DRAFT

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION

AGENDA ID #15837
RESOLUTION E-4846
August 10, 2017

R E S O L U T I O N

Resolution E-4846. Adoption of Pacific Gas and Electric Company's residential default time-of-use pricing pilot pursuant to Decision 15-07-001.

PROPOSED OUTCOME:

- Adopts Pacific Gas and Electric Company's (PG&E's) Residential Default Time-of-Use (TOU) Pilot Design with modifications.

SAFETY CONSIDERATIONS:

- There is no impact on safety.

ESTIMATED COST:

- The cost of PG&E's default TOU pricing pilot is estimated to be up to $14.7 million. These costs shall be recorded and recovered as detailed in this Resolution.

By Advice Letter 4979-E filed on December 16, 2016, 4979-E-A filed on December 23, 2016, 4979-E-B filed on February 24, 2017 and 4979-E-C filed on May 8, 2017.

SUMMARY

On December 16, 2016, Pacific Gas and Electric Company (PG&E) filed its Default Time-of-Use (TOU) Pilot Design advice letter (advice letter) in accordance with Decision (D.) 15-07-001 (the Decision)[1] and an Administrative Law Judge (ALJ) Ruling issued on December 29, 2015 in Rulemaking

[1] D. 15-07-001 at 166.

(R.) 12-06-013. The advice letter sets out PG&E's plan to default approximately 250,000 residential customers onto TOU rates in March 2018. PG&E will submit a Rate Design Window (RDW) application no later than January 1, 2018 for a default residential TOU rate and a menu of optional TOU rates. The results of this default pilot are expected to inform the resolution of that application and PG&E's subsequent default of all eligible residential customers onto TOU rates beginning in 2019. According to the advice letter, PG&E's proposed default pilot includes the following elements:

- Pre-default notifications will be sent to 250,000 eligible residential customers, and those who do not opt-out will be defaulted onto the default TOU rate (E-TOU-C3) over a two week period in March 2018.
- The pilot study period will begin in March 2018 and continue for one year. Customers will remain on the default TOU rate at the end of the pilot study period unless they are removed from the pilot due to ineligibility or choose to opt-out. Customers are free to opt-out at any time prior to, during, or after the pilot study period.
- Customers will receive bill protection for 12 months from the date that they are enrolled onto the default TOU rate or up to the date that they are unenrolled from the default TOU rate, whichever occurs first.
- The default TOU rate will have a daily peak period from 4-9pm, with all other hours as off-peak. The rate has the same structure year-round. The summer peak to off-peak price (POPP) ratio will be approximately 1.2:1 for usage above baseline.
- PG&E will test a variety of marketing, education and outreach (ME&O) materials.

PG&E's default pilot will gather information on:

- PG&E's operational readiness to default large numbers of customers onto TOU rates over a short time. This will include an assessment of PG&E's business processes and systems, information technology (IT) and billing systems, and customer service/support needs.

- The impact of different forms of ME&O on customer awareness of rate options, engagement with the TOU rate and perceptions while on a TOU rate. At a minimum, PG&E will test multiple versions of pre-default notifications, welcome communications and seasonal communications.
- The average peak and off-peak change in energy usage by customers enrolled on the default TOU rate.
- The bill impacts for customers enrolled on the default TOU rate.
- The opt-out rate for customers defaulted onto a TOU rate.
- The impact of tools such as balanced payment plans (BPP) on customer retention on the default TOU rate and load, bills and perceptions while on the default TOU rate.

This information must be collected in the evaluation and analysis of PG&E's default pilot. PG&E is ordered to ensure that the deliverables as outlined in this Resolution are collected through the default pilot and are presented in the proceeding to resolve PG&E's January 1, 2018 RDW application. PG&E's advice letter also contains a request for authorization of default pilot study costs as required by the Decision.[2]

As discussed in detail below, PG&E's advice letter, as modified herein, fulfills the requirements of the Decision and is expected to lead to the collection of the deliverables outlined in this Resolution. This Resolution adopts PG&E's Default TOU Pilot Design with modifications.

BACKGROUND

Public Utilities (P.U.) Code § 745[3] establishes the conditions for implementing default TOU rates for residential electricity customers. The Decision established the pathway toward default TOU rates for all eligible residential electricity customers of California's investor-owned utilities (PG&E, Southern California

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2 D.15-07-001 at 166.

3 All subsequent Section references are to the California Public Utilities Code unless otherwise indicated.

Edison Company (SCE) and San Diego Gas & Electric Company (SDG&E), collectively the "IOUs") in 2019, which includes a requirement that the IOUs conduct both opt-in and default TOU pilots.

Per the Decision's instructions, the IOUs formed a TOU Working Group (Working Group) to develop study parameters and pilot design. The Working Group collectively selected a consultant to inform its work on TOU pilot design and has met frequently since September 2015. PG&E's opt-in TOU pilots were the result of this collaboration and were approved in Resolution E-4762.

PG&E enrolled approximately 20,000 customers onto its opt-in TOU pilots, which began in June 2016. Customers were enrolled onto one of three TOU rates (treatment customers) or remained on the tiered rate (control customers). These pilots are comparing the load and bills between treatment and control customers, as well as their responses to an extensive survey. The findings from the opt-in TOU pilots will inform the Commission's decisions related to Section 745(c)(2)[4], as well as provide valuable information regarding customers' understanding, acceptance and engagement while taking service on a given TOU rate.

The Decision required a default pilot, in addition to opt-in pilots, to "study aspects of TOU that are directly impacted by self-selection bias, and to fine-tune customer education and test system operability prior to full rollout of default TOU." The Working Group and its consultant collaborated on default TOU pilot design, and the final report of the consultant to the Working Group (Consultant Report) is attached to PG&E's advice letter. The consultant report heavily informed PG&E's default TOU pilot design. We expect the Working Group will remain extant to consider ongoing implementation issues related to the default pilot, further development of the monitoring and evaluation (M&E) plan for the default pilot, and the preparation of PG&E's RDW application.

4 P.U. Code § 745(c)(2) The Commission shall ensure that any time-of-use rate schedule does not cause unreasonable hardship for senior citizens or economically vulnerable customers in hot climate zones.

NOTICE

Notice of AL 4979-E, 4979-E-A, 4979-E-B and 4979-E-C were made by publication in the Commission's Daily Calendar. PG&E states that a copy of the Advice Letter was mailed and distributed in accordance with Section 4 of General Order 96-B, and was also served on the R.12-06-013 service list.

PROTESTS

PG&E's Advice Letter 4979-E was timely protested by Environmental Defense Fund (EDF), Marin Clean Energy (MCE), the Office of Ratepayer Advocates (ORA) and the Utility Reform Network (TURN). PG&E responded to the protests of EDF, TURN, MCE and ORA on February 7, 2017.

PG&E's Supplemental Advice Letter 4979-E-B was timely protested by MCE and Sonoma Clean Power (SCP). PG&E responded to the joint protest of MCE and SCP on March 23, 2017.

PG&E's Supplemental Advice Letter 4979-E-C was timely protested by ORA. PG&E responded to the protest on May 25, 2017.

DISCUSSION

Energy Division has reviewed AL 4979-E, 4979-E-A, 4979-E-B and 4979-E-C and finds that PG&E's Default TOU Pilot Design fulfills the requirements outlined in D.15-07-001 and other direction provided in R.12-06-013, subject to certain modifications as discussed below.

Sample Size

PG&E currently estimates that 3,000,000 residential customers are eligible for default TOU.[5] In order to transition this volume of customers onto TOU over a one year period, excluding summer months and certain other months due to

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[5] AL 4949-E, Attachment 1 at 28.

All subsequent references to AL 4979-E are references to Attachment 1 to that advice letter, unless otherwise indicated.

ME&O constraints, PG&E estimates that it would need to transition customers at a rate of approximately 500,000 customers per month.

Per the Decision, a primary purpose of the default pilot is to "test system operability prior to full rollout of default TOU." Thus, the default pilot will mimic the volume of rate changes PG&E anticipates needing to perform in the full default rollout. PG&E will send pre-default notifications to 250,000 eligible residential customers, and default those who do not opt-out over a two-week period in March 2018. PG&E will assess the capability of its business processes and systems, IT and billing systems, and customer service to support this volume of rate changes. We find that PG&E's proposed sample size is adequate to fulfill this pilot objective.

Rate Design

PG&E initially proposed to default all pilot customers to a new two-tiered TOU rate, E-TOU-C (or EL-TOU-C, its California Alternate Rates for Energy (CARE) counterpart). E-TOU-C has a peak period from 4-9pm on weekdays, with all other hours as off-peak. These definitions are the same in the summer and winter. As provided in AL 4979-E, E-TOU-C would have a summer price differential between peak and off-peak usage of approximately 5.4¢ and a resulting POPP ratio of approximately 1.19:1 for usage above baseline. EL-TOU-C would retain a price differential of 5.4¢, resulting in a POPP ratio of 1.32:1 for usage of baseline. Illustrative pricing (based on current sales by tier and revenue requirements) is provided below.[6]

[6] *Id.* at 34.

PROXY 2018 E-TOU-C RATES (BY TIER)

	Summer On-Peak	Summer Off-Peak	Winter On-Peak	Winter Off-Peak
Non-CARE				
Baseline	$0.25764	$0.20345	$0.20179	$0.18752
Over Baseline	$0.33456	$0.28037	$0.27870	$0.26444
CARE				
Baseline	$0.18339	$0.12920	$0.12754	$0.11327
Over Baseline	$0.22414	$0.17095	$0.16929	$0.15502

In AL 4979-E-C, PG&E instead proposes to default all pilot customers to a slightly different two-tiered TOU rate, E-TOU-C3 (or EL-TOU-C3). E-TOU-C3 has a peak period from 4-9pm on *all* days, with all other hours as off-peak. These definitions are the same in the summer and winter. E-TOU-C3 would have a summer price differential between peak and off-peak usage of approximately 6.3¢ and a resulting POPP ratio of approximately 1.23:1 for usage above baseline. EL-TOU-C3, the CARE counterpart of E-TOU-C3, would retain a price differential of 6.3¢, resulting in a POPP ratio of approximately 1.39:1 for usage above baseline. Illustrative pricing (based on current sales by tier and revenue requirements) is provided below.[7]

PROXY 2018 E-TOU-C3 RATES (BY TIER)				
	Summer Peak	Summer Off-Peak	Winter Peak	Winter Off-Peak
Non-CARE				
Baseline	$0.25866	$0.19522	$0.20331	$0.18598
Over Baseline	$0.33558	$0.27214	$0.28023	$0.26290
CARE				
Baseline	$0.18500	$0.12157	$0.12855	$0.11122
Over Baseline	$0.22676	$0.16332	$0.17030	$0.15297

7 AL 4979-E-C Appendix A.

In their protests to AL 4979-E and PG&E's originally proposed E-TOU-C, EDF and TURN both argue that PG&E should be testing at least two rates, and that the second rate should have a higher POPP ratio than 1.2:1. EDF argues that the scope and objectives of PG&E's default pilot are too narrowly defined and that the pilot should additionally be testing how different TOU rates impact customers' interest in distributed energy resources (DERs), as different rate structures offer different value propositions for DERs. TURN argues that PG&E's proposed TOU rate is insufficient to test for the potential load response and bill impacts of any future TOU rates.

In its reply, PG&E states that its pilot objectives align with the guidance provided by the Decision and with the consensus of the Working Group, and that it is already testing three different TOU rates with varying peak periods and period prices in its opt-in TOU pilots. PG&E states that testing multiple rates here would cause additional complexity and cost without adding value to the learnings from the opt-in TOU pilots. PG&E also argues that a rate with a POPP ratio of 2:1, as suggested by TURN, is not cost-based and is an unlikely future rate for PG&E.

We disagree with EDF that the default pilot is the appropriate venue to test rate designs that impact the value proposition of DERs. The types of rates likely to provide the value proposition for DERs (shorter peak period, larger differences between period prices)[8] do not fit the criteria of an initial default "TOU Lite" rate.[9] As PG&E points out in its response and as EDF itself states, there are other ongoing pilots in which such rates are being considered. Furthermore, PG&E's mildly differentiated POPP ratio proposed here is but one consideration of many rate designs in the default TOU development process. We encourage EDF to engage in those efforts and to look for other opportunities to continue this exploration.

We reject TURN's argument that PG&E should be required to test an additional rate with a POPP ratio of 2:1. The opt-in TOU pilots will provide information on the differential load response and bill impacts of different rate structures,

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8 EDF Protest at 4.

9 D.15-07-001 at 135.

including a rate with a POPP ratio of 2:1, and furthermore, such findings are not within the primary objectives of the default pilot.

In its protest to AL 4979-E-C, ORA states that in moving from E-TOU-C to E-TOU-C3, PG&E has made equal cents per kWh adjustments to both baseline and above baseline usage rather than equal percentage changes, which distort the underlying POPP ratio of the TOU rate. ORA argues that equal percentage changes would have preserved the POPP ratio from E-TOU-C. ORA additionally argues that the CARE rates should be calculated by applying an even discount to both peak and off-peak usage, and to both baseline and above baseline usage. This would result in both the non-CARE and CARE rates having the same POPP ratios. ORA states that equal percentage changes from E-TOU-C and EL-TOU-C, and an even CARE discount, would reduce the negative summer bill impacts faced by both non-CARE and CARE customers.

ORA also believes that E-TOU-C3 should have a milder POPP ratio than E-TOU-C, since it is including lower marginal cost weekend hours in the peak period definition. Finally, ORA requests clarification that the rate approved for the default pilot is only for the default pilot, and that the rate for the full rollout of default TOU is still subject to debate.

In its reply to ORA's protest, PG&E states that it did not design E-TOU-C3 by modifying E-TOU-C. The two rates were created independently, and therefore ORA's recommendation to adjust E-TOU-C using equal percentage changes instead of equal cents per kWh changes is irrelevant. PG&E further explains that having the same cents per kWh difference between peak and off-peak periods for both baseline and above baseline usage (6.3¢ in the summer) accurately reflects the savings in generation costs that PG&E would realize if a customer were to shift 1 kWh of peak usage to the off peak period, regardless of whether that 1 kWh of usage is baseline or above baseline usage.

PG&E disagrees with ORA's recommendation to apply the CARE discount evenly to both peak and off-peak usage, and to both baseline and above baseline usage. As designed, the price differential between peak and off-peak usage is the same for both E-TOU-C3 and EL-TOU-C3 (6.3¢ in the summer) so that the CARE rate also reflects the savings in generation costs that PG&E would realize if a CARE customer were to shift 1 kWh of peak usage to the off peak period. If PG&E were to apply an even discount to both peak and off-peak usage, and to both baseline and above baseline usage, PG&E states that the price differential between peak and off-peak usage would be much lower and would not accurately reflect the savings realized by shifts in usage.

PG&E agrees with ORA that E-TOU-C3 would have a milder POPP ratio than E-TOU-C if both rates relied on the same underlying marginal costs. Since E-TOU-C was filed in AL 4979-E on December 16, 2016 (with a POPP ratio of 1.19:1), the underlying marginal costs used to design the rate have changed. Using the updated marginal costs, E-TOU-C3 does indeed have a milder POPP ratio than E-TOU-C (1.23:1 versus 1.25:1). Finally, PG&E also agrees with ORA that E-TOU-C3 is only intended as the default rate for the default pilot, and that the rate proposed or approved in its January 2018 RDW may or may not be the same as E-TOU-C3.

We agree with PG&E that there is no basis for moving on an equal percentage basis from E-TOU-C to E-TOU-C3. There may be an argument for adjusting a rate on an equal percentage basis when considering revenue requirement changes, but here we are simply examining initial rate design.

With regards to PG&E's CARE rate (EL-TOU-C3), we agree with ORA that the CARE discount should be applied evenly (or as close to evenly as possible, given interactions between sales, revenue requirements, discounts that are required to be applied on an equal cents per kWh basis such as the DWR bond charge, and the minimum bill) to both peak and off-peak usage and to both baseline and above baseline usage. While we understand PG&E's desire to preserve the marginal cost difference between the peak and off-peak time periods, that is not sufficient justification to warrant differential discounts for peak and off-peak usage or baseline usage levels, which has the potential to afford certain segments of customers larger overall discounts than others. We order PG&E to modify EL-TOU-C3 such that the CARE discount is applied evenly to both peak and off peak usage and to both baseline and above baseline usage. Should PG&E or ORA wish to establish more explicit guidelines for future CARE rate design, beyond what is currently provided in statute or the Decision, they are encouraged to raise the issue in Phase 3 of R.12-06-013 in the CARE Restructuring Working Group.

We approve PG&E's proposed E-TOU-C3 rate for use in the default pilot. With its mild POPP ratio of 1.23:1 for usage above baseline, E-TOU-C3 fits the Decision's criteria of an initial default "TOU Lite" rate. Furthermore, when considered alongside the other two whole-house TOU rate options currently open to PG&E residential customers, E-TOU-A and E-TOU-B, E-TOU-C3 slightly expands the menu of rate options. Neither E-TOU-A nor E-TOU-B has peak periods on the weekends, while E-TOU-C3 does. The default pilot rates for both SCE and SDG&E also have weekend peak or part-peak hours, so using E-TOU-C3 instead of E-TOU-C also enhances alignment across the three IOUs.

We assure ORA that our approval of E-TOU-C3 is for the purpose of the default pilot only. The default rate for the full rollout of default TOU remains an open question to be settled in PG&E's January 2018 RDW.

Exclusions from the Default Pilot

Section 745 describes certain categories of customers that may not be defaulted onto TOU rates, customers that the Commission may elect to default or not, subject to certain considerations, and conditions that must be met before customers can be defaulted onto TOU rates. In addition, PG&E proposes to exclude additional customers due to operational considerations.

Section 745(c)(1)

Section 745(c)(1) describes three categories of customers that may not be defaulted onto TOU rates: customers receiving a medical baseline allowance, customers requesting third-party notification and customers requiring an in-person visit from a utility representative prior to disconnection.[10]

PG&E is able to identify the customers that fall into one of these categories in its billing system, and thus, these customers are easily excluded from default TOU. PG&E will also include language in its pre-default notifications that customers

10 P.U. Code Section 745(c)(1) Residential customers receiving a medical baseline allowance pursuant to subdivision (c) of Section 739, customers requesting third-party notification pursuant to subdivision (c) of Section 779.1, customers who the commission has ordered cannot be disconnected from service without an in-person visit from a utility representative (Decision 12-03-054 (March 22, 2012), Decision on Phase II Issues: Adoption of Practices to Reduce the Number of Gas and Electric Service Disconnections, Order 2 (b) at page 55), and other customers designated by the commission in its discretion shall not be subject to default time-of-use rates without their affirmative consent.

should call a specific PG&E toll-free number if they believe they qualify for one of the aforementioned categories.

The suggested processes are sufficient to guard against the unintentional inclusion of these customers in the default pilot.

Section 745(c)(2)

Section 745(c)(2) requires that the Commission "ensure that any time-of-use rate schedule does not cause unreasonable hardship for senior citizens or economically vulnerable customers in hot climate zones."[11] The Commission defined "senior citizens" as any person 65 years or older. For the purposes of 745(c)(2), the Commission will consider any customer whose household includes a senior citizen who is a full-time permanent occupant of the household.[12] The senior citizen need not be the customer of record. The Commission defined "economically vulnerable customers" as any customer who is eligible for the CARE or Family Electric Rate Assistance (FERA) program even if that customer is not enrolled.[13]

PG&E's opt-in TOU pilot was specifically designed to provide the Commission with the information necessary to determine whether or not TOU rates cause unreasonable hardship for these two groups of customers. The Scoping Ruling lays out the process for considering the evidence on this issue and anticipates issuing a Decision in September 2017, prior to the start of the default pilot.[14]

D.16-09-016 required the IOUs to work with the Working Group to develop processes for identifying and excluding these customers, should the Commission

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11 P.U. Code Section 745(c)(2) The commission shall ensure that any time-of-use rate schedule does not cause unreasonable hardship for senior citizens or economically vulnerable customers in hot climate zones.

12 D.16-09-016 at 10.

13 D.16-09-016 at 8.

14 Assigned Commissioner and Administrative Law Judge's Ruling Amending Scoping Memorandum and Ruling issued January 23, 2017 (Scoping Ruling)

decide that it is necessary to do so. PG&E and the Working Group reached consensus on the processes below for the default pilot.

- Customers enrolled in CARE or FERA
  PG&E can identify customers enrolled in CARE or FERA in its billing system and can easily exclude existing CARE and FERA customers in the hot climate zone. PG&E currently estimates that, system-wide, 88% of eligible customers are enrolled in the CARE program.
- Customers eligible for, but not enrolled in CARE or FERA

  PG&E has a "propensity model" that it uses to identify non-CARE customers who may be eligible for CARE. It assigns customers a score, and those customers in the first two deciles are most likely to be eligible for CARE. PG&E proposes to exclude the customers in the first two deciles. This exclusion will only apply to customers in the hot climate zone. PG&E will also include the CARE and FERA eligibility requirements in its pre-default notifications. If customers believe they qualify, they will be directed to call a specific PG&E toll-free number.
- Households with senior citizen(s)
  PG&E has access to third party demographic data from the firm Experian. If this data shows that a customer's household has any senior citizens then those customers will be excluded. This exclusion only applies to customers in the hot climate zone. PG&E will also include language in its pre-default notifications that customers should call a specific PG&E toll-free number if any senior citizens live in their household.

The proposed processes are sufficient to guard against the unintentional inclusion of these customers in the default pilot.

Section 745(c)(4)

Section 745(c)(4) requires that a customer be "provided with not less than one year of interval usage data from an advanced meter and associated customer education."[15] PG&E states that no customers with less than 12 months of interval

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[15] P.U. Code Section 745(c)(4) A residential customer shall not be subject to a default time-of-use rate schedule unless that residential customer has been provided with

Footnote continued on next page

usage data will be selected for the default pilot. PG&E will provide all customers in the default pilot with a rate comparison in their pre-default notification, thus fulfilling the second part of the requirement.

Community Choice Aggregator

PG&E has a growing population of Community Choice Aggregator (CCA) customers within its service territory. CCA customers are not subject to default TOU, and can only be defaulted onto TOU rates if their CCA provider elects to do so. MCE and Sonoma Clean Power (SCP) have both indicated that they will participate in the default pilot, and so a proportionate sample of their customers will be included in the default pilot. However, PG&E will exclude any other existing CCA customers from the default pilot, as well as those customers it knows will become CCA customers in 2017 and 2018. PG&E's collaboration with MCE and SCP in the default pilot will serve as a model for future CCA participation in default TOU.

Other Exclusions

Finally, PG&E proposes to exclude certain other categories of customers, including customers already on a TOU rate, master-metered customers, direct access customers, and customers with insufficient interval usage data to perform a rate comparison analysis.

Default TOU is aimed at customers not already on a TOU rate, and master-metered customers will not see or experience the TOU price signals. Direct access customers would not see a price signal, since all of the time differentiation in PG&E's default TOU rate occurs in the generation portion of the rate, and direct access customers do not receive generation service from PG&E. Customers with

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not less than one year of interval usage data from an advanced meter and associated customer education and, following the passage of this period, is provided with no less than one year of bill protection during which the total amount paid by the residential customer for electric service shall not exceed the amount that would have been payable by the residential customer under that customer s previous rate schedule.

insufficient interval data would be excluded anyway under Section 745(c)(4). Thus, these exclusions are reasonable.

Section 745(d)

Section 745(d)(1) and 745(d)(2) require that the Commission consider whether or not default TOU rates will cause hardship to "customers located in hot, inland areas, assuming no changes in overall usage by those customers during peak periods" and "[r]esidential customers living in areas with hot summer weather, as a result of seasonal bill volatility, assuming no change in summertime usage or in usage during peak periods."

The Working Group concluded that "hot climate zone," "hot inland areas"and "areas with hot summer weather" all cover the same geographic area in PG&E's service territory. This includes PG&E regions P, R, S and W.[16]

In its protest, TURN argues that the Commission cannot reach conclusions on Section 745(d)[17] based only on the bill impact analyses of the proposed TOU rate. TURN argues that these analyses are insufficient for the Commission to reach conclusions concerning the potential hardship of TOU rates that are significantly different from the default pilot rate.

We agree with TURN that the analyses provided in AL 4979-E are insufficient to consider the hardship from potential bill impacts and bill volatility of PG&E's default pilot rate and rates that differ significantly from that rate. The

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16 D.16-09-016 at 38.

17 P.U. Code Section 745(d) The commission shall not require or authorize an electrical corporation to employ default time-of-use rates for residential customers unless it has first explicitly considered evidence addressing the extent to which hardship will be caused on either of the following:

(1) Customers located in hot, inland areas, assuming no changes in overall usage by those customers during peak periods.

(2) Residential customers living in areas with hot summer weather, as a result of seasonal bill volatility, assuming no change in summertime usage or in usage during peak periods.

Commission will consider the hardship from the potential bill impacts and bill volatility of different rate options in Phase 3 of R.12-06-013.[18]

Removal from the Default Pilot

Eligible customers who are selected to participate in the default pilot may opt-out at any time prior to, during or after the default pilot study period. They may go back to the tiered rate or choose another available rate option.

Default pilot customers who terminate service with PG&E will be automatically removed from the default pilot.

Default pilot customers who move and transfer service to another premise within PG&E's service territory will also automatically be removed from the default pilot and be put back on the tiered rate. This is reasonable for purposes of the default pilot. The Commission will consider treatment of these customers for the full default rollout in Phase 3 of R.12-06-013.[19]

Default pilot customers who enroll or de-enroll in PG&E's Net Energy Metering (NEM) program will also be removed from the pilot. Enrollment or de-enrollment in NEM requires the customer to execute a new service agreement, which disrupts PG&E's ability to tie customer information together from before and after NEM participation. Additionally, under NEM 2.0, new NEM customers are required to be on a TOU rate. This is acceptable; while PG&E may lose some customers from the default pilot study population, it will retain the customer on a TOU rate.

It is worth noting particular customers who will *not* be automatically removed from the pilot. If, in the course of the default pilot, customers' situations change such that they meet one of the criteria described in Section 745(c)(1), PG&E states that they will not be automatically removed from the default pilot. Instead, the customer will be given the option to stay on the default TOU rate, to go back to the tiered rate or to choose another available rate option. These customers (and all other default pilot customers) will receive up to 12 months of bill protection,

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[18] Scoping Ruling at 10.

[19] Scoping Ruling at 10.

as described below. This approach maximizes customer choice and is appropriate.

Community Choice Aggregators

As indicated above, MCE and SCP have indicated that they will participate in the default pilot. Their participation is encouraged, but does result in additional complexity. For instance, PG&E will need to coordinate with MCE and SCP on the communications to CCA customers to ensure that customers understand that the choice to opt-out of default TOU is distinct from the choice to opt-out of receiving service from the CCA.

Additionally, PG&E does not currently have the capability to provide CCA customers with rate comparisons. Stakeholders agree that this is an important piece of information for customers to have in order to make an informed choice regarding whether or not TOU is the right rate choice for them.

It its initial protest, MCE states that the costs associated with providing rate modeling for CCA customers should be recovered by PG&E through its distribution function, as they argue that rate modeling is a part of the billing services PG&E should provide to its distribution customers. In its supplemental advice letter 4979-E-B, PG&E proposes to build a rate comparison tool for MCE and SCP customers for the default pilot at an estimated cost of $250,000. In its reply to MCE's initial protest, PG&E states that it will record all default pilot costs in its RRRMA, which will be allocated for recovery from electric distribution customers through the Distribution Revenue Accounting Mechanism (DRAM).

MCE and SCP filed a protest to supplemental advice letter 4979-E-B. In their protest, MCE and SCP argue that CCA customers should receive rate comparison information for the same rate options as bundled customers. That is, if PG&E provides its bundled customers with rate comparisons for rate options other than just the tiered rate and the default TOU rate, CCA customers should also receive rate comparisons for those additional rate options. MCE and SCP would also like PG&E to provide more details about its proposed long term solution for a rate comparison tool for CCA customers in its future filing for the full rollout of default TOU, and request that the Commission direct those costs be recorded in PG&E's RRRMA. Finally, MCE and SCP argue that PG&E is overstating the challenges associated with PG&E performing generation rate modeling on the CCAs' behalf.

In its reply to MCE and SCP's protest, PG&E states that it would require additional time and expense to provide rate comparisons for rate options other than just the tiered rate and the default TOU rate, and that this could hinder completion of the rate comparison tool in time for the default pilot. PG&E states that it will collaborate with MCE and SCP to develop a long term solution for a rate comparison tool for CCA customers prior to submitting its plans for the full rollout of default TOU. Finally, PG&E asserts that its descriptions of the challenges associated with generation rate modeling are accurate.

We agree with PG&E that any costs associated with the default pilot should be recorded in the RRRMA. Thus, subject to reasonableness review, any costs necessary to provide CCA customers with rate comparisons *for the default pilot* may be recorded in the RRRMA. We decline to provide any direction in this Resolution regarding the appropriate method or cost recovery for creating a long term rate comparison tool solution for CCA customers. That is outside the scope of this advice letter filing. We make no finding on the purported difficulty or ease of generation rate modeling for a long term rate comparison tool solution for CCA customers, as that is also outside the scope of this advice letter filing.

Since AL 4979-E and 4979-E-B were filed, PG&E, MCE and SCP have continued to work together on the best way to provide CCA customers with rate comparisons. They have since agreed to provide CCA customers with rate comparisons via PG&E's Your Account, which gives customers access to all available rate options, not only the tiered rate and the default TOU rate. However, CCA customers will see results based on PG&E bundled customer pricing, as opposed to PG&E delivery pricing and CCA generation pricing. PG&E, MCE and SCP have agreed to this approach for the default pilot.

PG&E will continue to work with MCE, SCP and the Energy Division to work through the remaining challenges associated with CCA participation in the default pilot.

Bill Protection

Section 745(c)(4) requires that customers defaulted onto a TOU rate receive one year of bill protection, such that the "total amount paid by the residential customer for electric service shall not exceed the amount that would have been payable by the residential customer under that customer's previous rate schedule."

PG&E proposes only to default those customers currently on the tiered rate. Thus, PG&E will compare the amount that customers pay on the default TOU rate against the amount they would have paid on the tiered rate. If the customer would have paid less on the tiered rate, the customer will be credited the difference.

PG&E will make this calculation at the time a customer is unenrolled from the default TOU rate, or 12 months after a customer begins service on the default TOU rate, whichever occurs first. As stated previously, customers may leave or be automatically removed from the default pilot for numerous reasons.

Section 745(c)(4) only requires that bill protection be provided to those customers defaulted onto a TOU rate. However, a question arose in the Working Group regarding bill protection for those customers excluded from default TOU (per Section 745 or Commission direction) who nonetheless elect to participate in TOU. Per ALJ Ruling, bill protection shall be provided to any customer who opts-in to the default TOU rate, on or before the last day of the default pilot period.[20] This expansion of the bill protection provision guards against the anomalous result in which vulnerable customers ineligible for default TOU, who nonetheless elect to participate in TOU, would be ineligible for a consumer protection afforded to non-excluded customers.

However, the ALJ Ruling does not cover customers taking service under a NEM Successor Tariff. Per D.16-01-044, customers served under any NEM Successor Tariff are required to take service under a TOU rate. Because NEM Successor Tariff customers are ineligible for an inclining block tiered rate, such as PG&E's standard Schedule E-1, NEM Successor Tariff customers are not eligible to receive bill protection.

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[20] February 6, 2017 Prehearing Conference Transcript at 452-459.

March 6, 2017 Email Ruling Regarding Bill Protection for Customers Opting-in to Default TOU Pilot Programs

PG&E proposes that the expansion of bill protection only apply to customers who opt-in to the default TOU rate from the tiered rate. However, the Ruling is clear that this expansion applies to *all* customers, with the exception of NEM Successor Tariff customers as discussed in the preceding paragraph, who opt-in to the default TOU rate, regardless of whether or not the tiered rate was their previous rate schedule. Bill protection will be calculated for these customers in the same manner as for customers who move from the tiered rate to the default TOU rate, meaning that, even if customers opt-in to the default TOU rate from a different TOU rate, PG&E will compare the amount the customers paid on the default TOU rate against the amount they would have paid on the tiered rate, not their former TOU rate.

MCE and SCP have stated in conversations with PG&E and Energy Division (ED) staff that they will calculate bill protection for their customers in a similar manner.

Bill Protection Revenue Shortfall

PG&E estimates a revenue shortfall of $5.2 million related to providing bill protection.

In its protest, ORA requests more information on the projected revenue shortfalls associated with bill protection payments and load shifting, and the estimated cost savings resulting from load shifting. It its reply to ORA's protest, PG&E describes how it estimates its projected revenue shortfall and states that load shifting would lead to some additional revenue loss, but that that loss should be at least partially offset by avoided costs. At this time, PG&E is not able to provide estimates of cost savings associated with load shifting.

We agree with PG&E that it is premature to estimate the revenue shortfalls and/or cost savings due to load shifting. The results from the opt-in TOU pilots will help to inform that analysis.

In its protest, MCE also seeks to clarify that any revenue shortfalls associated with bill protection payment should be attributed to the appropriate rate function. In other words, if PG&E experiences a generation revenue shortfall, that shortfall should be recorded in PG&E's Utility Generation Balancing Account. Likewise, if PG&E experiences a distribution revenue shortfall, that shortfall should be recorded in PG&E's DRAM. In its reply, PG&E states that bill protection payments will be recorded as shortfalls in generation revenue.

All the price variation in PG&E's proposed E-TOU-C3 rate occurs in the generation portion of the rate, and thus we agree with MCE and PG&E that PG&E should record bill protection payments as shortfalls in generation revenue. This shortfall will be recovered across all of PG&E's residential generation customers.[21]

Any revenue shortfall that MCE and SCP experience related to bill protection will be collected from their customers.

Marketing, Education and Outreach

PG&E provides four primary goals and objectives of its ME&O for the default pilot:[22]

1. Inform residential customers (selected for the Default Pilot) that their rate will be changing and educate them on how and when they must take action if they choose to opt-out;
2. Drive awareness and understanding of the Default Pilot rate and other rate options;
3. Drive awareness and provide call-to-action for customer classes that may qualify for one or more of the default exclusion categories as decided by the Commission in compliance with Section 745; and
4. Provide ongoing education about the Default Pilot rate plan and actions customers can take to reduce and shift energy to be successful on their new rate.

To achieve the above goals and objectives, PG&E proposes to provide customers with pre-default notifications, welcome communications, seasonal communications, end-of-bill protection notices and other ME&O materials from across PG&E's other business areas not specific to TOU. In order to achieve the

[21] D.15-07-001 at 162.

[22] AL 4979-E at 45.

Decision's purpose of "fine-tun[ing] customer education," PG&E proposes to test a number of variations of the aforementioned communications. These variations include channel, format, content and timing. For example, PG&E proposes to test 13 different variations of its pre-default notification. Per the Consultant Report,

> "Tests vary with respect to the number of communication touches sent to each customer, the timing of each communication, communication channels (e.g. email, or EM, direct mail, or DM, and on-bill, or "onsert"), the number of alternative rates included in rate comparison information provided to each customer, and the granularity of the rate comparison information (e.g. annual, seasonal or monthly)."[23]

We clarify that all rate comparison information must include at least an annual comparison per Section 745(c)(5), but may in addition include seasonal and/or monthly comparisons.

PG&E has determined that it will not create different versions of a given piece of ME&O for different customer personas, due to the added complexity of additional versioning on top of other messaging and segmentation priorities.[24]

In order to address the seasonal bill volatility associated with TOU rates, PG&E proposes to promote its Balanced Payment Plan (BPP) program to a subset of customers as a part of its summer seasonal communication. PG&E states that "[c]ustomers who sign up closer to summer and winter months tend to stay on the program [BPP] longer than those that sign up during spring and fall seasons,"[25] likely because they experience immediate relief from higher bills.

PG&E has not yet determined the exact messaging and design for its ME&O materials and will consider the results of current and future planned customer research in creating the final ME&O materials. There is also space in PG&E's pre-

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[23] Consultant Report at 3. Note that PG&E does not propose to test monthly rate comparison information.

[24] PG&E's "personas" consist of customer groups who think, act and behave similarly. Every PG&E customer has a specific persona attached to their profile (PG&E AL 4764-E, Attachment 1 at 11-2).

[25] AL 4979-E at 60.

default notification test plan to empirically test two alternate versions of messaging. Other aspects of its ME&O plan also remain undecided, such as the sample size for each test track and customer makeup for the BPP test track.

In its protest, EDF states that PG&E should consider a broader set of customer attributes, such as the shape of the diurnal load and history of other energy interventions, and how these attributes vary between benefiters and non-benefiters, when determining which mitigation strategies to target at each customer.

In its reply to EDF's protest, PG&E states that it will work to identify attributes that may contribute to a customer's categorization as benefiter or non-benefiter and may incorporate segmented messaging into its default notifications. PG&E will also incorporate information on energy efficiency and demand response into its ME&O materials.

We agree with EDF that PG&E's proposed ME&O strategies require further refinement and we take this opportunity to provide PG&E with specific direction on one opportunity to incorporate information on demand response. We find that the pre-default notifications present a unique opportunity to engage with customers regarding their rate choices, including dynamic pricing rate overlays such as critical peak pricing (SmartRate™). We direct PG&E to add two additional test cells to its default notification testing scheme. These test cells should include only customers in PG&E's hot climate zone and these customers should receive the same type and cadence of communications as customers in test track J. We refer to these additional test cells as test tracks J1 and J2. For customers in test tracks J1 and J2, one of the options on their rate comparison should be the default TOU rate with SmartRate™ . PG&E shall work with Energy Division and the Working Group to identify customers in test track J2 who are more likely to enroll in SmartRate™ and successfully respond to its dynamic pricing signals. For the customers in test track J2 who meet these criteria, PG&E will develop other collateral to be included in the rate comparison mailer to encourage those customers to enroll in SmartRate™.

Additionally, although PG&E has proposed a robust default notification testing scheme, we find that minimal variation is currently planned for seasonal communications. We order PG&E to test persona based targeted messaging against non-targeted messaging as part of its summer seasonal communication.

We also direct PG&E to collaborate with Energy Division and the Working Group to finalize its ME&O collateral, and to determine appropriate sample sizes and customer makeup for each of its ME&O test tracks. We further direct PG&E to file a Tier 2 advice letter with the final testing plan by November 1, 2017 and to include copies of all marketing collateral in its quarterly Progress on Residential Rate Reform reports, required pursuant to D.15-07-001.

PG&E's goals and objectives for its ME&O are appropriate and its proposed tests for its communications materials are expected to provide valuable information to inform the ME&O for the full default rollout. The measurement and evaluation of PG&E's proposed tests is discussed below.

Metrics and Measurement & Evaluation

The default pilot will require extensive ex post measurement and evaluation (M&E) to ensure that PG&E is prepared for the full default rollout, to identify aspects of the default pilot that worked well and to identify areas that require changes or augmentation. PG&E's advice letter and the Consultant Report attached to the advice letter begin the process of detailing the metrics by which the pilot will be assessed and the associated M&E activities needed to gather information on those metrics.

For instance, PG&E proposes the metrics and M&E activities below to assess its MEO approaches:[26]

- Customer attrition from TOU—as measured by customers who elect not to participate;
- Customer confusion or dissatisfaction—as measured by call center interactions and surveys;
- Customer awareness—as measured by survey data; and
- Customer satisfaction—as measured by survey data.

[26] AL 4979-E at 87.

Additionally, PG&E proposes to measure load and bill impacts. PG&E will provide load and bill impact results from the first summer by November 2018, but thereafter would report its load and bill impacts through the Demand Response Measurement and Evaluation Committee's annual April 1 filings. PG&E also proposes to conduct a process evaluation to assess its operational readiness for full default rollout.

In its protest, ORA requests that the Commission adopt metrics to assess the default pilot's effectiveness and success, and that the Commission consider PG&E's performance on these metrics as a part of its reasonableness review.

In its reply to ORA's protest, PG&E states that it is premature for the Commission to adopt any metrics to assess the default pilot's success, and that in any case, metrics should not be used for enforcement.

We agree with ORA that we should define metrics by which to assess the default pilot. We find that PG&E's proposed areas of evaluation and M&E activities for load and bill impacts and operational readiness are appropriate to assess the default pilot. We direct PG&E to work with Energy Division and the Working Group to define the customer segments for whom load and bill impacts are desired, and to further enumerate the metrics used to assess operational readiness.

With respect to the various ME&O approaches being tested, we find value in harmonizing the customer research activities across the IOUs. Therefore, we direct PG&E to work closely with Energy Division, the Working Group and the other two IOUs to further refine, and harmonize across the three IOUs, the metrics and M&E activities required to assess the various ME&O approaches.

While these measures will help to gauge the success of the default pilot, their primary purpose is to inform the operational requirements and ME&O needed for the subsequent rollout of default TOU to the remainder of eligible residential customers. Thus, we decline to tie default pilot cost recovery to achievement on these metrics.

Budget and Cost Recovery

PG&E estimates default pilot implementation costs of approximately $9.5 million over the period of 2017-2019, and proposes to record these costs in its RRRMA.

PG&E additionally estimates a generation revenue shortfall of $5.2 million related to providing bill protection. This revenue shortfall will be recovered across all of PG&E's residential generation customers.[27]

In its protest, ORA requests that PG&E provide detailed cost information (budgeted and actual costs incurred) on a quarterly basis to aid in tracking and reasonableness review of PG&E's default pilot costs. ORA also seeks information regarding PG&E's accounting practices, to ensure that default pilot expenses are recorded in a transparent manner that facilitates future reasonableness review, and that prevents default pilot costs from being mistaken as part of the GRC revenue requirement. ORA wants PG&E to provide a more detailed budget, and clarification on how the requested expenditures align with or are incremental to requests made in other recent filings in R.12-06-013.

In its reply to ORA's protest, PG&E agrees to report on default pilot expenditures on a quarterly basis, as a part of its Quarterly Progress on Residential Rate Reform (PRRR) reports, using the six cost categories provided in AL 4979-E. PG&E provides a detailed description of its accounting practices for the Residential Rate Reform Memorandum Account (RRRMA), and states that it can separate default pilot costs from opt-in TOU pilot costs if necessary. PG&E requests that the Commission reject ORA's request for PG&E to provide more detailed budget information than it has already provided in AL 4979-E and will provide in its quarterly PRRR reports. PG&E clarifies that the ME&O budget described in AL 4979-E is incremental to the MEO budget described in its recent ME&O Plan advice letter (AL 4949-E).

We agree with ORA that a detailed budget provides a necessary baseline against which to conduct future reasonableness review of expenditures. We order PG&E

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[27] D.15-07-001 at 162.

to track actual expenditures to date against its estimated costs as part of its PRRR reports, using not just the six cost categories provided in AL 4979-E, but using each of the line item categories highlighted in the attached budget (Attachment 1), separating default pilot costs from opt-in TOU pilot costs where applicable. This level of detail will better enable reasonableness review of PG&E's default pilot expenses.

While termed a "pilot," we note that this is really the first step towards defaulting the entire eligible residential class onto TOU rates. Thus, some of the operational and system improvements required for the default pilot will also serve PG&E for the full default rollout.

Other Issues Raised by Parties

It its protest, EDF states that PG&E should be prepared to apply findings from other pilots that occur prior to 2018, such as the Distribution Resources Plan (DRP) demonstrations and the Demand Response Auction Mechanism, to the default pilot.

In its reply to EDF's protest, PG&E states that it is coordinating its rate reform initiatives with other relevant pilots and is open to working with EDF to further this effort.

We agree with EDF that PG&E should look to incorporate findings from other relevant pilots into the default pilot. PG&E should also keep Energy Division and the Working Group apprised of any applicable findings from other pilots.

COMMENTS

Public Utilities Code section 311(g)(1) provides that this resolution must be served on all parties and subject to at least 30 days public review and comment prior to a vote of the Commission. Section 311(g)(2) provides that this 30-day period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day comment period for the draft of this resolution was neither waived nor reduced. Accordingly, this draft resolution was mailed to parties for comments, and will be placed on the Commission's agenda no earlier than 30 days from today.

FINDINGS

1. D.15-07-001 (the Decision) and the Administrative Law Judge's Ruling (Ruling) of December 19, 2015 directed Pacific Gas and Electric Company (PG&E) to file an Advice Letter proposing a default time-of-use (TOU) pilot for its residential customers.
2. PG&E will submit a Rate Design Window (RDW) application no later than January 1, 2018 for a default residential TOU rate and a menu of optional TOU rates.
3. PG&E estimates that 3,000,000 residential customers are currently eligible for default TOU per statutory requirements and operational considerations.
4. PG&E will default approximately 250,000 residential customers in its default pilot to test its operational readiness to default the remainder of residential customers to TOU rates in 2019.
5. PG&E will default customers onto E-TOU-C3, a rate with a 4-9pm peak period on all days.
6. California Public Utilities Code Section 745 requires that certain customers be excluded from default TOU. PG&E will exclude these customers from its default pilot. PG&E will also exclude certain other customers in addition to the statutory exclusions.
7. Marin Clean Energy (MCE) and Sonoma Clean Power (SCP) have indicated their intent to participate in the default pilot.
8. Customers may opt-out of default TOU at any time.
9. Customers may be removed from the default TOU rate if they become ineligible for default TOU.
10. Customers defaulted onto E-TOU-C3 or who opt-in to E-TOU-C3 will receive up to 12 months of bill protection.

11. PG&E will test variations of marketing, education and outreach (ME&O) materials.
12. PG&E will promote its Balanced Payment Plan (BPP) program to a subset of customers.
13. PG&E will measure load and bill impacts of the default TOU rate.
14. PG&E will conduct a process evaluation to determine its operational readiness for the full rollout of default TOU in 2019.
15. PG&E will conduct customer research to determine the appropriate ME&O options to use for the full rollout of default TOU in 2019.
16. PG&E will record default pilot implementation expenses in its Residential Rate Reform Memorandum Account (RRRMA).
17. PG&E will record revenue shortfalls related to bill protection as generation revenue shortfalls.

THEREFORE IT IS ORDERED THAT:

1. PG&E's Default TOU Pilot Design Advice Letter (AL 4979-E, 4979-E-A, 4979-E-B and 4979-E-C) is approved as modified herein.
2. PG&E is ordered to ensure that the deliverables as outlined in this Resolution are presented as part of its January 1, 2018 Rate Design Window (RDW) filing for a default TOU rate and a menu of TOU rate options.
3. PG&E must modify EL-TOU-C3 such that the CARE discount is applied evenly to both peak and off-peak usage and to both baseline and above baseline usage, and file the revised tariff as a supplement to AL 4979-E within 21 days of this Resolution's adoption.
4. PG&E must provide up to 12 months of bill protection to all non-NEM Successor Tariff customers who opt-in to the default TOU rate, regardless of whether or not the tiered rate was their previous rate schedule.
5. PG&E must add two test cells to its default notification testing scheme, where customers will receive a rate comparison that includes the default TOU rate with SmartRate™ and certain customers will receive additional collateral promoting their enrollment in SmartRate™.

6. PG&E's summer seasonal communication must test persona based targeted messaging against non-targeted messaging.
7. PG&E must consult with Energy Division and the TOU Working Group to finalize its ME&O collateral, and to determine appropriate sample sizes and customer makeup for each of its ME&O test tracks.
8. PG&E must file a Tier 2 advice letter with the final testing plan by November 1, 2017.
9. PG&E must include copies of all marketing collateral in its quarterly Progress on Residential Rate Reform (PRRR) reports.
10. PG&E must consult with Energy Division, the TOU Working Group, SCE and SDG&E to refine and harmonize the metrics and M&E activities required to assess the various ME&O approaches.
11. PG&E must track its actual expenditures to date against its estimated costs in its PRRR reports, using each of the line item categories highlighted in the attached budget (Attachment 1).

This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on August 10, 2017; the following Commissioners voting favorably thereon:

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TIMOTHY J. SULLIVAN
Executive Director

Attachment 1

PG&E Default Pilot Budget Tables – AL 4979-E

Table 1: PG&E Default Pilot Budget Estimate Summary

Budget Category	2017 Proposed Budget	2018 Proposed Budget	2019 Proposed Budget	Total Proposed Budget	Budget Details
Default Pilot Design (Section B)	$33,500	$33,500	$0	$67,000	Details below in Table 3
Marketing & Outreach (Section D)	$375,000	$911,250	$101,250	$1,387,500	Details below in Table 15
Customer Support (Section E)	$174,595	$331,745	$80,778	$587,118	Details below in Table 16
IT and Operations (Section F)	$4,875,000	$0	$0	$4,875,000	Details below in Table 17
Measurement & Evaluation (Section G)	$115,000	$830,000	$140,000	$1,085,000	Details below in Table 12
Labor	$880,000	$880,000	$228,800	$1,988,800	8 FTE for 12 months in 2017 and 2018, 8 FTE for 3 months in 2019. FTE = 40 hours x 50 weeks (13 weeks for 3 months)
Total Annual Cost	**$6,453,095**	**$2,986,495**	**$550,828**		
Default Pilot Total Cost	**$9,990,418**				

Table 3: PG&E Default Pilot Design (Section B) Budget Estimate

Budget Category	2017 Proposed Budget	2018 Proposed Budget	2019 Proposed Budget	Total Proposed Budget	Budget Details
Working Group Consultant	$33,500	$33,500	$ -	$67,000	PG&E's portion of the contract executed with Nexant Inc.
Total Annual Budget	**$33,500**	**$33,500**	$ -		
Total Propose Budget	**$67,000**				

Table 15: Marketing, Education & Outreach (Section D) Budget Estimate

Budget Category	2017 Proposed Budget	2018 Proposed Budget	2019 Proposed Budget	Total Proposed Budget	Budget Details
Communications Development	$250,000	$250,000	$ -	$500,000	Estimate based on expertise executing projects of this complexity. The starting point for this estimate was the cost for the 2016 for Opt-In Pilot material with reduction/adjustment to account for learnings, efficiencies, and projected scope variance for 2017 work for this pilot. This includes agency fees for development including research creative, final outputs for notifications and post-default materials.
90 Day Notification (DM and/or EM)	$125,000	$ -	$ -	$125,000	$0.50 per piece x 250,000 customers
60 Day Notification (DM Only)	$ -	$125,000	$ -	$125,000	$0.50 per piece x 250,000 customers
On-bill Annual or Seasonal RC	$ -	$8,750	$ -	$8,750	$0.05 per piece x 175,000 customers
DM piece Annual or Seasonal RC	$ -	$43,750	$ -	$43,750	$0.50 per piece x 87,500 customers
30 Day Notification (DM and/or EM)	$ -	$125,000	$ -	$125,000	$0.50 per piece x 250,000 customers
Outbound calling (if needed)	$ -	$125,000	$ -	$125,000	$0.50 per piece x 250,000 customers
Post-Default Welcome Communication	$ -	$96,250	$ -	$96,250	$0.05 per piece x 87,500 customers ($8,750) + $1.0 per piece x 175,000 customers ($87,500)
Summer Seasonal Education	$ -	$112,500	$ -	$112,500	$0.50 per piece x 225,000 customers
Winter Seasonal Education	$ -	$25,000	$ -	$25,000	$0.50 per piece x 50,000 customers
End of Bill Protection Notice	$ -	$ -	$101,250	$101,250	$0.50 per piece x 202,500 customers
Total Annual Budget	$375,000	$911,250	$101,250		
Total Proposed Budget	**$1,387,500**				

Table 16: PG&E Estimated Customer Support (Section E) Budgets Estimate

Budget Category	2017 Proposed Budget	2018 Proposed Budget	2019 Proposed Budget	Total Proposed Budget	Budget Details
Call Center Support	$57,375	$321,765	$80,778	$459,918	13.77 per call x 33,400 calls = $459,918 (over 3 years)
Training Facilitation	$7,440	$ -	$ -	$7,440	40 sessions x 2.75 hours x $67.64 = $7,440
Employee Training	$99,800	$ -	$ -	$99,800	800 employees x 2.5 hours x $49.90 = $99,800
Web-based Training	$9,980	$9,980	$ -	$19,960	800 employees x 0.5 hours x $49.90 = $19,960 ($9,980 annually over 2 years)
Total Annual Budget	$174,595	$331,745	$80,778		
Total Proposed Budget	**$587,118**				

Table 17: Information Technology (Section F) Budget Estimate

Budget Category	2017 Proposed Budget	2018 Proposed Budget	2019 Proposed Budget	Total Proposed Budget	Budget Details
Building New Rate	$325,000	$ -	$ -	$325,000	This process is specific to the creation of the E-TOU-C rate which consists of building and programming the new rate and ensuring it appears in all internal and external tools by the time the first notifications are sent out (expected December 2017).*
Default Process	$2,400,000	$ -	$ -	$2,400,00 0	This process consists of the functionality needed to identify (eligible) randomly selected customers not subject to exclusions, and then notify and transition them to the Default Pilot, which includes numerous system configurations and integration. This also includes building online and IVR opt-out functionality and tracking. Additionally, it includes updates to the rate analysis tool for customers to assess how they are performing on current versus default rate. All changes must be tested in multiple PG&E systems to ensure operational readiness.*

Billing upgrades	$1,300,000	$ -	$ -	$1,300,000	This process consists of the development of bill protection for E-TOU-C in time for implementation of tracking starting in March 2018. It will support updates to the energy statement and updates to revenue reporting. All changes must be tested in multiple PG&E systems to ensure operational readiness.*
Workflow Management	$50,000	$ -	$ -	$50,000	This process consists of support for exceptions generated by the Default Workflow process, the Billing Operations team will need to have the additional work flow exceptions routed to the workforce management tool for assignment.*
CCA rate modeling	$800,000	$ -	$ -	$800,000	This process consists of online (OPower) modeling of CCA generation rates and will be further detailed in the upcoming Supplemental Filing.*
Total Annual Budget	$4,875,000	$ -	$ -		* All IT costs are internal IT estimates based on proposed scope of work and include estimates for labor, testing, and contract costs associated with creating testing and production environments. Once detailed business and IT requirements are complete, an updated budget can be provided upon request.
Total estimate IT costs	**$4,875,000**				

Table 22: Customer Research, Measurement & Evaluation (Section G) Budget Estimate

Budget Category	**2017 Proposed Budget**	**2018 Proposed Budget**	**2019 Proposed Budget**	**Total Proposed Budget**	**Budget Details**
Communication Development	$45,000	$15,000	$ -	$60,000	3x quantitative surveys and 3x online discussion groups = $45,000 1x quantitative surveys and 1x online discussion groups = $15,000 Costs consist of programming, vendor support and consulting.
Quantitative ME&O and Experience Survey Tracking*	$20,000	$480,000	$ -	$500,000	2017 benchmark survey oversample = $20,0002018 Quantitative survey waves: 3 waves of a quantitative survey, Benchmark = $10,000 + Wave 1 = $235,000 + Wave 2 = $235,000, Total = $480,000
Qualitative ME&O and Experience Evaluation**	$ -	$150,000	$ -	$150,000	Two periods (April & November) of online discussion sessions at $75,000 each = $150,000

ME&O Effectiveness Analysis**	$ -	$50,000	$25,000	$75,000	The budget is based off of negotiated rates with evaluation vendors ($200/hour) times the estimated hours required to complete the task (375 hours) over a two year period, with the majority of the work occurring in 2018.
Load and Bill Impacts Analysis	$ -	$50,000	$100,000	$150,000	The budget is based off of negotiated rates with evaluation vendors ($200/hour) times the estimated hours required to complete the task (750 hours) over a two year period, with the majority of the work occurring in 2018.
Process Evaluation	$50,000	$85,000	$15,000	$150,000	The budget is based off of negotiated rates with evaluation vendors ($175/hour) times the estimated hours required to complete the task (800 hours) over a three year period, with the majority of the work occurring in 2017 and 2018. An additional $10,000 is included for materials costs (e.g. consultant travel).
Total Annual Budget	**$115,000**	**$830,000**	**$140,000**		
Total Proposed Budget	**$1,085,000**				