California Residential Rates OIR, 2012 / 2013
PG&E, SCE and SDG&E – Proposed Residential Rates Preference Research

Background

PG&E, SCE and SDG&E (the IOUs) believe that a critical data need for a comprehensive response to the Residential Rates OIR is the customer viewpoint of current and possible future residential rate design. In order for the IOUs to develop appropriate rate design proposals in this proceeding, an understanding of customer perceptions of rate structures, components and potential bill impacts must be incorporated. Over the past several years, the IOUs have explored customer understanding of and attitudes towards rates through quantitative and qualitative research. After consolidating existing research results from the IOUs, the key findings can be summarized as follows:

- Electric rates are not well understood by residential customers.
- Tiered rates, in particular, are viewed as overly complex.
- Customers want rate options that they can understand, and are stable, predictable, fair and affordable.

The challenge remains to incorporate this understanding of customer attitudes into the ways in which potential future rate components and full rate options are rolled out and explained to customers. At the same time, understanding the benefits that customers infer from rate features such as "understandable," "stable," etc., and to what degree their preferences capture these benefits will help inform future rate design efforts.

In addition, we also want to ensure that we understand and capture the best means of ensuring customer understandability within groups such as low income/hard-to-reach customers, Spanish-speaking customers, Solar customers and "more involved" customers. Education is a critical component of introducing a rate. We, therefore, want to compare the results of an additional sample of "unexposed " customers who are not provided with the explanation of rate terminology within our survey, with those of our main sample, who will be provided some information about rate features before they are asked to make choices.

Objectives

The IOUs are interested in conducting a statewide quantitative research project, have collaborated on the initial objectives and scoping of this research, and are soliciting input from other parties in the RROIR. The objectives are as follows:

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- Understand current customer awareness and understanding of different rate structures and rate terminology
- Quantify, and further identify how customer attitudes and understanding impact how customers evaluate rate details and components, in order to ensure rates are understandable by customers and provide customers meaningful opportunities to change their energy use in ways that will reduce their bills.
- Understand the reasons that "understandable," stable," "predictable," "choice," "fair," and "affordable" matter to residential customers to better inform rate transition / implementation strategies.
- Determine understandability for different potential rate options across customer segments. Segments under consideration include:
  - Service provider: PG&E, SCE, SDG&E
  - Usage: high vs. low
  - Regional: e.g. by climate zones
  - Demographics: e.g., high vs. low income, seniors vs. other age groups
  - Solar and non-solar
  - Spanish-speaking
  - "High involvement" customers, who actively modify their energy use behavior and save money
  - "Unexposed" customers that will not be provided the rate terminology in the survey vs. the informed customers that will be provided some level of education about the optional rate structures

Methodology

To achieve these objectives, we propose utilizing a quantitative research design that would include choice-based questions within a conjoint analysis design. Conjoint is a well-accepted customer research method used in product development and marketing across different industries and product categories, which determines how people value different features that make up a product or service. The objective is to establish what combination of attributes is most influential on customer choice or decision making. Conjoint can be used to use specific rate structure components as a basis for assembling rates. In conjoint language, these would be called the "attributes" (e.g., volumetric charge, customer charge, demand charge, time-of-use periods). "Levels" specify potential variations in the options for a particular attribute. For the 3 basic rate structures – time-of use, inclining block, and flat - customers would be asked to rank options such as:

- A two-tiered inclining block rate with and without a demand charge
- A TOU Rate with a steep and a mild price ratio of on-peak to off-peak periods
- A Flat Rate with or without a customer charge.

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A conjoint analysis will create insight into rates that appeal to the majority of customers, as well as specific sub-segments, such as low-income customers. The respondents will be provided definitions in simple customer language before completing the choice exercise. This approach will make it easier for the customer to assess the rate options.

After the conjoint exercise, we will evaluate what is necessary to make rates "understandable" and "affordable," etc., for residential customers and how these principles apply to potential rate structures and methods for communicating those rate structures to customers, as well as the benefits of these characteristics.

We plan to visually present details concerning potential rate options in the conjoint exercise and have identified using a web-based survey as an appropriate methodology. To ensure a demographically representative sample, we propose to set quotas based on age, gender, and income (including CARE customers). However, it is not possible to match population proportions based on ethnicity or primary language spoken – web-based survey panel samples are substantially under-represented for this. A portion of the surveys will be completed in Spanish to ensure that we capture inputs from Spanish-speakers using a targeted web-based panel of Spanish-speakers. In addition, we propose adding a separate sample of low-income/hard-to-reach customers who may not have online access and provide them with computers. This latter sample of 200 participants will supplement the approximately 500 low-income customers we will be able to identify within the 2,100 general market sample.

Sample

We recommend a total sample size of 2,100 "general population" customers, with optional subgroups of 200 customers each.

Sample Group	Sample Size (n)
General Residential Population (Total)	2,100
- English	*1,950*
- Spanish	*150*
Targeted Optional Subgroup	200

The general population sample would total 2,100 of which 1,950 will complete the survey in English and 150 will complete the survey in Spanish. This sample will be stratified across the IOU service territories which would allow three subgroups of n=~700. For "statewide" results,

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data will be weighted to match IOU population proportions.

Sample selection effort for specific customer groups include the following:

- The 150 Spanish-speakers (approximately 7% total sample) will be recruited from a specialized Spanish-language panel. This sample may be supplemented by the individual IOUs.
- Samples of the following groups will be determined:
  - Solar customers
  - "More involved" customers such as PG&E's SmartRate customers, and residential customers outside of California where time-varying rates have already been implemented
  - Hard-to-reach/low income customers who are not currently online and will be given access to computers in order to participate in this survey
  - Residential "unexposed" customers who would *not* be provided an explanation of rate features before the performing the conjoint exercise.

Timing

This study must be completed by the end of January, in order for the findings to be available for reply to the "Definitions" order and reply comments scheduled for late January / early February 2013.

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