R.12-06-013 Residential Rate Structure
Customer Survey Key Findings – Follow Up 4/16 Webinar
Final Questions from 4/19 Webinar

1. Slide 14-Important Factors when choosing rates - 66% of what? How were these priorities selected by the respondents?
   Answer. Respondents were asked to select their three top factors when choosing a rate plan for their household. 66% of respondents selected "saves money" as one of their Top 3 factors.
2. Slide 18 – as you rank attributes, what was the method or significance of determining attribute importance?
   Answer. Attribute importance was determined through Conjoint Analysis. Respondents reviewed thirteen sets of rates (3 different rates per set) and selected the one rate of the three which they most preferred. With every choice that was made, the specific "levels" for each attribute from the chosen (and rejected) options were recorded. This information was then used to calculate the attribute importance scores, which reflect the relative influence that teach attribute had on respondent choices.
3. Revenue Neutral Rates
   A. Why simulator cannot be build based on exact revenue neutral rates
   B. What the simulator tells us even though the rate options are not revenue neutral
   C. Limitations of running revenue neutral rates through simulator
   Answer. This study is focused on customer preferences and perceptions; it is not an economic study. The rate options presented to respondents in the survey were designed to provide a wide range of options in order to understand customer preferences regarding rates. They were not designed to be revenue neutral. The resulting customer preferences will be used to as inputs to help guide the decisions of the rate designers.
4. (Jamie Fine) What are the limitations of this work to the extent it can be generalized to all class of customers?
   Answer. The research was conducted among an online panel of residential ratepayers. The research team set quotas to match age and income against California census data of the adult population. The data was then weighted to match education and gender of the California adult population. Additionally, interviews were completed across each IOU's service territory. As such, we believe that the sample can be generalized to the overall residential customer population for the three IOU's. Also, the sample did include most types of customers that are found in the total population, including CARE, those who self-identified as having a household member with a disability, seniors, and others. These subgroups can also be analyzed separately.
5. (TURN) We do not understand the bases for the conclusions on p. 22 (last bullet point) and p. 44 (first bullet point under tiered rates) regarding a preference for steeper tier differentials. Our impression is the opposite. Please explain.
   Answer. These references were a hypothesis that the research team had generated based on the results from the Conjoint Analysis, specifically concerning utility values. The team subsequently tested the hypothesis after the 4/19 webinar using the conjoint simulator and found it to be true.
6. Slide 20 – very last bullet point, potentially strong preference for 2 tier rate with relatively high tier prices, where are you getting that conclusion?
   Answer: This hypothesis was tested in the conjoint simulator, and not proven. This seems to support the finding that price per kWh drives choice more than rate structures themselves.

Even though the 2-tier rate was simpler, participants still based their choice more on the relative price per KWh levels between the different rates.

7. (TURN) Please explain the ability to compare numerical results between different rate plans. Is it possible to compare. How did you evaluate preference between rate plans.
   Answer. Customer preference for different rate plans can be estimated using the conjoint simulator. The conjoint simulator uses the respondent-level utility values for each level within an attribute to estimate the percent of customers who would prefer each of the options that are included in any particular conjoint simulation scenario. Any combination of the attributes and levels can be used to create "market place" scenarios where we can test any other combination of attributes and levels against each other.

DRA

1. The study suggested that there is no noticeable difference in results between online and alternative recruitment of low income. (p.4) Does this apply to all the conclusions drawn in the RROIR Customer Survey Key Findings? Any areas that show distinct differences?
   Answer. The study did not find enough differences between the online and the alternative recruitment of low income groups to suggest that the respondents came from two different populations. The alternative recruitment group was included to test a hypothesis that the online sample would not reflect the true population of low income customers, so the lack of difference between the two groups refutes this hypothesis. In other words, we believe that the online sample is similar to the alternative recruitment sample of low income customers.
2. 19% describe they are on TOU rates. (p.7) Are some of these customers currently on TOU options? Do IOUs know?
   Answer. A very small percentage of customers are currently on TOU, far fewer than the 19% who believe they are on a TOU rate. This gap highlights the fact that customers' current knowledge about rates is modest at best, and that TOU is not a foreign concept to a sizeable minority.
3. Interest in taking action to reduce bill. (p. 8) How do the IOUs intend this be used? *
   Answer. This information, along with other survey responses, will provided deeper understanding about customer interests and preferences. The finding that a majority of customers are interested in taking action to reduce their bill suggests that at least some would be receptive to rates that could reward them for their efforts.
4. Regarding Savings needed to prompt switching (slide 9): It is interesting that only 3% picked the $150-199 savings level, when 22% picked $100-149 and 16% picked $200-299. Does Hiner know what's going on here?
   Answer. This is a result of respondents' tendency to select "round numbers" so higher percentages selected $100 and $200 than selected an amount in the $150-$199 range.
5. Important factors when choosing rates (p.13). 30% said simple while 24% said understandable. Are customers clear about what is simple and what is understandable? Will they mix predictable with worry free? Maybe the above results should be counted together?
   Answer. Survey respondents saw short descriptions of these factors. Because respondents were asked to choose their top 3, results for two different factors cannot be added together. Below is the exact text from the survey:

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.	

6. Rate choice exercises (p.15-16, 23-28). If these are done without making them revenue neutral, what Hiner intends to do to take that into consideration?
   Answer. Our purpose was not to test revenue neutral rates, but rather to present customers with a variety of rate options in order to understand their preferences. This preference information can be used to guide the development of revenue neutral rates.
7. Interest in switching (p.29). It states that after choosing a preferred rate plan option thirteen times, respondents were asked how likely they would actually switch from their current rate plan. And, it suggested 90% were open to consider a new rate. It is not clear whether these customers are totally clear about what their current rate plan is. This slide seemed to imply that respondents changed their thoughts. It is not totally clear what trigger the change. Is it through the exercise of choosing 13 different rate options?
   Answer: This question attempts to account for the fact that when respondents were working through the first 12 choice sets, their current rate was not one of the options. They were forced to make a choice, which showed their top preference among the three rates, but not necessarily whether they would choose that rate if it were available as an option over their current rate. After the 13th choice set, which was identical for every respondent, they were asked about that choice specifically if they would switch from their current rate. Since only 9% said they would definitely NOT switch from their current rate, 91% were willing to consider switching to that particular rate.
8. Tolerance for bill increase is in excess of 20%. (p.30) How to interpret this together with the last part that says 90% are open to consider a new rate?
   Answer: This purpose of this question was to try to understand how much bill change customers might be able to tolerate during a transition to a new rate structure. The results of this question provide some insight on how rates might be transitioned over time to minimize bill impacts.
9. Willingness to risk bill impact (p.31) almost half are not willing to risk bill impact. So, again, this seems contradictory to 90% open to consider a new rate plan.
   Answer: This question helps explain customer inertia. Even though customers would consider a new rate plan, it doesn't mean they will switch. This question provides insight into propensity to actually switch based on potential savings vs. risk of bill increase. Another way to look at this is that even though 90% said they would consider switching, only 50% are willing to switch if there would be any risk of a higher bill. And among those, only 24% would be willing to risk more than a 10% bill increase. This could provide insight into the design of TOU rates if the

objective is to encourage customers to switch.

10. Regarding Rate Plan Option Education: For the question "Which of the following rate plans do you think would work the best for you?" (p.12 of survey questionnaire) The Steep TOU and Mild TOU plan were not included in the rate options but included in the findings?
    Answer: This question was included as part of the education process, directly after the respondent had been provided information about flat and tiered rates. The purpose was to have them stop and consider the information they just reviewed. The answers to this question did not factor into the conjoint analysis, which analyzed ~82,000 choices to be able to identify relative preferences for different rate structures.
11. In the Conclusions (p.42-44)
    a. Designing a TOU rate option that is appealing enough to encourage migration from standard rate. (p.43) – How will IOUs address potential revenue shortfall.
       Answer: This is a key question that will be addressed in rate proposal filings.
    b. Concluded that flat rate, then 2-tiered rates are most favorable to customers. (p.44) but, does the customers know where they are and what the consequences are if they move to flat or 2-tiered?
       Answer: Based on the conjoint results, we did conclude that a flat rate and 2 tiered rate were preferred by more customers than the other three types (3 tiered, TOU with 2 price levels, and TOU with 3 price levels). However, keep in mind that some customers preferred each of these other three types as well; that is, there was variation in preference across customers. Customers did receive education about these rate types prior to making choices between them, and their conjoint task choices were not random, so they did use some basis for judgment when making their rate choices in the survey.
    c. Rate attributes, levels and structure (p.44) Again, the customers were not given adequate info on how those choices impact their bills. How will Hiner address this?
       Answer. The survey included a section designed to inform and educate customers prior to their rate choices. We believe the information that was included here was adequate for customers to understand the implications of different rate structures, price per kWh, service charges, and demand charges. It is clear that customers where thinking about bill impacts when making their conjoint task choices. This is apparent when reviewing the open-ends from the survey.
    d. Slide 42 states "Customers were able to make thoughtful rate choice decisions without rate education." What is this statement based on?*
       Answer. The survey sample included a group of customers who were not exposed to the educational section of the survey. This "unexposed" groups' conjoint task choices showed similar preferences compared to the core sample. Again, the open-ends also provide evidence that respondents were making thoughtful choices during the conjoint task.

12. Regarding the section on "Core" respondent characteristics on slide 48, demographics of Core group don't match California Demographics. - US Census California data for 2011:
    - Hispanic of Latino= 38.1% vs. Survey respondents= 17%
    - White (not Hispanic)= 39.7% vs. Survey respondents= 64%
    - African American= 6.6% vs. Survey respondents= 2%

    Answer. The research was conducted among an online panel of residential ratepayers. The research team set quotas to match age and income against California census data of the adult population. The data was then weighted to match education and gender of the California adult

population. The research team had determined that these variables were among the most important to control since they could likely have a bearing on responses.

Additional Questions From 4/19 Webinar

13. Did respondents have the impression that the choices were about "rate increases"?
    Answer. The survey text included an introduction that explained, "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." Prior to the conjoint choice section, additional instructions were provided, "Note that these different rate plans are not rate increases, but merely different ways of billing you for electricity."
14. Is it possible respondents answered randomly?
    Answer. The Conjoint Analysis method allows for analytical testing of responses for randomness. Our testing indicated that customer responses were not at all random. These statistics showed that respondents were giving thoughtful answer to the conjoint tasks and that respondents were being consistent in their choices.
15. Where does the document refer to rate preferences?
    Answer. Rate preferences are found in the Conjoint Analysis section of the PowerPoint report. Specifically, there are conjoint simulation results that show the share of preference for some example rate option comparisons. The cross tabulations do not include the conjoint results because these conjoint results were determined in a summary method that draws from individual customer responses, but does not assign back any summary results to an individual respondent. Hence, the conjoint results cannot be integrated into the cross tabulations. One rate choice set that all respondents saw and answered, called the "hold-out task," is included in the cross tabulations. The "hold-out task" was the last and final conjoint task given to respondents. This task was identical for all respondents.
16. What is the difference between the capital versus lower case letters notations?
    Answer. Letters (in the cross tabulations) indicate that the noted percentage or mean is statistically different from the column associated with the letter. The capital or upper case letters indicate significant differences at a 95% confidence level (a higher standard), while the lower case letters indicate significant differences at a 90% confidence (a somewhat lower but still generally accepted standard).
17. What do the preference percentages related to the hold-out task mean, and how to they relate to other findings about preferences among rate structures?
    Answer. The preference percentages related to the hold-out task are the percent of all respondents who selected each of the three options in the hold-out. Keep in mind that the hold-out options included rate types, price per kWh, service charge, and demand charge variables, so should not be used to draw conclusions solely about rate type.
18. Can utility values within a rate attribute could be compared with another (eg pages 20 and 21, can 51.3 be compared to 47.7)?
    Answer. Utility values should not be compared across attributes. Utility values within an attribute are scaled to sum to zero, which makes it difficult to cross compare.