respondent Characteristics: Core

Education was weighted to match census population estimates.

- Because the panel sample under-represents those who did not graduate from High School, the category of “High School or less” is predominantly High School graduates.

Education	Core (n=2,132)	PG&E (n=717)	SCE (n=715)	SDG&E (n=700)
High School or Less	40%	a 40%	b 40%	c 40%
Trade/Technical/Some College	30%	30%	30%	30%
College Graduate	19%	19%	19%	19%
Masters or Doctorate	11%	11%	11%	11%

Ethnicity	Core (n=2,132)	PG&E (n=717)	SCE (n=715)	SDG&E (n=700)
White (not Hispanic)	64%	a 61%	b 65%	c 68%
Hispanic or Latino	17%	18%	16%	18%
Asian/Pacific Islander	11%	13% c	10%	7%
African-American	2%	1%	3%	3%
Native-American	1%	1% c	1%	<1%
Mixed	2%	2%	2%	1%
Other	1%	1%	1%	1%
Prefer Not to Answer	2%	2%	2%	2%





# Respondent Characteristics: Core

Household and employment status of the respondent are shown here.

- About 6 out of ten (61%) are from 1 or 2 person households, with the remaining 39% from households with 3 or more.
- About half are employed either full or part-time, and about one in four (28%) are retired.

Number in Household	Core	PG&E	SCE	SDG&E	Employment Status	Core	PG&E	SCE	SDG&E
	(n=2,132)	(n=717) a	(n=715) b	(n=700) c		(n=2,132)	(n=717) a	(n=715) b	(n=700) c
One	20%	21%	19%	20%	Employed Full Time	38%	35%	39%	43% a
Two	41%	40%	42%	38%	Employed Part Time	13%	14%	11%	17% b
Three	17%	17%	16%	19%	Unemployed	10%	11% c	10%	7%
Four	13%	13%	13%	12%	Homemaker	5%	5%	6%	5%
Five or more	9%	9%	10%	11%	Student	5%	6%	4%	3%
					Retired	28%	27%	29% c	24%
					Prefer Not to Answer	2%	2% c	1%	1%

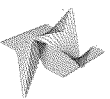


# Respondent Characteristics: Core

Respondents were asked if someone with a disability resided in the home. One in four (26%) answered “yes,” and then provided the type of disability.

- About two-thirds (64%) of all respondents are homeowners and about the same proportion (62%) are in single-family homes. One in four (25%) lives in a multifamily residence.

Someone in Household Has a Disability	Core (n=2,132)	PG&E (n=717)	SCE (n=715)	SDG&E (n=700)	Own or Rent	Core (n=2,132)	PG&E (n=717)	SCE (n=715)	SDG&E (n=700)
Yes	26%	a 25%	b 29% c	c 23%	Own	64%	a 57%	b 70% ac	c 63%
If yes: Type					Rent or Lease	36%	43% b	30%	37% b
Chronic disease	34%	42% bc	28%	27%	Type of Home				
Mobility	26%	22%	30%	21%	Single Family Detached	62%	61% c	65% c	52%
Hearing	14%	15%	14%	13%	Single Family Attached	7%	7%	6%	10% b
Vision	12%	13%	10%	13%	Apartment/Condo 2-4 Units	11%	11%	9%	14% b
Psychological	11%	9%	13%	8%	Apartment/Condo 5+ Units	14%	4%	13%	20% ab
Cognitive	5%	6%	3%	9%	Mobile Home	5%	5% c	5% c	2%
Other	9%	8%	11%	10%					
Prefer Not to Answer	21%	18%	22%	28%					



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Sample sizes shown are unweighted. All other data is weighted.

10/24/2014

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