PACIFIC GAS AND ELEC TRIC COMPANY

APPENDIX A

CUSTOMER RESEARCH SU RVEY AND REPORT

PACIFIC GAS AND ELECTRIC COMPANY

APPENDIX A.1.

CUSTOMER RESEARCH KEY FINDINGS REPORT

RROIR Customer Survey
Key Findings

April 16, 2013

Final Draft

Prepared for:

Pacific Gas and Electric Company
WE DELIVER ENERGY

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

SDGE connected
A Sempra Energy utility

HINER & PARTNERS, INC.
MARKETING DIAGNOSTICS AND STRATEGIES

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 duringsurvey
  - 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 tomatch: (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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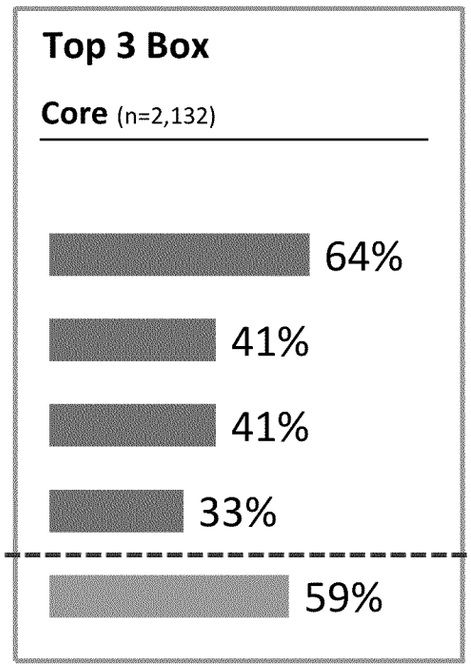
Customer Satisfaction with Rates

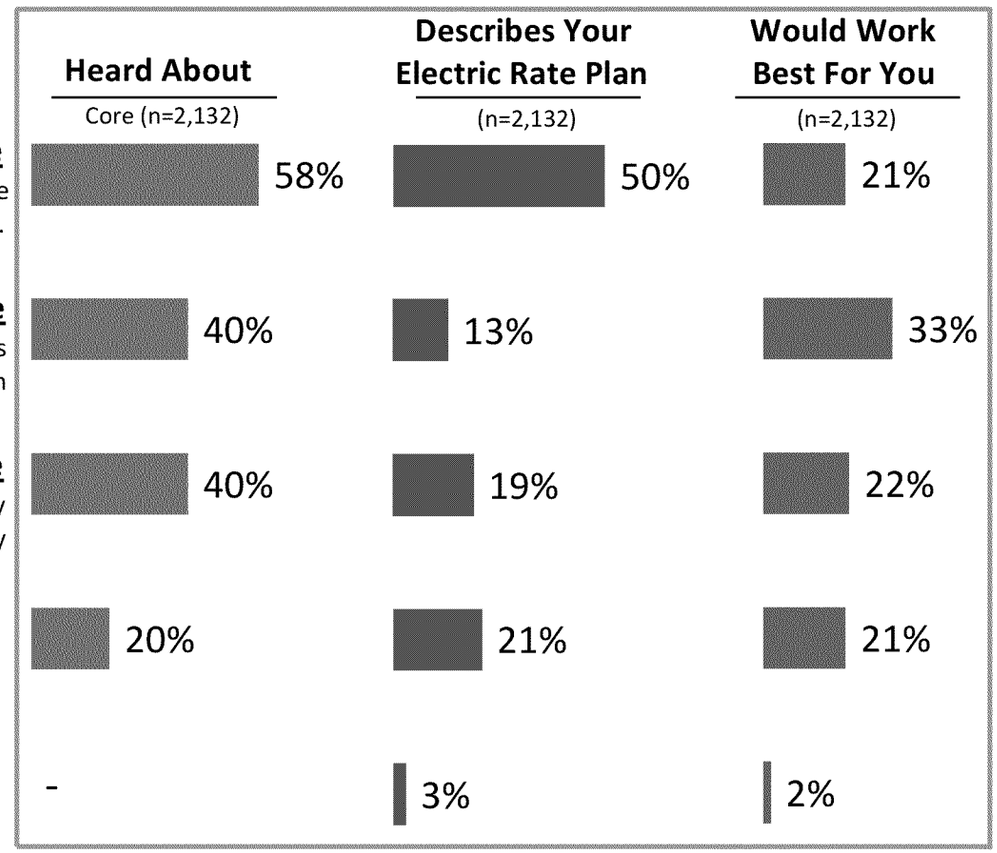
- California IOU customers give their utility company high marks for "keeping the lights on" but they are less satisfied concerning rate options and education.
  - SCE received higher satisfaction scores across all these measures than PG&E or SDG&E.



	PG&E (n=717) a	SCE (n=715) b	SDG&E (n=700) c
Keeping my lights on/no power outages	63%	65%	65%
Availability of rate plans to switch your specific needs	39%	44% c	35%
Communicating rate changes in a timely manner	37%	46% ac	38%
Educating you on the benefits of different rate plans	31%	36% c	28%
Overall Satisfaction	**57%**	**61%**	**56%**

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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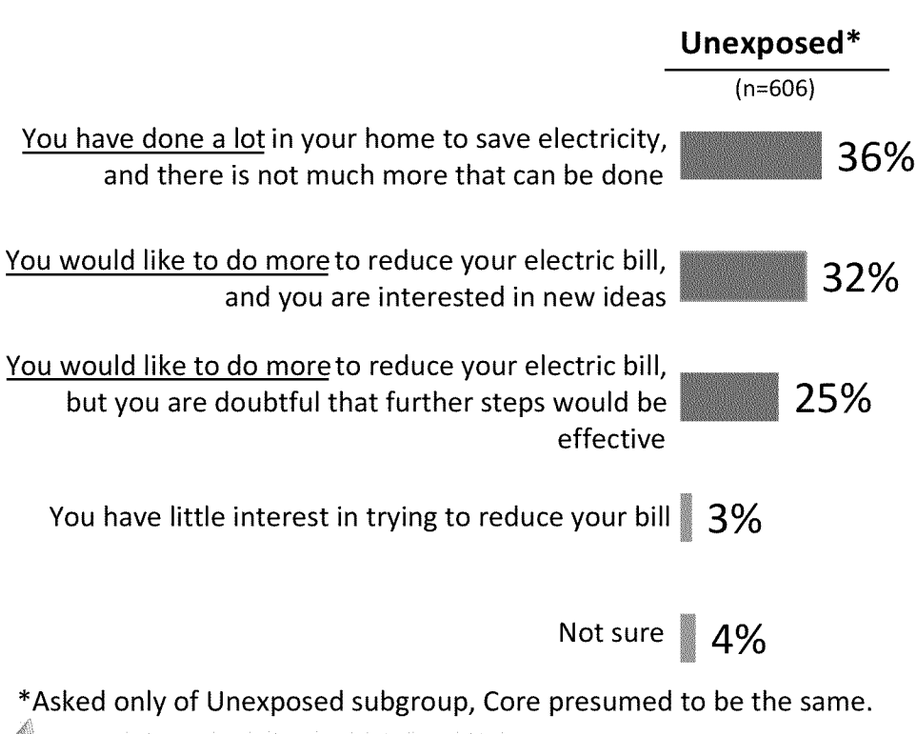
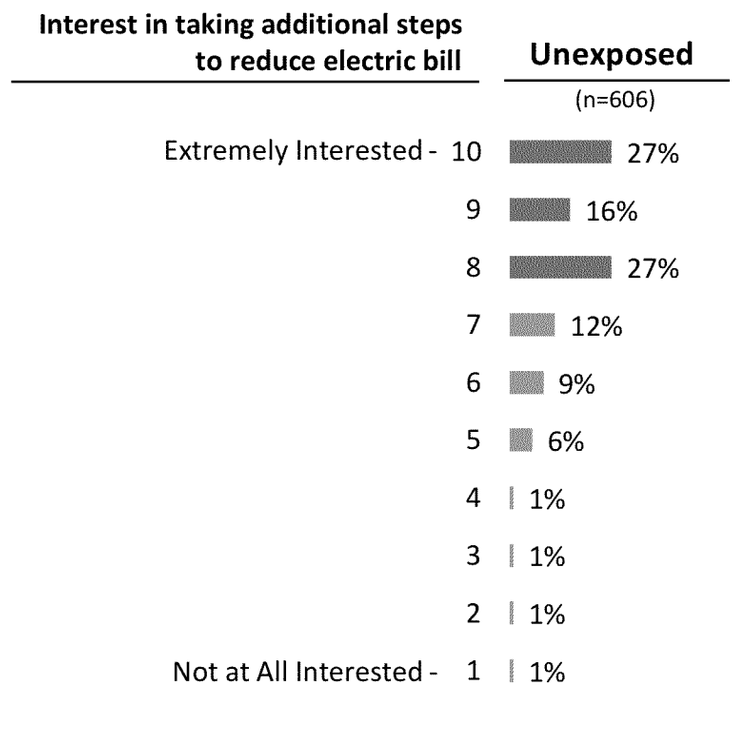
Interest in Taking Action to Reduce

- 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.

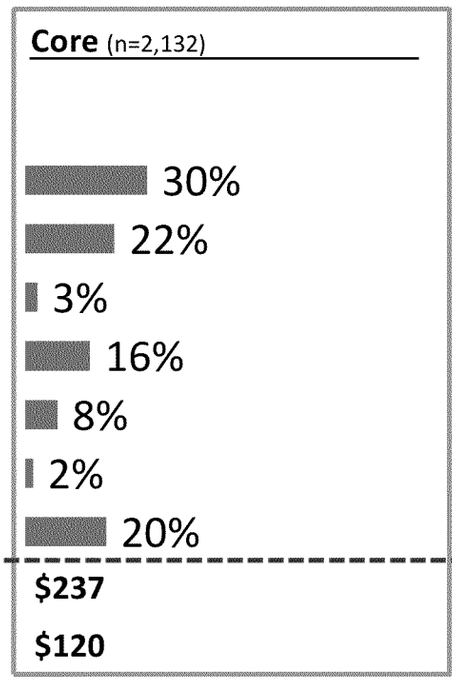


*Asked only of Unexposed subgroup, Core presumed to be the same.



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%.



	Core (n=2,132)	**CARE** (n=351) a	**Non-CARE** (n=1781) b
$0 to $99	30%	35% e	28%
$100 to $149	22%	23%	21%
$150 to $199	3%	3%	3%
$200 to $299	16%	19%	15%
$300 to $399	8%	9%	8%
$400 to $499	2%	1%	3% a
$500 or more	20%	10%	23% a
Mean	**$237**	**$178**	**$255** a
Median	**$120**	**$100**	**$150**

Rate Plan Option Education

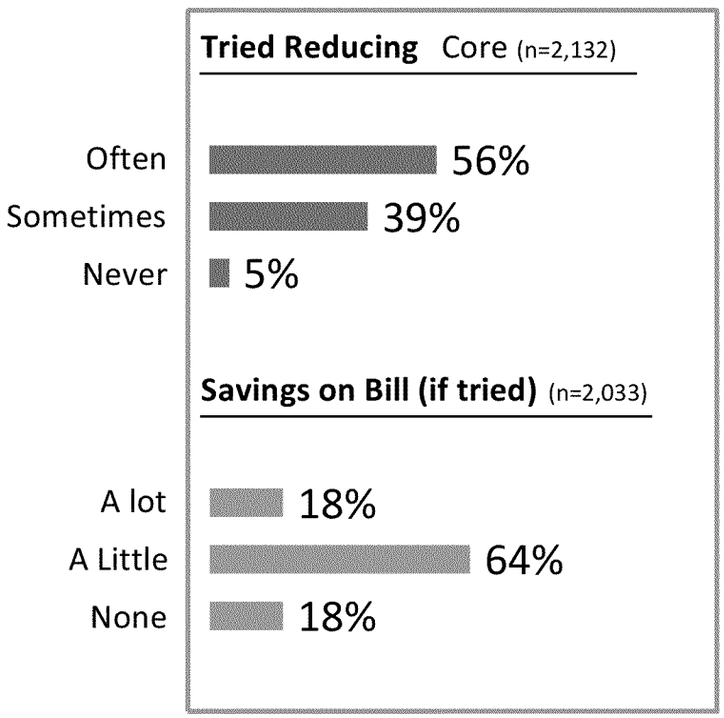
- In the survey, all but the Unexposed respondents were provided information about different rate structures and components
  - Electricity Usage
  - Rate Structures
    - Flat rate plans
    - Tiered rate plans
    - Time-of-Use rate plans
  - Rate Structure Components
    - Price per kilowatt-hour (kWh)
    - Monthly service fees
    - Demand charges

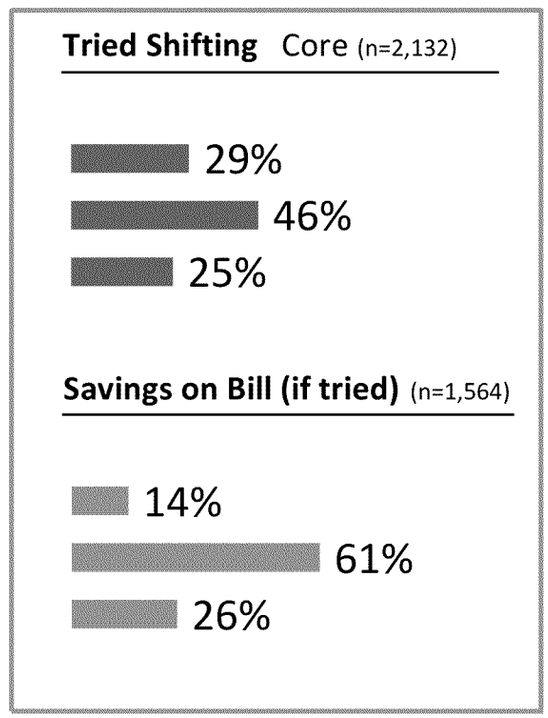
- Additionally, respondents answered questions about previous and future actions that could be taken in their homes to reduce and shift electricity use.

- The Unexposed group went immediately into rating importance of specific factors when choosing rates, and then the conjoint decision tasks.

Education: Energy Use Behavior

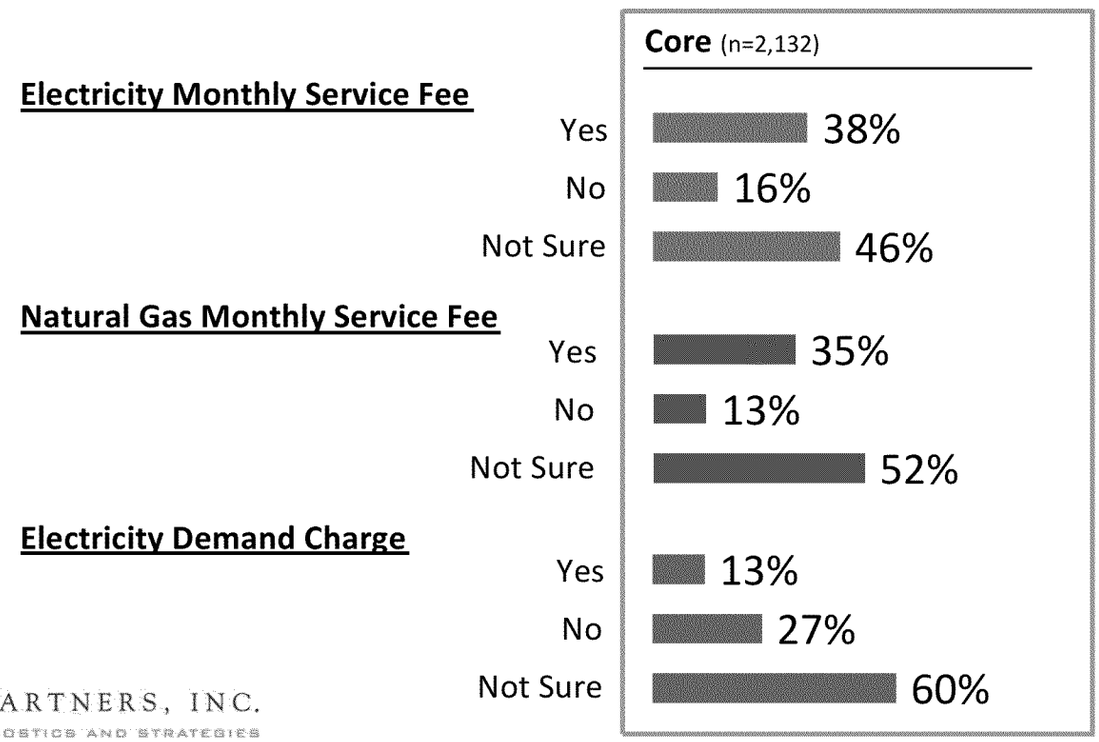
- 95% have tried to save money on their bill by reducing their energy use
- 75% have tried to save money by shifting their electricity use
  - Despite most customers knowing they are not on a TOU rate, many believe they have saved money by shifting.





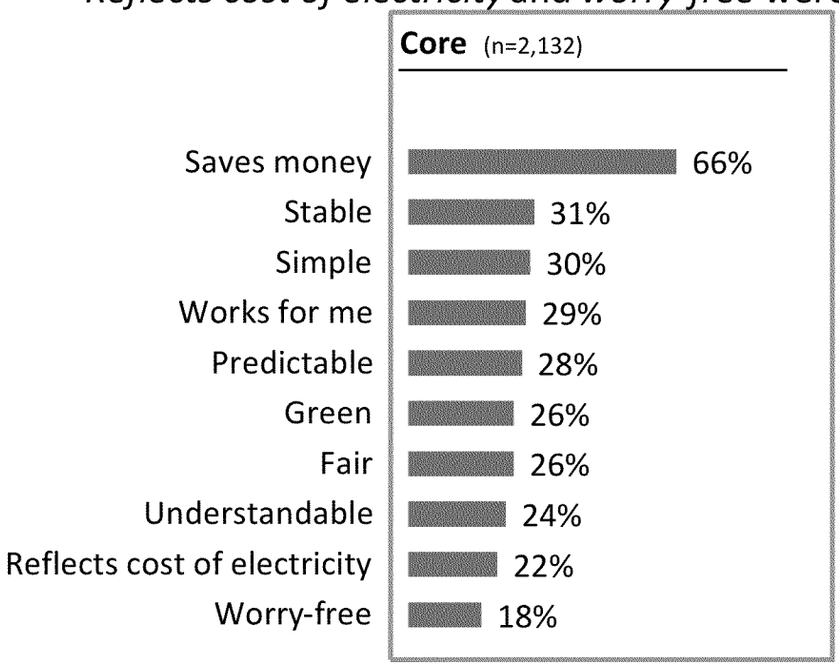
Education: Monthly Service Fee & Demand Charges

- 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."



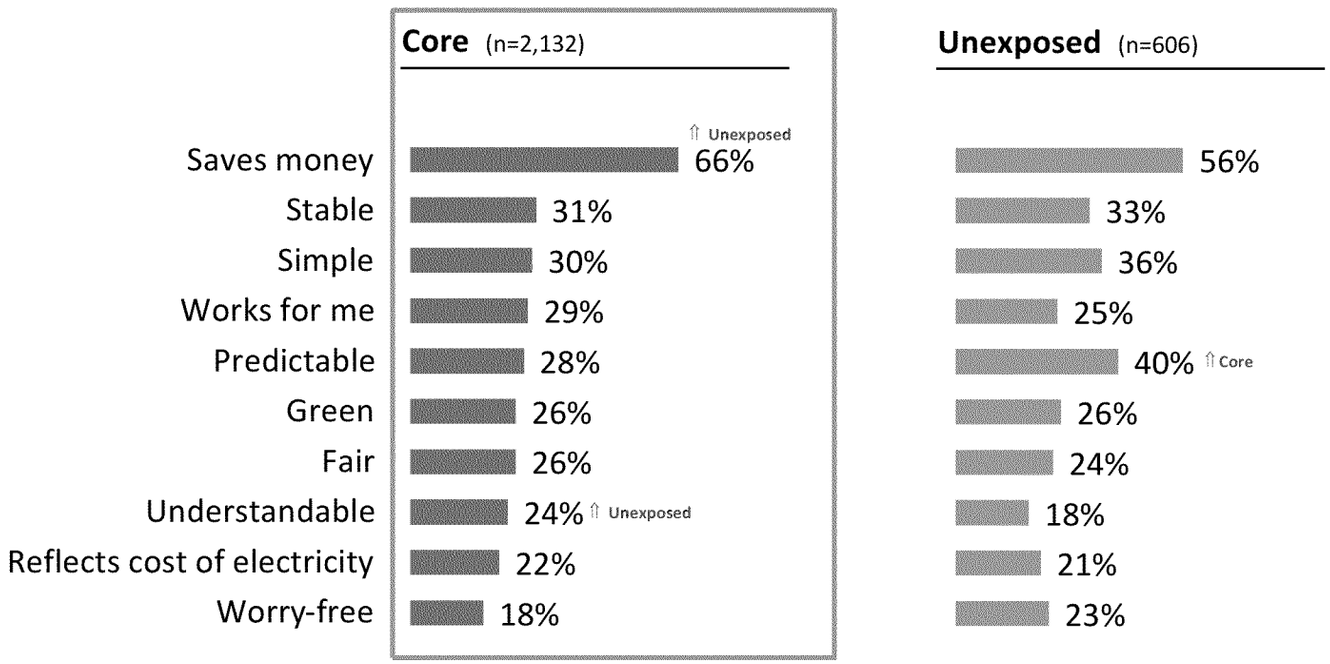
Important Factors When Choosing Rates

- 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.

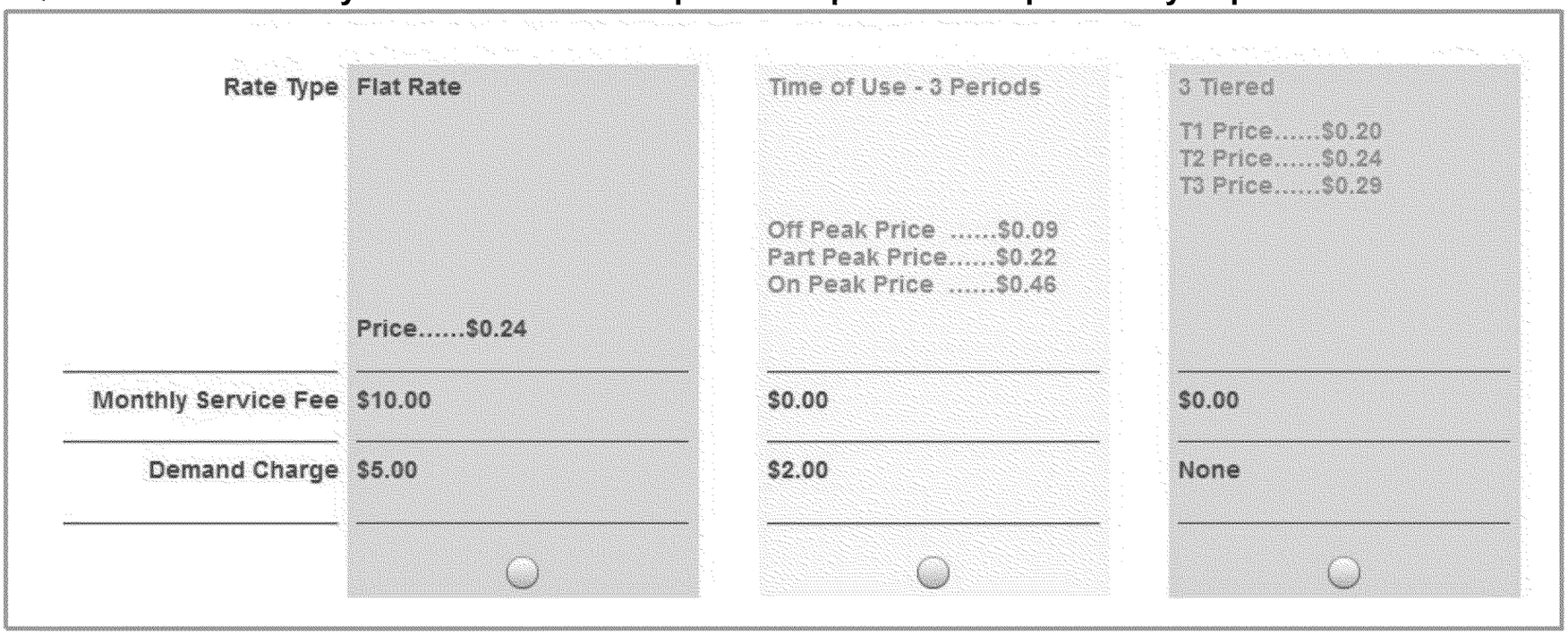


Rate Preferences: Choice Exercise

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 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
2 TIER	$0.12	$0.16	$0.15	$0.18
	$0.14	$0.20	$0.17	$0.19
3 TIER	$0.10	$0.11	$0.18	$0.20
	$0.12	$0.20	$0.22	$0.24
	$0.16	$0.29	$0.26	$0.29
TOU 3	$0.12	$0.09	$0.16	$0.18
	$0.13	$0.22	$0.20	$0.24
	$0.16	$0.46	$0.24	$0.26
TOU2	$0.12	$0.08	$0.18	$0.22
	$0.14	$0.30	$0.20	$0.26
Flat Rate	$0.12	$0.16	$0.20	$0.24

Rate Plan Preferences: Conjoint Analysis

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

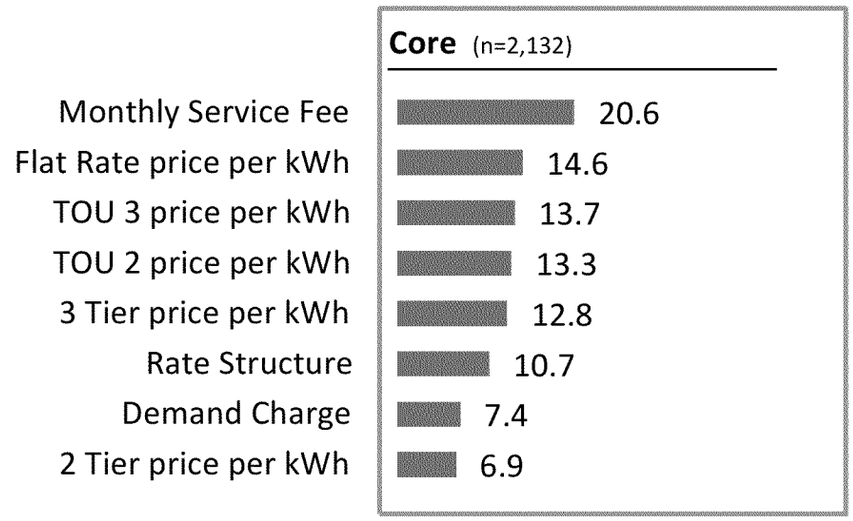
- **Ratings of Attribute importance (e.g., Monthly Service Fee)**
  - Ratings represent the influence on respondent choice that an Attribute has relative to other Attributes and sum to 100%
  - Ratings can be compared directly, forexample, an Attribute with an importance rating of 20% has twice the positive 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 todetermine 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

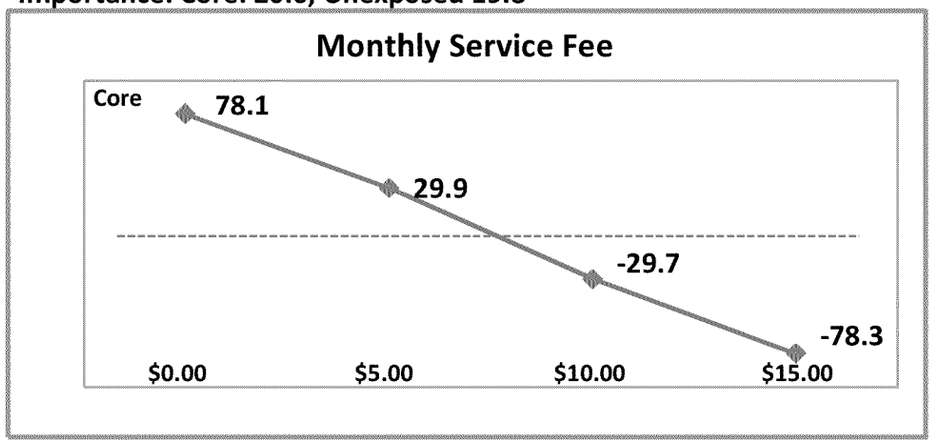
Rate Preferences: Attribute Importance

- 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.

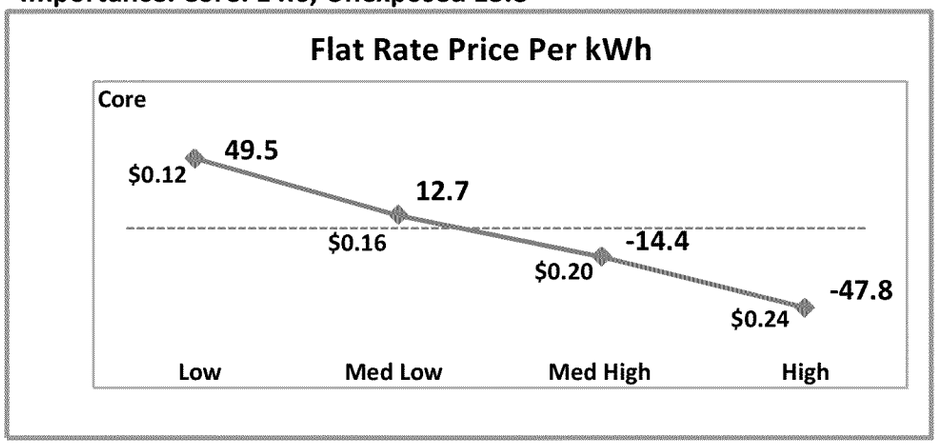


Rate Preferences: Utility Values

Importance: Core: 20.6, Unexposed 19.8



Importance: Core: 14.6, Unexposed 13.8



Monthly Service Fee

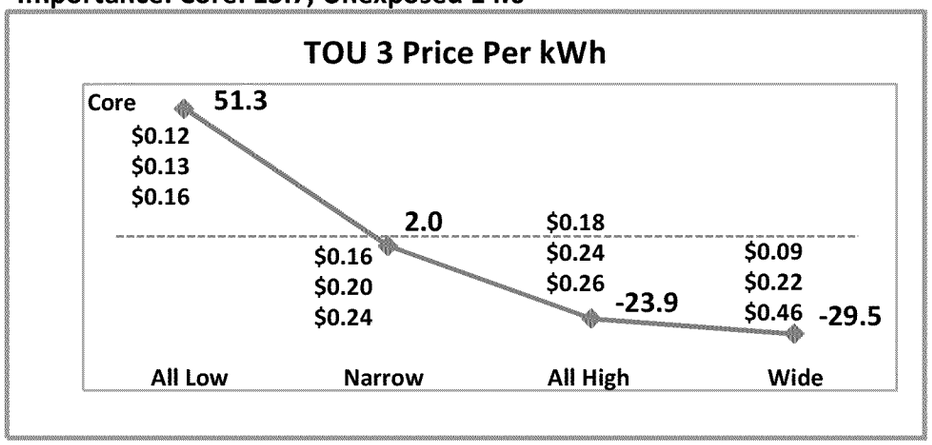
- Most important attribute in all rate plan selection
- Utility values are linear
  - Indicates negative impact on preference, but similar whether going from $0.00 TO $5.00, or from $5.00 to $10.00.

Flat Rate Price Per kWh

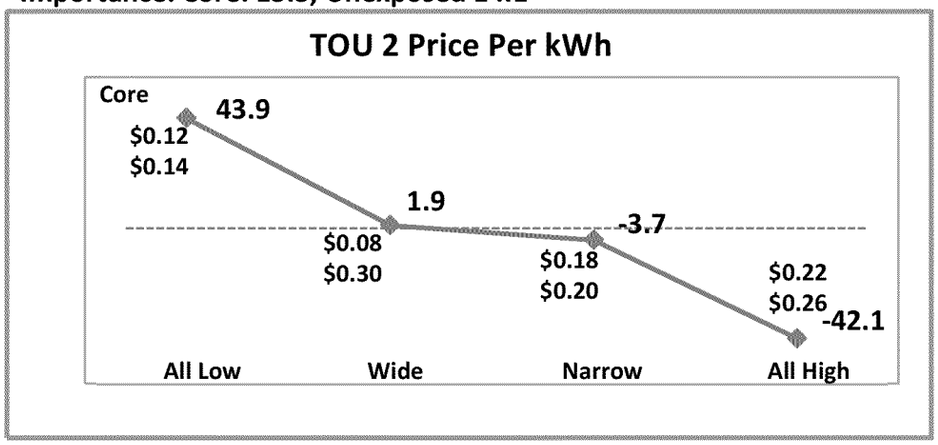
- Very important attribute in Flat Raterate plan selection
- Gaps between $0.12 and $0.16, and $0.20 and $0.24, are larger than the gap between $0.16 and $0.20
  - Indicates relative indifference to rate changes in the midrange ($0.16 to $0.20) compared to rate changes at higher and lower prices per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

Rate Preferences: Utility Values

Importance: Core: 13.7, Unexposed 14.6



Importance: Core: 13.3, Unexposed 14.1



TOU 3 Price Per kWh

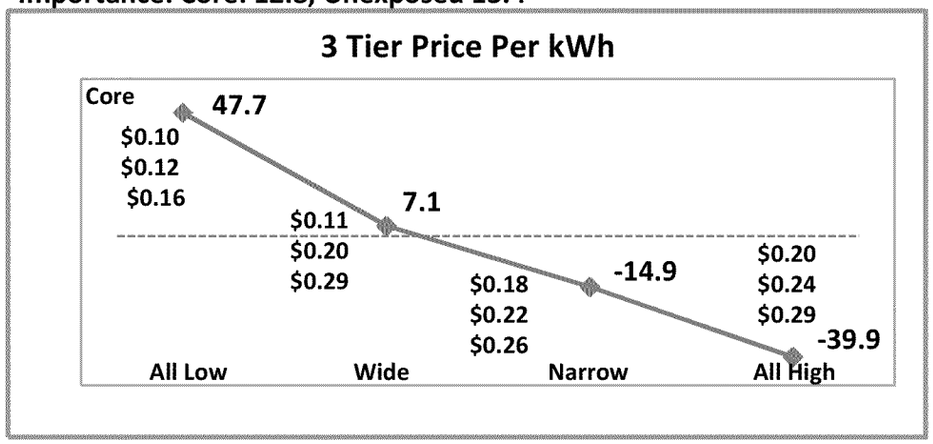
- Very important attribute in TOU 3 rate plan selection
  - Relatively strong preference for "all low" price per kWh level declining for other price per kWh levels
- Lowest preference for "wide range" which brings both highest potential bill savings and increase
  - Indicates high level of risk aversion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

TOU 2 Price Per kWh

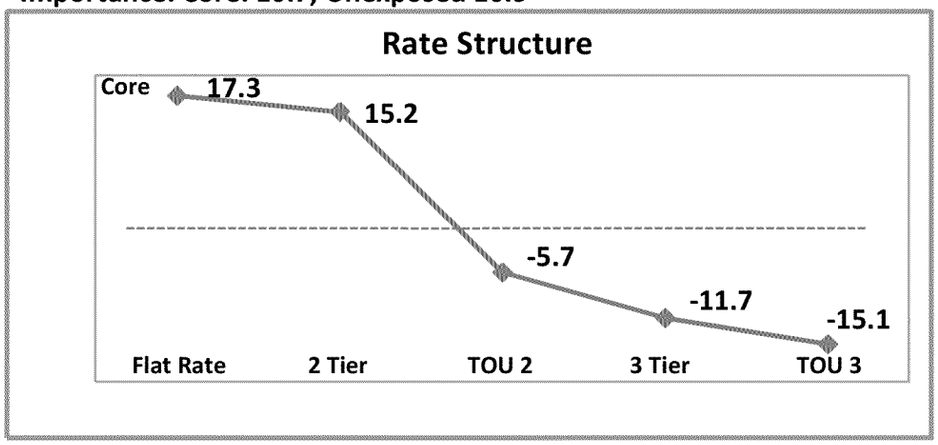
- Very important attribute in TOU 2 rate plan selection
- Nearly equal values for both wide and narrow price per kWh levels
  - Indicates that customers largely indifferent between the two
- Wide price per kWh level for TOU 2 may be preferred over narrow for TOU 3
  - Indicates that a simpler steep TOU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

Rate Preferences: Utility Values

Importance: Core: 12.8, Unexposed 13.4



Importance: Core: 10.7, Unexposed 10.9



3 Tier Price Per kWh

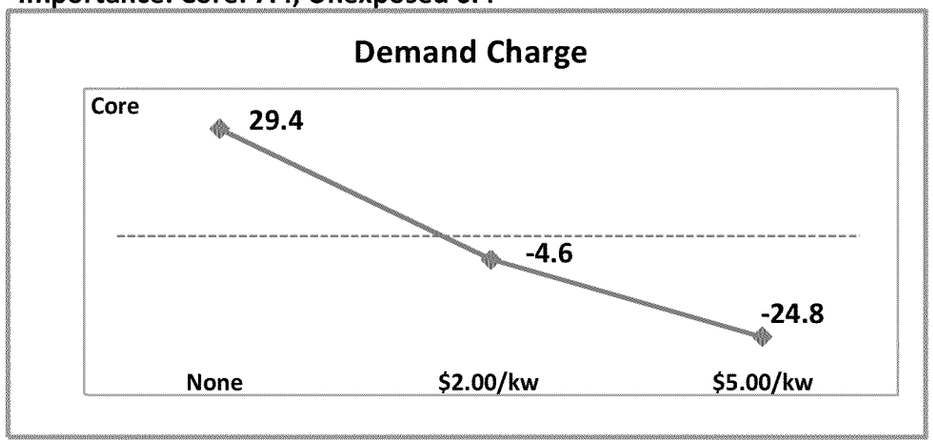
- Very important attribute in3 Tier rate plan selection
- Higher utility given to wide price per kWh level than to narrow (similar to TOU 2) but with a larger gap
  - Indicates greater preference for steeper rather than narrow tier price per kWh differentials in a 3 Tier rate

Rate Structure

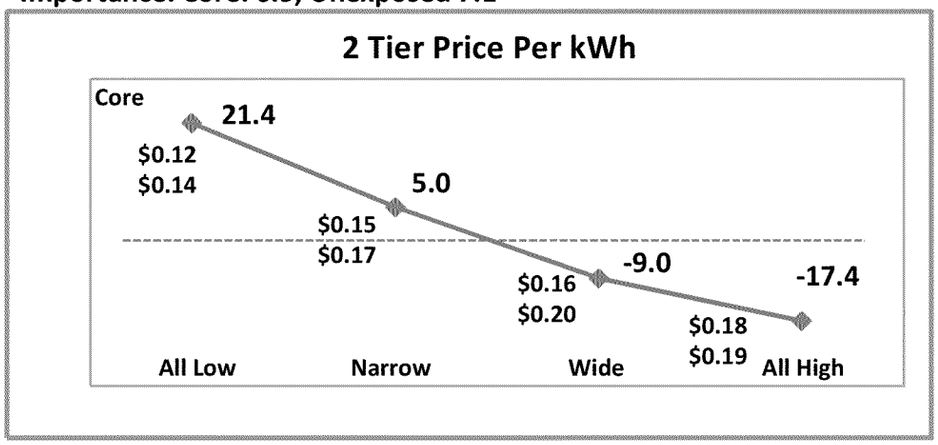
- Important attribute rate plan selection, but not as important as price per kWh structure
- Highest and nearly equal utility values given to Flat and 2 Tier rate structures with much lower utility given to TOU 2, 3 Tier, TOU 3.
  - Indicates preference for Flat and 2 Tier rate plans.
  - Indicates preference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

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

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%

* The "hold out" is a conjoint choice set that all respondents reviewed. All other choice sets in the survey were randomly generated.

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%

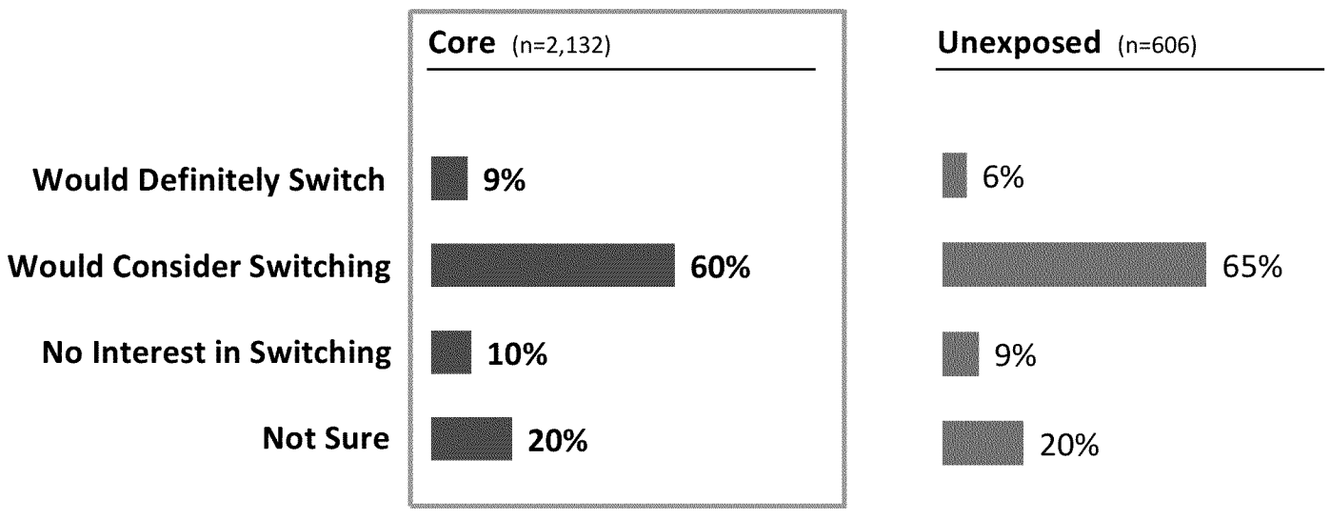
Simulations: Low vs. High price/kWh Levels

- 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

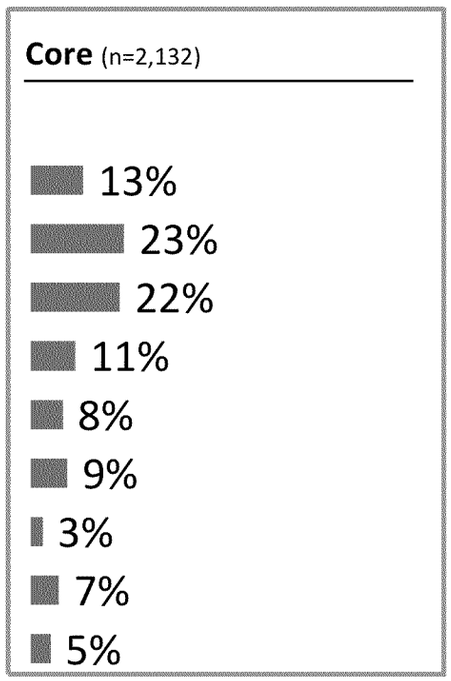
- After choosing a preferred rate plan option thirteen times, respondents were asked how likely they would be to actually switch from their current rate plan.
  - Only 10% of the Core had no interest in switching from their current rate, indicating 90% were open to considering a new rate.
  - 9% of the 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%.

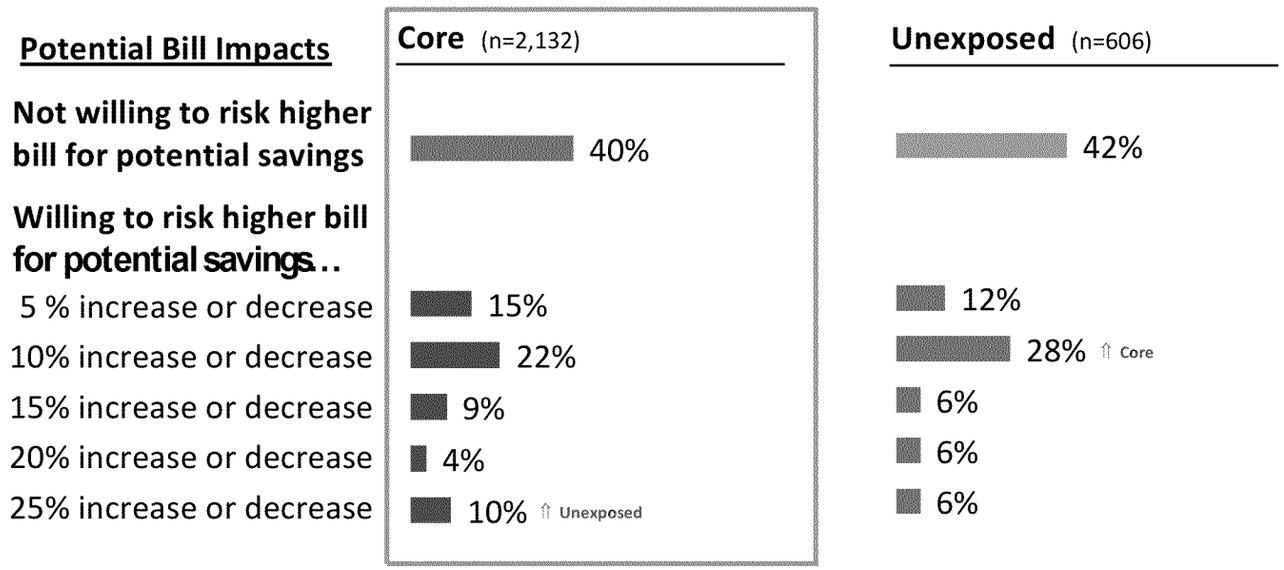
- CARE customers react to lower amounts but their median summer bill ($60) is much lower as well, so they also respond to changes in excess of 20%.



Amounts	CARE (n=351) a	Non-CARE (n=1781) b
$0 to $9	20% b	11%
$9 to $19	30% b	21%
$20 to $29	21%	23%
$30 to $39	8%	11%
$40 to $49	6%	8%
$50 to $74	5%	10% a
$75 to $100	2%	3%
More than $100	4%	9% a
Not sure	4%	5%

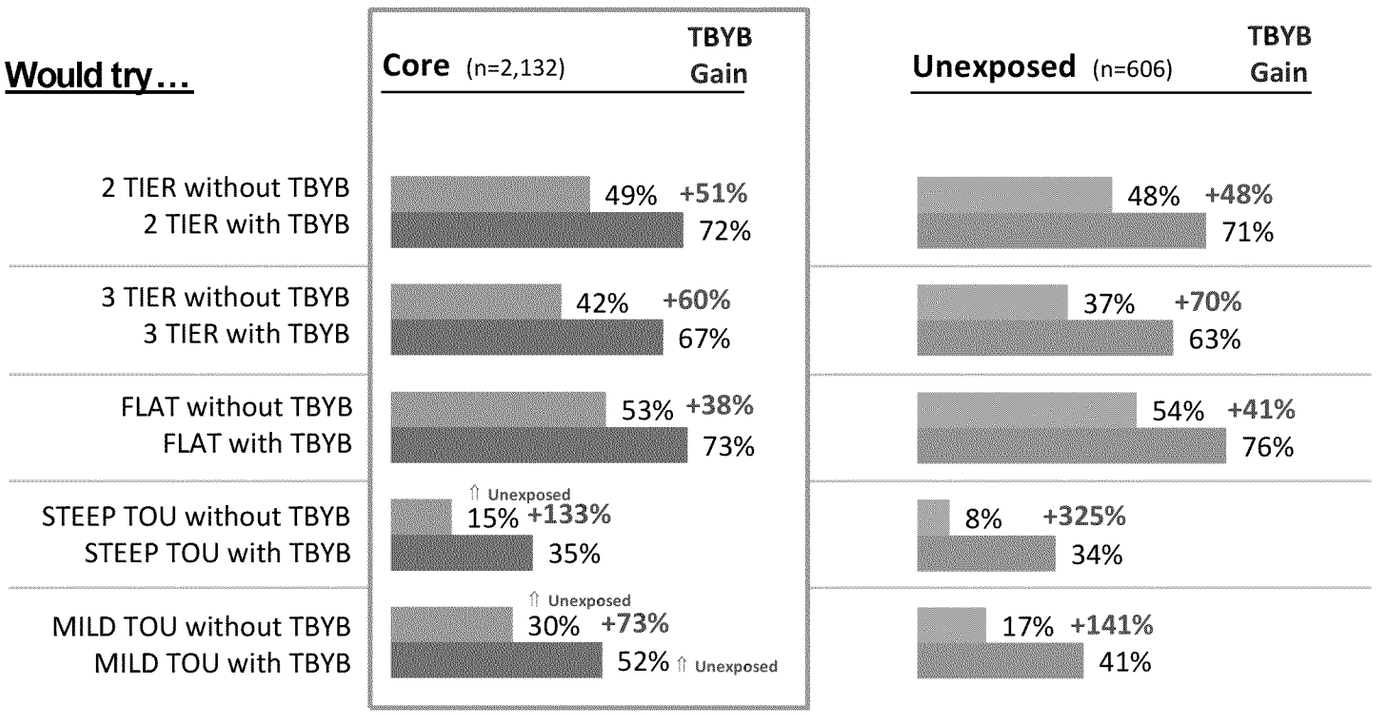
Willingness to Risk Bill Impacts

- 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



Jurisdictions Outside CA

	CA IOU Core	SRP / APS	Hydro One
Progress Transitioning Customers			
Migration Approach	None	Opt-in over time	Completing Default of all Res Customers
On TOU Rate	<5%	30-40%	~100%
Attitude and Acceptance of TOU Rates			
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%
Satisfaction (Top 3 Box)			
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 "Worksfor 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%
Satisfaction (Top 3 Box)				
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 forthem
- 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

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

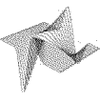
Age, Income, Gender

Education, Ethnicity

Number in Household, Employment Status

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

Respondent Characteristics



HINER & PARTNERS, INC.
MARKETING DIAGNOSTICS AND STRATEGIES

Sample (Unweighted)

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

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
Total	**752**	**697**	**902**	**2,151**

Other Jurisdictions	SMUD	LADWP	Riverside	Total
Inside CA	212	202	207	**621**

Other Jurisdictions	Hydro One	Arizona		Total
Outside CA	200	200		**400**

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 (n=2,132)	PG&E (n=717) a	SCE (n=715) b	SDG&E (n=700) c
18 to 24	6%	8% b	3%	7% b
25 to 34	17%	19%	16%	16%
35 to 44	16%	16%	17%	16%
45 to 54	13%	11%	14%	17% a
55 to 64	29%	29%	31%	28%
65 to 74	14%	14%	15%	11%
75 or older	4%	4%	4%	4%

Income	Core (n=2,132)	PG&E (n=717) a	SCE (n=715) b	SDG&E (n=700) c
Less than $30,000	32%	37% bc	30%	25%
$30K to < $75K	38%	34%	41% a	45% a
$75,000 or more	29%	29%	29%	30%
Gender				
Female	60%	60%	60%	60%
Male	40%	40%	40%	40%

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) a	SCE (n=715) b	SDG&E (n=700) c
High School or Less	**40%**	40%	40%	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) a	SCE (n=715) b	SDG&E (n=700) c
White (not Hispanic)	**64%**	61%	65%	68% a
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 (n=2,132)	PG&E (n=717) a	SCE (n=715) b	SDG&E (n=700) c
One	**20%**	21%	19%	20%
Two	**41%**	40%	42%	38%
Three	**17%**	17%	16%	19%
Four	**13%**	13%	13%	12%
Five or more	**9%**	9%	10%	11%

Employment Status	Core (n=2,132)	PG&E (n=717) a	SCE (n=715) b	SDG&E (n=700) c
Employed Full Time	**38%**	35%	39%	43% a
Employed Part Time	**13%**	14%	11%	17% b
Unemployed	**10%**	11% c	10%	7%
Homemaker	**5%**	5%	6%	5%
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) a	SCE (n=715) b	SDG&E (n=700) c
Yes	**26%**	25%	29% c	23%
If yes: Type				
Chronic disease	**34%**	42% bc	28%	27%
Mobility	**26%**	22%	30%	21%
Hearing	**14%**	15%	14%	13%
Vision	**12%**	13%	10%	13%
Psychological	**11%**	9%	13%	8%
Cognitive	**5%**	6%	3%	9%
Other	**9%**	8%	11%	10%
Prefer Not to Answer	**21%**	18%	22%	28%

Own or Rent	Core (n=2,132)	PG&E (n=717) a	SCE (n=715) b	SDG&E (n=700) c
Own	**64%**	57%	70% ac	63%
Rent or Lease	**36%**	43% b	30%	37% b
Type of Home				
Single Family Detached	**62%**	61% c	65% c	52%
Single Family Attached	**7%**	7%	6%	10% b
Apartment/Condo 2-4 Units	**11%**	11%	9%	14% b
Apartment/Condo 5+ Units	**14%**	4%	13%	20% ab
Mobile Home	**5%**	5% c	5% c	2%

PACIFIC GAS AND ELECTRIC COMPANY

APPENDIX A.2 .

CUSTOMER RESEARCH METHODOLOGY

CUSTOMER RESEARCH METHODOLOGY

To achieve the research objectives, the survey utilized a quantitative research design that included a choice-based conjoint analysis. Conjoint analysis is a well-accepted customer research method used in product development and marketing across different industries and product categories. Conjoint analysis measures how people value different features that make up a product or service. The objective is to identify the combination of product attributes that are most influential in the customer decision making process. Conjoint analysis allowed the use of specific rate structure components as a basis for assembling rate plan options. In conjoint language, these would be called the "attributes" (e.g., volumetric charge, fixed service fee, demand charge, time-of-use periods). "Levels" specify potential variations within a particular attribute, such as different levels of monthly service fee (e.g., $0, $5, $10). For three basic rate structures – time-of-use, inclining block, and flat - customers were asked to choose among a set of three rate plan options. The following is an example of one such task:

The respondents were provided definitions of rate structures and components in simple customer language before completing the choice exercises. The 82,000 rate plan options from the Core sample were then modeled using conjoint analysis, which provided insight into rate structures, components and levels that appeal to customers.

The customer sample included a group of ~700 respondents from each IOU service territory for a total of 2,132 Core respondents. All other groups, including additional IOU customers were compared to the Core group. To ensure a demographically representative sample, quotas were set based on age, gender, and income (including CARE customers). To further insure a representative sample,

additional weighting was applied to gender and education. A portion of the surveys were completed in Spanish using a targeted web-based panel to ensure that sufficient input was captured from Spanish-speakers. In addition, a separate sample of low-income/hard-to-reach customers who might not have online access were identified through address-based recruiting. This latter sample of 200 participants supplemented the 500 low-income customers within the 2,100 Core sample. As reflected in the tables below, other supplemental groups were recruited to compare to the core sample and identify any significant differences in energy use behavior and attitudes and rate option preferences.

Core IOU	PG&E	SCE	SDG&E	Total
English	666	665	650	1,981
Spanish	51	50	50	151
Total	717	715	700	2,132

Supplemental Groups	PG&E	SCE	SDG&E	Total
Unexposed	203	202	201	606
Low Income Phone Recruits	67	67	66	200
Spanish Speakers	–	200	200	400
Solar	228	228	209	665
High Engagement	254	–	226	480
Total	752	697	902	2,351

Other Jurisdictions	SMUD	LADWP	Riverside	Total
Inside CA	212	202	207	621

Other Jurisdictions	Hydro One	Arizona SRP/APS	Total
Outside CA	200	200	400

PACIFIC GAS AND ELECTRIC COMPANY

APPENDIX A.3 .

CUSTOMER SURVEY

Residential Rates Customer Survey

Survey length: 25 minutes

Sample: n=2,100 statewide general population (stratified 700 per IOU), plus additional subgroups 5,200 total.

	PG&E		SCE		SDG&E		TOTAL
English Speakers		650		650		650	**1,950**
Spanish Speakers		50		50		50	**150**
Total General Population		**700**		**700**		**700**	**2,100**
Additional Samples							
Spanish Speakers				200		100	**300**
Solar (NEM) Customers		200		200		200	**600**
More engaged and knowledgeable about electricity rates	SmartRate	200				200	**400**
Other CA Jurisdictions with alternative rate plan structures			SMUD	200			**600**
			LADWP	200			
			Riverside	200			
Outside CA Jurisdictions with significant penetration of TOU rates	Hydro One Canada	200			Arizona	200	**400**
Not exposed to rate education section in survey		200		200		200	**600**
Low income supplemental sample – not recruited via web		66		67		67	**200**
Total Add'l Samples		**866**		**1,267**		**967**	**3,100**
Total		**1,566**		**1,967**		**1,667**	**5,200**

Introduction

Thank you for agreeing to participate in this online survey about electric rate plan options. There is no right or wrong answer to any of the survey questions posed. We simply want your opinion. Your individual answers will remain confidential.

The utilities and state regulators are exploring possible changes to the way they charge their customers for electricity. Your responses will assist in determining what, if any, changes should be made.

This survey should take about 25 minutes to complete. Most participants will complete this survey in one sitting, but you can stop and resume from the same point at a later time by clicking on the link from the survey invitation.

If you need to stop and then return to the survey, please click on the link that brought you to this survey after you have close your browser. This will bring you to the question you last answered.

S2 Which of the following companies provides your household electricity? [ONE ONLY]

CALIFORNIA SAMPLES	
Anaheim Public Utilities	
Imperial Irrigation District	
Los Angeles Department of Water & Power (LADWP)	*
Pacific Gas & Electric Company (PG&E)	*
Pasadena Water & Power	
Riverside Public Utilities	*
Sacramento Municipal Utility District (SMUD)	*
Southern California Edison (SCE)	*
San Diego Gas & Electric Company (SDG&E)	*
ARIZONA SAMPLES	
Arizona Public Services (APS)	*
Salt River Project (SRP)	*
San Carlos Irrigation	
Tucson Electric Power	
Unisource Energy Services	
ONTARIO CANADA SAMPLES	
Hydro One	*
Some other company	

[NEED ONE OF THE "*" OPTIONS]

Section 0 – Screening

S1 In your household, which of the following activities are you involved in? [MULTIPLE RESPONSE OK] **<use right term for electric / gas bill for PG&E and SDG&E participants, electric bill for all other participants throughout survey) >**

Reviewing and/or paying the monthly electric bill	1	NEED
Calling your electric utility company when there is a problem	2	
Making decisions about programs, payments, and other options provided by your electric utility	3	NEED
None of the above	4	TERM

[NEED PUNCH 1 or 3]

S2 To ensure we represent a variety of opinions, which of the following industries do you or other primary earners in your household work for? *Please select all that apply.*

Agriculture	2	OK
Banking / insurance / financial services	3	OK
Business or professional services / consulting	5	OK
Construction / home improvement / contractor	6	OK
Education	7	OK
Entertainment	9	OK
City, County, State, or National government	10	OK
Healthcare	11	OK
High technology / computer programming	12	OK
Hospitality / food services	14	OK
Manufacturing	15	OK
Market research/Marketing/advertising	16	TERM
Retail	18	OK
Utilities such as electrical or gas power companies	20	TERM
Retired	21	OK
Unemployed	22	OK
None of these	23	OK

S3 Including you, how many people live in your household?

_____ (NUMBER BETWEEN 1 AND 20)

S4 About how many square feet is your home?

Under 1,000	1
1,000 to 1,499	2
1,500 to 1,999	3
2,000 to 2,499	4
2,500 to 2,999	5
3,000 to 3,499	6
3,500 or more	7
Not sure	8

S5 What is your age?

18-24	1
25-34	2
35-44	3
45-54	4
55-64	5
65-74	6
75 or older	7
Prefer not to answer	9

S6 What is your annual household income before taxes? This information will help us better understand your answers. [NOTE: NEEDED TO DETERMINE ELIGIBILITY FOR CARE DISCOUNT QUESTIONS]

Less than $15,000	1
$15,000 to just less than $22,000	2
$22,000 to just less than $30,000	3
$30,000 to just less than $38,000	4
$38,000 to just less than $46,000	5
$46,000 to just less than $54,000	6
$54,000 to just less than $62,000	7
$62,000 to just less than $75,000	8
$75,000 to just less than $100,000	9
$100,000 to just less than $200,000	10
$200,000 or more	11

S7 Are you male or female?

Male	1
Female	2

S8 What is your zip or postal code?

_____

Section 1 – Electric Utility Evaluations

1.1 Using a 10-point scale, where 1 means you are extremely dissatisfied, and 10 means you are extremely satisfied, how would you rate your satisfaction with [FROM S2: PG&E, SCE, SDG&E, Salt River Project, Arizona Public Service, Hydro One, ETC.] when it comes to … ? [Randomize statements][1-10 SCALE, Not Sure]

a. Availability of rate plans to suit your specific needs
b. Charging a fair price for electricity services
c. Communicating rate changes in a timely manner
d. Educating you on the benefits of different rate plans
e. Keeping my lights on / no power outages

1 Extremely Dissatisfied	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10 Extremely Satisfied	10
Not sure	99

1.2 Using a 10-point scale where 1 means your feelings are not at all favorable and 10 means your feelings are extremely favorable, how would you rate your overall satisfaction with the service provided by [FROM S2: PG&E, SCE, SDG&E, Salt River Project, Arizona Public Service, Hydro One, ETC.].

1 Not At All Favorable	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10 Extremely Favorable	10
Not sure	99

Section 2 - Rate Knowledge, Preferences, Behaviors

The next questions will help us understand what you currently know about the way you are charged for electricity use. It's okay if you are not that familiar with this subject. If you are not sure of an answer, just select the option "not sure."

2.1a Which of the following electric rate plans have you heard about before this interview? *Check all that apply.* [ROTATE]

Flat rate, meaning you pay the same price for each unit of electricity regardless of when you use it or how much you have used during the month	1
Tiered rate, meaning your price for each unit of electricity may increase over the month if you use more than a certain amount of electricity	2
Time of Use rate, meaning you pay a different price for each unit of electricity depending on the time of day you use that electricity	3
Not sure	4

2.1b Which of the following best describes your electric rate plan for your home? *Check all that apply.* [ROTATE]

Flat rate, meaning you pay the same price for each unit of electricity regardless of when you use it or how much you have used during the month	1
Tiered rate, meaning your price for each unit of electricity may increase over the month if you use more than a certain amount of electricity	2
Time of Use rate, meaning you pay a different price for each unit of electricity depending on the time of day you use that electricity	3
Something else: Describe	4
Not sure	5

2.1c Which of the following rate plans would work best for you? [ROTATE]

Flat rate, meaning you pay the same price per unit regardless of when you use it or how much you have used during the month	1
Tiered rate, meaning your price per unit increases over the month as you use more electricity	2
Time of Use rate, meaning you pay a different price per unit depending on the time of day you use electricity	3
Something else: Describe	4
Not sure	5

<2.2 and 2.3 only for group that will not be exposed to the Section 3 rate education section>

2.2 Which of the following best describes your current attitude toward taking steps to lower your electric bill? [ROTATE]

You have little interest in trying to reduce your electric bill	1
You would like to do more to reduce your electric bill, but you are doubtful that further steps would be effective	2
You would like to do more to reduce your electric bill, and you are interested in new ideas	3
You have done a lot in your home to save electricity, and there is not much more that can be done	4
Not sure	5

2.3 How would you rate your interest in *taking additional steps* to reduce your household's electric bill? Use the following 10-point scale where 10 means you are extremely interested and 1 means you are not at all interested.

1 Not at all Interested	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10 Extremely Interested	10
Not sure	99

2.4 How much of a savings on an annual basis would it take to get you to switch to a new rate plan?

$_____ [Annual AMOUNT] $0-$1000

Section 3

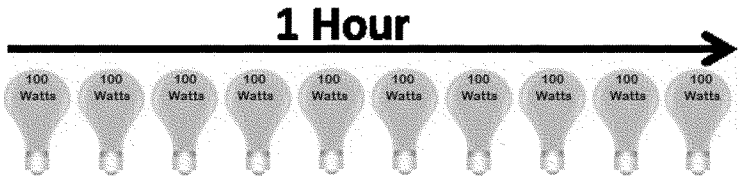
Introduction to Electric Rate Plans
<SKIP SECTION 3 FOR GROUP THAT DOES NOT GET EXPOSED TO EDUCATIONAL INFORMATION ABOUT RATE PLAN STRUCTURES>

kWh / ENERGY USE BEHAVIOR

Currently, you buy and use electricity by the kilowatt-hour (kWh), just as you buy gasoline by the gallon, and cell phone service by the minute.

1 kWh = 1 Unit of Electricity
It takes one unit of electricity (one kWh) to burn ten 100-watt light bulbs for one hour. Conversely, in order to save one unit of electricity (one kWh) you would need to reduce your electricity use by an amount equivalent to burning ten 100-watt light bulbs for one hour.

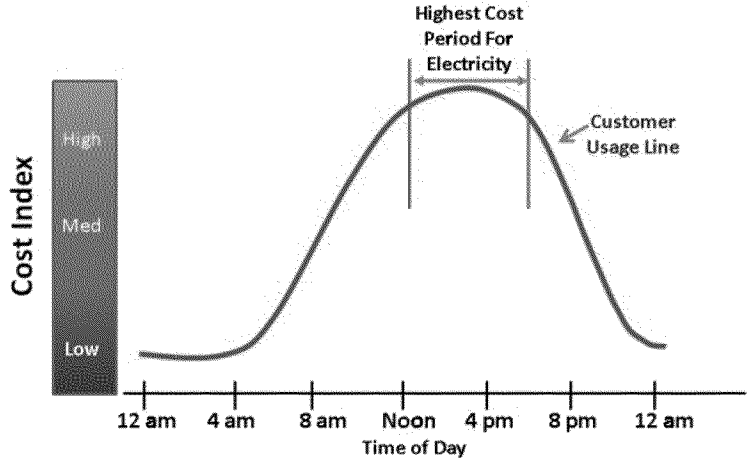
One Unit of Electricity = 1 kWh



10 x 100 watts = 1,000 watt hours = 1 kilowatt hour (kWh)

<For California participants only>
Note: 100 watt light bulbs are no longer sold in California. Using 60 watt light bulbs, you would need to turn off 17 light bulbs to save one kWh.

The Cost to Generate Electricity



- The cost of fuel used for power generation is a major component of the price of electricity.
- As total demand for electricity by all customers increases, utility companies must generate electricity using more costly resources.
- During the "peak" period of the day when the most electricity is being used by customers, the cost is significantly higher.
- And during exceptionally high demand days expensive and less environmentally friendly "peaker" plants need to be brought online.
- In addition, when the peak grows over time, new costly generation plants must be built.

Energy Use Behaviors

With all rate plans, if you *reduce* your electricity use overall, you can save money. Some rate plans also reflect the range in cost to generate electricity during the day, by saving you money when you *shift* your electricity use away from peak demand periods.

3.1a In the past, have you tried to save money on your bill by reducing your electricity use or by shifting your electricity use to a different time of day? RANDOMIZE

	Never	Sometimes	Often
Tried to save money on my bill by reducing my electricity use	1	2	3
Tried to save money on my bill by shifting my electricity use	1	2	3

<The next question should only show when the participant did not answer "Never". If they answered Never once, than that activity should not show in the next question.>

3.1b How much savings have you noticed on your bill from reducing or shifting your electricity use to a different time period when you…? RANDOMIZE

	A Lot	A Little	None
Tried to save money on my bill by reducing my electricity use	1	2	3
Tried to save money on my bill by shifting my electricity use	1	2	3

How your charges vary by type of rate plan

This survey investigates three kinds of rate plans that charge for electricity in different ways:

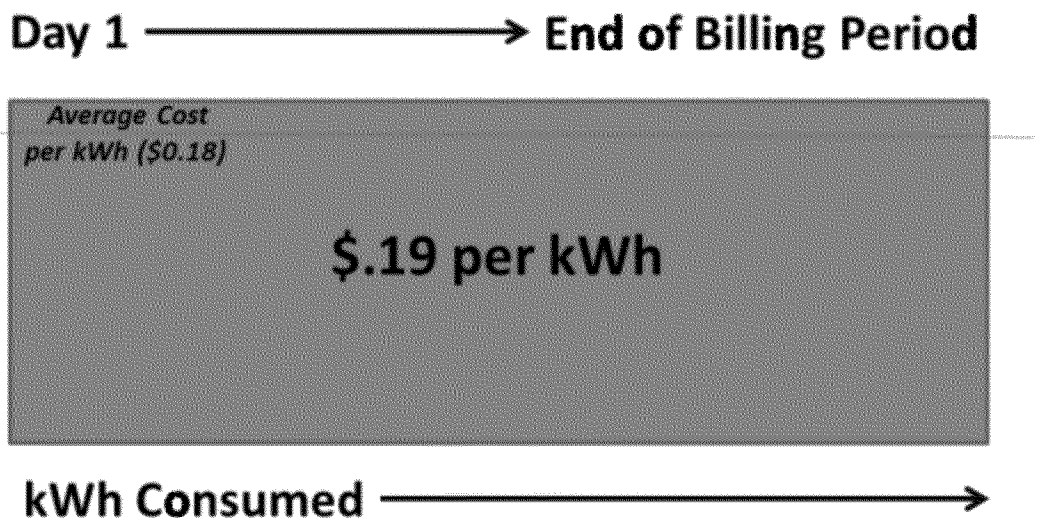
- Flat Rate Plan
- Time-of-Use Rate Plan
- Tiered Rate Plan

We're also investigating a couple different types of charges: Monthly Service Fees and Demand Charges. There will be a section for each of these.

<Randomize order of FLAT and Tiered>

Flat Rate Plan

- The price you pay for each unit of electricity (kWh) does not change no matter how much or when you use it during the billing period.
- You can save money by using less electricity (e.g., by installing energy efficient light bulbs and appliances, or turning off lights), but not by shifting your usage between different time periods of the day.
- You may pay a higher rate than average cost, but you are also less likely to have unexpected bill increases from month to month and season to season.

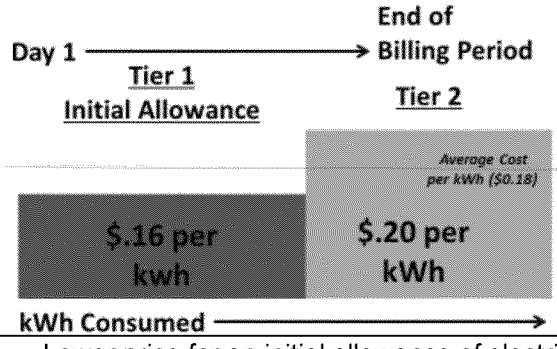
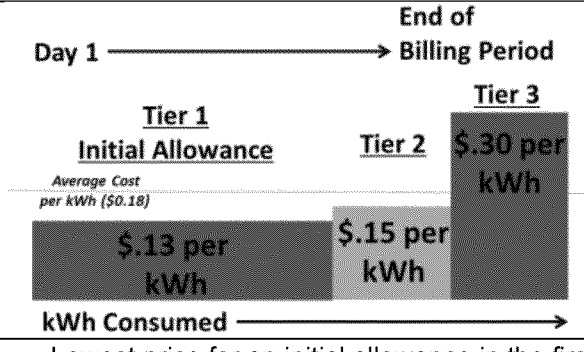


Price per kWh is illustrative only.

Tiered Rate Plan

- A certain allowance of electricity is available at the beginning of each monthly billing period at a low rate.
- If you consume more than this allowance, you move into higher blocks of electricity called "tiers."
- The price per unit (kWh) increases in each higher tier.

- The average price per unit (kWh) you pay during the monthly billing period, (along with what you can save on your bill by reducing your electricity usage) will depend on the total amount of electricity you have used, and the tier that you have reached by the end of the monthly billing period.
- You can save money on your bill by using less electricity over the monthly billing period (e.g., by installing energy efficient light bulbs and appliances, or turning off lights). This will reduce your overall usage and can also help you to avoid or delay going into higher priced "tiers".
- Shifting your energy use to other time periods during the day would not affect your bill.
- Tiered rate plans incentivize people to use less electricity which can help the environment because it means less harmful emissions are released into the air.
- Tiered rate plans range from having 2 to 5 tiers and associated increasing prices per kWh.

Two-Tiered Rate Plan	Three-Tiered Rate Plan
	
• Lower price for an initial allowance of electricity. • Higher price for all additional electricity used.	• Lowest price for an initial allowance in the first tier. • Price increases in the second and third tiers. • You can pay up to three different prices in any billing period.

Prices per kWh and tier timeframes are illustrative only. When during the billing period you would move into Tier 2 will depend on how much electricity you consume.

3.2

A) Which energy saving actions have you done in your household in the past 5 years?

B) Which do you think you realistically could implement or do more of in the future? *Check all that apply.* RANDOMIZE

	A) Done in the Past?	B) Can do in the Future?
Installing and using a programmable thermostat		
Replacing or cleaning furnace / air conditioning filters		
Reducing air conditioning temperature settings on the thermostat		

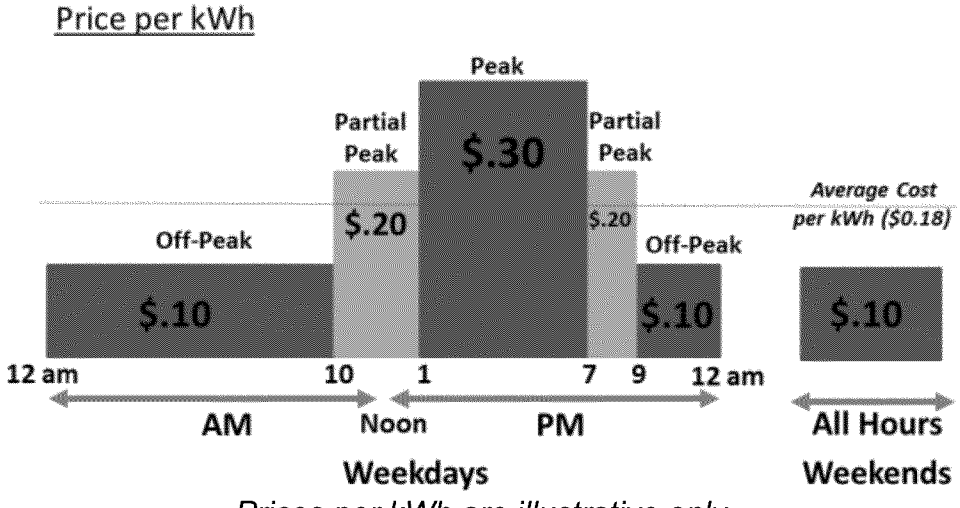
Unplugging appliances when not in use		
Installing and using energy saving power strips		
None of these		

3.3 Which of the following rate plans do you think would work the best for you? Choose One:

Flat Rate Plan (no tiers)	
Two-tier Plan	
Three-tier Plan	
No Preference	

Time-of-Use Rate Plan

- The price per unit of electricity (kWh) varies depending on the time of day.
- Prices are higher during periods when total system demand for electricity is the highest, typically in the afternoon and early evenings during the week.
- Prices per kWh are lower when people use less electricity, typically in the early mornings, nights and weekends.
- You may be able to save money on your bill by minimizing your energy use during peak times of day by using appliances only during off-peak times like early morning, late evening and weekends.
- Conversely, if you cannot shift or reduce your electricity usage during peak periods, you may have a higher bill.
- Because TOU rate plans charge higher prices during peak periods, people use less energy while the cost is high, which can help the environment and lower electricity prices for everybody because fewer new power plants need to be built.
- TOU rate plans typically have either two or three periods. The example below shows a three period TOU rate plan.



Prices per kWh are illustrative only.

3.4 1) Which of these do you currently have in your household? *Check all that apply*.

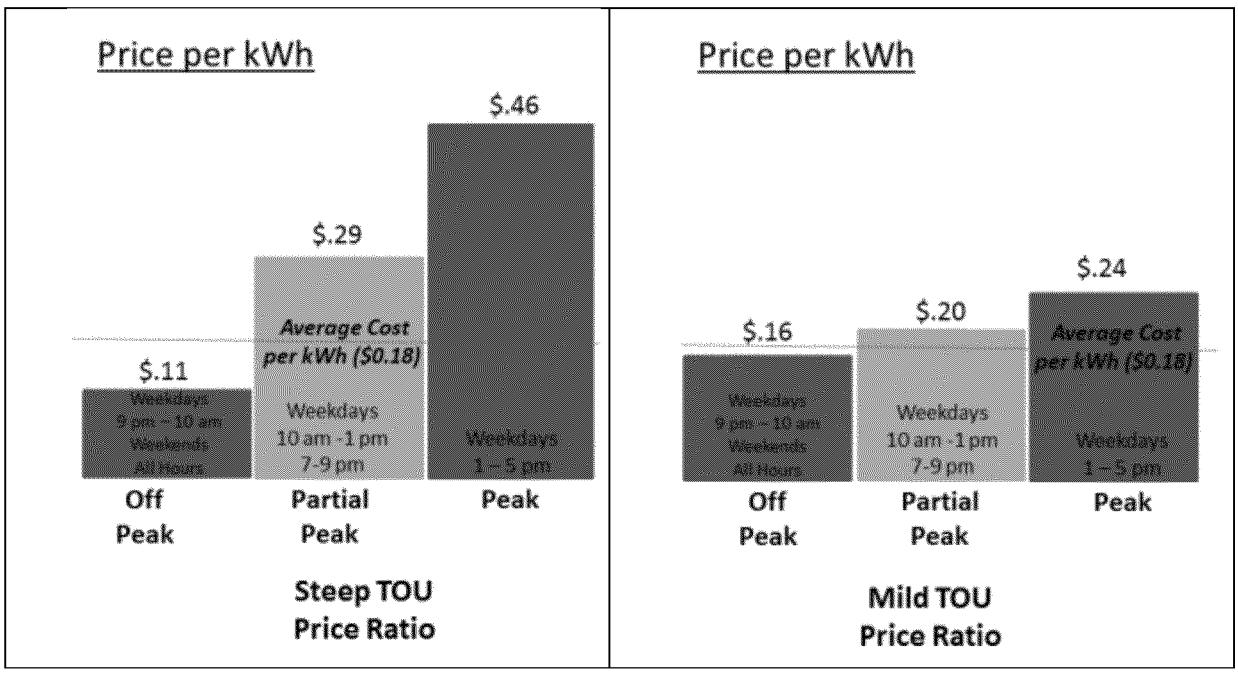
2A) In the past, have you shifted operation of this end use away from peak demand periods? *Check all that apply.*

2B) In the future, can you shift operation of this end use away from peak demand periods. *Check all that apply.*

	Have in my house	A) Have shifted use in the past away from peak period	B) Can shift in the future away from peak period
Clothes Washer			
Pool Pump			
Air Conditioner			
Electric Stove			
Electric Oven			
Electric Heater			
Television(s)			
Computer(s)			
Video Game Console(s)			

Time-of-Use Rate Plan Pricing

A Time-Of-Use rate plan may be "steep" where the price difference between the periods is greater, or "mild" where the price difference between the periods is smaller.



• Your bill can be a lot higher if you do not reduce electricity use during peak times, but it can be a lot lower if you can reduce your electricity use during the peak. • If you are typically home on afternoons during the week, there may be more potential for a higher bill on a steep TOU rate plan	• The risk of a higher bill is lower, but your ability to save money on your bill by shifting use off-peak is also lower. • If you are typically home on afternoons during the week, a mild TOU rate plan can help limit the potential for a higher bill.

Prices per kWh are illustrative only.

OTHER COMPONENTS OF RATE PLANS

Monthly Service Fees

- Typically based on the cost of providing certain services that all customers receive regardless of how much electricity they use, such as your connection to the grid, billing, customer service assistance, and communications.
- Other subscription-type services can have monthly fees, such cell phone plans, water service, etc.
- The price per kWh may be slightly lower than it would be on a rate structure without a monthly service fee.
- Can reduce your ability to save money by lowering or shifting your energy use, however, it can also help reduce your bills if you use a lot of energy.

How it Works

For example, with a $5 monthly service fee, you would pay $5 whether you use no electricity during the month or a lot of electricity. The $5 monthly service fee would be combined with your electricity per unit (kWh) charges.

- If your kWh charges were $95, with a $5 monthly service fee, your total charges would be $100.
- If your kWh charges were $0, your total charges would be $5.

3.5 Which of the following services charges you a monthly service fee?

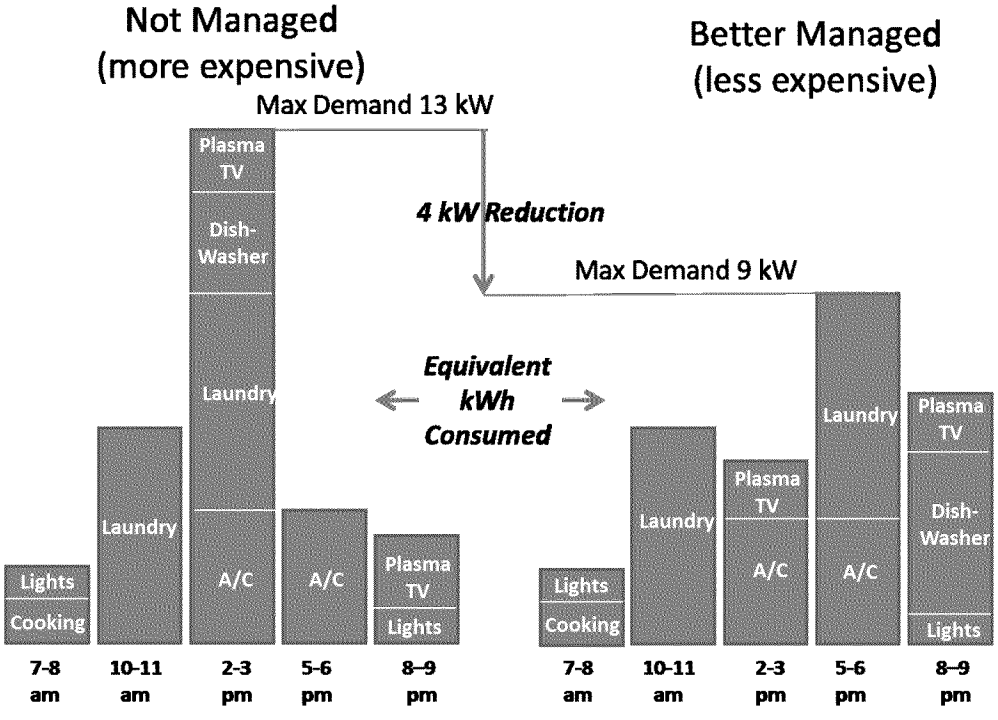
	Monthly Service Fee Included in Plan?			
	Yes	**No**	**Not Sure**	**Don't Have**
Electricity				
Natural Gas				

DEMAND CHARGE **<Substitute correct terminology for Riverside customers "reliability charge" >**

This is the last information section to read. Thank you for staying with us!

Electricity Demand – kilowatts (kW)

- Total demand for electricity by all customers can vary enormously according to time of day or time of year.
- For residential customers, kW demand is usually highest in the summer when air conditioners are running and in the winter when people come home and turn on their lights and use appliances and heaters.
- You can keep your demand low by spreading out your electricity (kWh) use as evenly as possible. For example, this chart shows how maximum demand can be lowered by spreading out activities such as laundry and dishwashing to other times of the day, while still using the same amount of electricity.



Actual, relative and temporal demand per end-use is illustrative and will vary based on appliance model, when you are home, and other factors.

Calculating Demand Charges

- Your maximum demand, or peak demand, will be the maximum kW used during any one hour period during the billing period when you run the most end-uses (appliances, lights, electronics, air conditioning, etc.) at the same time.
    - If you are able to spread out your demand evenly over the month and avoid high peaks, you will minimize your demand charge.

- If you are unable to avoid high peaks, you will have a higher demand charge.
- For example, if there is only one day during the billing period where you need to turn on your air conditioning, you demand charge will be based on your maximum demand during an hour when the air conditioning was running, which may be significantly higher than the maximum demand during any other hour during the billing period.

Examples of how your demand charge could be calculated:

Demand Charge $ / kW	Max Demand	Billed Amount
$2	*10 kW*	*$20*
$2	*9 kW*	*$18*

3.6 Does a demand charge apply to your current electric bill?

SELECT ONE

Yes	
No	
Not sure	

3.7 If you were comparing electric rate plans, what would be the most important factors you would consider in choosing the plan for your household?

Please choose the three most important factors from the following:

RANDOMIZE ALL

Understandable	In language I can understand.	
Simple	Does not require a lot of effort to understand how my energy use behavior will affect my bill.	
Stable	Will not cause my bill to change a lot from month to month, or from season to season (winter / summer).	
Predictable	I know about how much my bill amount should be each month.	
Worry-Free	I don't need to pay attention to when during the day or month I use energy.	
Saves Money	Provides opportunity to save money on my bill by changing my energy use behavior.	
Works for Me	Fits my habits and lifestyle.	
Green	Helps protect our air and environment.	
Fair	Seems like a fair way to be charged for energy.	
Reflects Cost of Electricity	Encourages me to use less electricity during peak periods when it costs the most.	

3.8. What does a fair way of being charged for energy mean to you?

OPEN ENDED QUESTION:

Section 4

Choice Exercise Introduction

Now we're going to show you three different rate plans. These rate plan configurations are based on the material you've been reading about in our survey.

Note that these different rate plans are not rate increases, but merely different ways of billing you for electricity.

The rate plan configurations are going to be randomly generated. Some of the rate plan configurations will look similar to others you may have seen before, but they will all be different, even if they are only slight differences. Please pay attention to the differences between the rate plan configurations.

<<12 Random, 1 Holdout (the same for each participant)>>

Q 4.1 – Q 4.12

SHOW 1st RANDOMIZED CHOICE TASK.

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

SHOW 2nd RANDOMIZED CHOICE TASK.

Thank you! Here's another set of four rate plan configurations.

SHOW 3rd RANDOMIZED CHOICE TASK.

Now we're going to show you 10 more of these preference tasks.

Please carefully look at all four rate plans and pick the rate plan that you prefer the most.

REPEAT 11 Times

Q 4.13

SHOW HOLDOUT CHOICE TASK

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

Please tell us why you chose this option. Please be as specific as possible.

Q 4.14 If this electric rate plan were available today, how likely would you be to switch from your current electric rate plan?

Would definitely switch	
Would consider switching	
No interest in switching	
Not sure	

Q 4.15 Now we'd like to ask about how your choice of rate plan might be affected by the possibility that your bill might change. Different rate plans can have different consequences for individual customers.

Getting a lower bill by switching to a new rate plan may require you to change your energy use behavior. At the same time, if you do not change your energy use behavior, your bill might go up. Which combination of potential savings versus potential for a higher bill would you prefer if switching to a new rate plan?

If I switched to a new rate plan I would like the dollar amount of my bill to have the potential to:

…Stay the same. I am not willing to risk a higher bill for potential savings.
…Decrease by 5%, but increase no more than 5%
…Decrease by 10%, but increase no more than 10%
…Decrease by 15%, but increase no more than 15%
…Decrease by 20%, but increase no more than 20%
…Decrease by 25%, but increase no more than 25%

Section 5 – Try Before You Buy (TBYB)

"Try Before You Buy" (TBYB) allows you to try out a new rate plan. If you end up saving money, you get to keep the savings. If you end up owing more money than you would have spent on your previous plan, then you get to pay only what you would have been charged on your previous plan.

5.1 Would your willingness to try each of these rate plans change with 12 months of "Try Before You Buy"?

	No TBYB Included		**12 Months TBYB Included**	
	Would Try	**Would NOT Try**	**Would Try**	**Would NOT Try**
2 Tiered Rate				
3 Tiered Rate				
Flat Rate				
Steep TOU Rate				
Mild TOU Rate				

SECTION 6 DELETED DUE TO TIME CONSIDERATIONS

Section 7
BILL REVIEW HABITS AND BILL IMPACTS

7.2 When you review your monthly electric bill, which of the following do you typically do? Select all that apply.

Look at the amount due and/or the due date	1
Look at actual electricity or kWh use	2
Read the details about how your bill is calculated	3
Read notes or other messages that are on the bill	4
Read any inserts that are included with the bill	5
None of these – you don't look at the bill	6
Not sure	9

7.3 Thinking about the last year, what was your average monthly electric bill during last summer (May through October)?

____(RECORD NUMBER 0-9999)

7.4 What was your average monthly electric bill during last winter (November through April)?

____(RECORD NUMBER 0-9999)

7.5 When your electric bill is more than the average amount or what you were expecting, how much of an increase gets your attention?

I look at my electric bill more closely when it is higher by approximately this $ amount:	
$0 to $9	
$10 to $19	
$20 to $29	
$30 to $39	
$40 to $49	
$50 to $74	
$75 to $99	
More than $100	
Not sure	

7.6 How often in the past 12 months have you received an electric bill that was higher than expected?

Never	
Rarely (1-2 bills)	
Sometimes (3-4 bills)	
Often (more than 4 bills)	

If Never, skip Questions 7.7 – 7.9

7.7 Did you take action when you noticed a higher than expected bill?

Took Action	**Called my electric utility company**	
	Checked my usage online	
	Something else: _____	
I did not take action		
Can't recall		

Section 8 – Demographics and Household Characteristics

The remaining questions ensure that we are representing the opinions of all households.

D1 What is the last year of school you completed?

Some high school or less	1
High school graduate	2
Trade or technical school graduate	3
Undergraduate college degree	4
Masters or doctorate degree	5
Prefer not to answer	9

D2 What is your current employment status?

Employed full-time	1
Employed part-time	2
Unemployed or between jobs	3
Homemaker or caregiver (non-professional)	4
Student	5
Retired	6
Prefer not to answer	9

D3 Do you spend any part of your work day at home?

Work at home all the time	1
Work at home most of the time	2
Work at home sometimes	3
Do not work at home	4

D4 What do you consider your ethnicity to be?

White (but not Hispanic),	1
African-American,	2
Asian or Pacific Islander,	3
Hispanic or Latin American	4
Native American,	5
Mixed race	6
Something else (SPECIFY:_____)	98
Prefer not to answer	99

D5 What languages do you speak in your home?

English	1
Spanish	2
Chinese - Mandarin	3
Chinese - Cantonese	4
Japanese	5
Korean	6
Filipino	7
Hmong	8
Vietnamese	9
Something else (SPECIFY:____)	10
Prefer not to answer	98

D6 If you are willing to provide this information for demographic use only, we would like to know whether you or anyone in your household has a permanent disability, related to mobility, hearing, vision, cognitive, psychological, or chronic disease?

Yes	1
No	2
Prefer not to answer	9

D7 [IF D6=YES] In which category would you classify the disability?

Mobility	1
Hearing	2
Vision	3
Cognitive (learning or mental)	4

Psychological..... 5
Chronic disease..... 6
Other (Specify:____)..... 7
Not sure / Prefer not to answer..... 9

H1 Which of the following best describes the type of home you live in?

Single family, detached (e.g., freestanding house)..... 1
Single family attached such as town house or row house 2
Apartment or condo in multi-unit structure of 2–4 units 3
Apartment or condo in multi-unit structure of 5 or more units . 4
Mobile home 5
Not sure or prefer not to answer 8

H2 Do you or does your family own or rent your home?

Own 1
Rent..... 2

**H3 Approximately in what year was your home built? Record the nearest decade if not known exactly.

_____ Record year (1800-2013)

H4 Are you enrolled on any of these special electric rate plans?

CARE or FERA (discount for low-income customers) (CA) 1
Low-income Discount (Non-CA) 2
Electric Vehicle rate plan 3
Time Of Use rate plan 4
Solar or Net Energy Metering (NEM) rate plan (CA)..... 5
Solar Rate (non-CA) 6
SmartRate Plan (PG&E ONLY) 7
Balanced Payment Plan 8
Automatic Payment Service..... 9
None of these 10
Not sure..... 11

[IF NOT CHECKED IN H4]
H5 Do you plan to add the following in the next 12 months?

Plug-in Electric Vehicle..... 1
Solar Electricity..... 2
Not sure..... 3
No, I do not..... 4

<Insert 3.2 and 3.4 here for unexposed customers.>

H7 OPTIONAL **<Only include this question for SCE & PG&E customers>**

We h ave one last thing to ask you. Would you please provide the account number from your latest electric bill? Doing so is optional, however, it will help us better understa nd your answer to this survey. Your confidentiality will be maintained, and no sales call will result.
Yes, I will provide my account number
No, I prefer not to.

If yes

Please enter your account number here: _____

H8 OPTIONAL

What was your general impression of this survey?

Thank you for your participation.