STATE OF CALIFORNIA EDMUND G. BROWN J

PUBLIC UTILITIES COMMISSION
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TO PARTIES OF RECORD IN RULEMAKING 12-06-013:

This is the proposed decision of Administrative Law Judges Jeanne M. McKinney, Sophia J. Park and S. Pat Tsen. Until and unless the Commission hears the item and votes to approve it, the proposed decision has no legal effect. This item may be heard, at the earliest, at the Commission's September 28, 2017 Business Meeting. To confirm when the item will be heard, please see the Business Meeting agenda, which is posted on the Commission's website 10 days before each Business Meeting.

Upon the request of any Commissioner, a Ratesetting Deliberative Meeting (RDM) may be held. If that occurs, the Commission will prepare and publish an agenda for the RDM 10 days beforehand. When the RDM is held, there is a related ex parte communications prohibition period. (See Rule 8.3(c)(4).)

Parties of record may file comments on the proposed decision as provided in Rule 14.3 of the Commission's Rules of Practice and Procedure.

/s/ ANNE E. SIMON
Anne E. Simon
Acting Chief Administrative Law Judge

AES:ek4
Attachment

Decision **PROPOSED DECISION OF ALJ'S MCKINNEY, PARK AND TSEN**
(Mailed 8/29/2017)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on the Commission's Own Motion to Conduct a Comprehensive Examination of Investor Owned Electric Utilities' Residential Rate Structures, the Transition to Time Varying and Dynamic Rates, and Other Statutory Obligations.	Rulemaking 12-06-013

DECISION ADOPTING FINDINGS REQUIRED PURSUANT TO PUBLIC UTILITIES CODE § 745 FOR IMPLEMENTING RESIDENTIAL TIME-OF-USE RATES

Table of Contents

Title Page

DECISION ADOPTING FINDINGS REQUIRED PURSUANT TO PUBLIC UTILITIES CODE § 745 FOR IMPLEMENTING RESIDENTIAL TIME-OF-USE RATES 1
Summary 2
1. Factual and Procedural Background 3
2. Discussion and Analysis 7
   2.1. Section 745(c)(2) 7
      2.1.1. Do Senior Citizens in Hot Climate Zones Experience Unreasonable Hardship under TOU Rates? 8
      2.1.2. Do Economically Vulnerable Customers in Hot Climate Zone Experience Unreasonable Hardship under TOU Rates? 11
      2.1.3. TURN's Proposal Regarding a FERA Penetration Rate Party Positions 24
      2.1.4. ORA's Proposal for a Summer Moratorium on Disconnections 27
   2.2. Section 745(c)(1) 29
      2.2.1. TURN's Proposal Regarding a MedicalBaseline Penetration Rate 29
   2.3. Section 745(c)(4) 34
      2.3.1. Initial Default TOU Migration 35
      2.3.2. One Year of Interval Usage Data 36
      2.3.3. One Year of Bill Protection 40
   2.4. Section 754(d) 44
      2.4.1. Standards or Methods to Complete Section 745(d) Analysis 45
      2.4.2. Future Need to Perform Section 745(d) Analysis 46
3. Comments on Proposed Decision 48
4. Assignment of Proceeding 48
Findings of Fact 48
Conclusions of Law 51
O R D E R 52

DECISION ADOPTING FINDINGS REQUIRED PURSUANT TO PUBLIC UTILITIES CODE § 745 FOR IMPLEMENTING RESIDENTIAL TIME-OF-USE RATES

Summary

In Decision (D.) 15-07-001, the Commission set forth steps to transition most Californians to default time-of-use rates in 2019. Public Utilities Code Section 745 sets forth conditions, including the consideration of the impact of time-of-use rates on certain customer groups, that must be met prior to the implementation of default time-of-use rates for residential customers.

This decision finds that there is no basis to exclude senior citizens in hot climate zones from default time-of-use rates but that economically vulnerable customers in hot climate zones should be excluded from the default time-of-use pilots scheduled to begin in March 2018. The Commission will consider the investor-owned utilities' proposals for the full rollout of default time-of-use rates in their January 1, 2018 Rate Design Window Applications. At that time, the Commission will further consider whether economically vulnerable customers in hot climate zones should be excluded from the full rollout of default time-of-use rates.

This decision also addresses implementation issues regarding Section 745(c)(4)'s requirement that customers receive one year of interval usage data prior to being defaulted to a time-of-use rate and the requirement that defaulted customers receive one year of bill protection. This decision determines that time-of-use rates shall become the "standard turn-on rate" at the start of the full rollout of default time-of-use rates. Therefore, the investor-owned utilities are not required to provide interval usage data or bill protection to customers starting or transferring service after this date.

Rulemaking 12-06-013 remains open.

1. Factual and Procedural Background

In Decision (D.) 15-07-001 (*Decision on Residential Rate Reform for Pacific Gas and Electric Company (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E) and Transition to Time-of-Use Rates*), the Commission set a course for residential rate reform over the next few years and for a transition of most residential customers from a tiered, non-time varying rate[1] to a default time-of-use (TOU) rate.[2] D.15-07-001 directed each of Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) (collectively, the Investor Owned Utilities (IOUs)) to each file a residential rate design window (RDW) application no later than January 1, 2018 that proposes a default TOU rate structure to begin in 2019, assuming that the requirements of Public Utilities Code Section 745 have been met.[3] Pursuant to Section 745, certain customers must be excluded from default TOU and certain requirements must be met before any residential customers are put on a default TOU rate.

D.15-07-001 required the IOUs to develop and design opt-in TOU pilots for immediate implementation and default TOU pilots to be implemented in 2018 and to evaluate these pilots in preparation for widespread enrollment in TOU. D.15-07-001 ordered the implementation of a TOU Working Group to design TOU pilots that would allow study of TOU rates.

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[1] A "tiered rate" is a rate schedule on which price varies by the total amount of electricity used in a one-month period. In contrast, under a TOU rate the price varies by when the electricity was used.

[2] A default rate is not mandatory; customers are still allowed to opt-in to a different rate.

[3] All subsequent section references are to the California Public Utilities Code unless otherwise indicated.

On October 15, 2015, the assigned Commissioner and Administrative Law Judge (ALJ) issued a scoping memo and ruling establishing the scope of issues for Phase 3 of this proceeding (Phase 3 Scoping Memo), which included the interpretation of the Section 745 requirements that must be met for default TOU.[4] The Phase 3 Scoping Memo stated that defining these requirements were necessary for TOU pilot design and measurement and would enable the IOUs to continue gathering supporting information and documentation for their 2018 RDW applications.

On December 24, 2015, PG&E and SCE separately filed Tier 3 advice letters (ALs) setting forth their opt-in TOU pilot plans, and SDG&E similarly filed its plan on December 30, 2015.[5] The Commission approved the IOUs' opt-in pilot plans in Spring 2016.[6] The IOUs began enrolling customers onto the opt-in pilots in June 2016 and collected data over the summer months. Participating customers were either enrolled in one of three IOU-specific TOU rates (treatment customers) or left on their current tiered rate (control customers). These pilots compared the load and bill impacts between treatment and control customers, as well as customers' responses to an extensive survey. PG&E and SCE each enrolled approximately 20,000 customers onto their opt-in TOU pilots, and SDG&E enrolled approximately 10,000 onto its opt-in pilot.

The Commission adopted D.16-09-016 (*Decision on the Requirements of California Public Utilities Code Section 745 for Default Time-of-Use (TOU) Rates for*

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[4] D.15-07-001 at 332, Conclusion of Law 56: "A third phase of this proceeding should be opened to consider (1) interpretation of the Section 745 conditions that must be met for default TOU…"

[5] PG&E AL 4764-E, SCE AL 3335-E and SDG&E AL 2835-E

[6] Resolutions E-4762 (PG&E), E-4761 (SCE), and E-4769 (SDG&E).

Residential Customers) on September 15, 2016. The decision resolved Section 745 interpretation and implementation issues to the extent necessary for the opt-in pilots to collect appropriate data. The decision determined that findings on Section 745 could not be made until the appropriate data are gathered. The decision stated that an initial evaluation would be done based on data from the opt-in pilots and other existing data, and that any relevant findings from the default TOU pilots could be incorporated into the analysis at a later date.[7]

On December 16, 2016, each of the IOUs filed a separate advice letter setting forth their plans for the default TOU pilots to be launched in March 2018.[8] The Commission approved SCE's and SDG&E's advice letters in May 2017, and PG&E's advice letter in August 2017.[9] The primary objectives of these pilots are to assess the IOUs' operational capacity to default customers to a new rate, as well to review customer impacts and refine plans for default TOU rate design and roll-out. PG&E will default approximately 250,000 customers, SCE will default approximately 400,000 customers, and SDG&E will default approximately 120,000 customers.

On January 23, 2017, the assigned Commissioner and assigned ALJ issued a Ruling Amending Scoping Memorandum and Ruling (Amended Scoping Memo) to, among other things, set the scope and procedural schedule for the next set of issues related to Section 745 and to clarify expectations for a successful roll-out of TOU rates to residential customers. It stated that Section 745

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[7] D.16-09-016 at 17.

[8] PG&E AL 4979-E, SCE AL 3531-E and SDG&E AL 3020-E.

[9] Resolutions E-4846 (PG&E), E-4847 (SCE), and E-4848 (SDG&E).

interpretation and implementation issues not addressed in D.16-09-016 should now be considered.

On April 11, 2017, a report summarizing the first interim evaluation of the opt-in pilots was issued by the consultant selected by the TOU Working Group to inform its work on TOU pilot design.[10] Workshops were held May 18, 2017 and May 22, 2017 to discuss the report. An evidentiary hearing was held on May 22, 2017 to document the results of the May 18, 2017 and May 22, 2017 workshops, to provide an opportunity for cross-examination of witnesses, and to move written testimony into the record.

Opening Briefs on Section 745 Track issues were served and filed on June 14, 2017 by the Utility Consumers' Action Network (UCAN), and on June 15, 2017 by the Office of Ratepayer Advocates (ORA), Center for Accessible Technology (CforAT), The Utility Reform Network (TURN), Consumer Federation of California (CFC), and the three IOUs. Reply Briefs on Section 745 Track issues were served and filed on June 29, 2017 by UCAN, ORA, CforAT, TURN, and the three IOUs.

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[10] *California Statewide Opt-in Time-of-Use Pricing Pilot Interim Evaluation*, dated April 11, 2017, prepared by Nexant, Inc. and Research Into Action ("Nexant Report"). This report was admitted into the record as Exh. PG&E-305.

2. Discussion and Analysis

2.1. Section 745(c)(2)

Section 745(c)(2) requires that:

> 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.

In D.16-09-016, the Commission determined that "senior citizen" means a permanent resident of a household, age 65 or older, in any income bracket.[11] D.16-09-016 defined "economically vulnerable customers" as those customers who are eligible for California Alternate Rates for Energy (CARE) or Family Electric Rate Assistance (FERA).[12] D.16-09-016 also determined that for purposes of Section 745(c)(2), there are two possible sources of hardship caused by default TOU rates: (1) economic impacts and (ii) health and safety impacts resulting from reduced air conditioning use.[13]

The Amended Scoping Memo included within the scope issues regarding whether, based on the definitions provided in D.16-09-016, TOU rates could lead to unreasonable hardship for senior citizens or economically vulnerable customers in hot climate zones.[14] In the event that the Commission determined that default TOU causes these customers to experience unreasonable hardship, the Amended Scoping Memo asked

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[11] D.16-09-016 at 38, Ordering Paragraph 2.

[12] *Id*.

[13] *Id*. at 14.

[14] Amended Scoping Memo at 8.

parties to consider the following issues: (1) whether steps could be taken to mitigate or reduce the hardship; (2) whether there were steps beyond those approved in the TOU default pilot advice letters that should be taken; and (3) if these customers must be excluded from default TOU, what steps could be taken to ensure these customers are not defaulted without their affirmative consent.

2.1.1. Do Senior Citizens in Hot Climate Zones Experience Unreasonable Hardship under TOU Rates?

2.1.1.1. Party Positions

PG&E argues that there is no unreasonable hardship from TOU for PG&E's seniors in hot climate zones.[15] PG&E states that the Nexant Report demonstrates that TOU does not cause any statistically significant increases in economic index scores,[16] difficulty paying bills, or health hardship between control group seniors and treatment group seniors.[17] PG&E also notes that another indication that seniors do not suffer unreasonable hardship is that they had a very low pilot opt-out rate. The load shift for households with seniors in

[15] PG&E Opening Brief at 22-23.

[16] The economic index is a metric developed for the opt-in pilot by Research Into Action to describe a person or group's relative level of "economic difficulty," with higher scores representing more difficulty. Exh. PG&E-305 at 40 ("The economic index was formed using Exploratory Factor Analyses (EFA) to explore the underlying connections between questions targeted at economic and financial issues -- including an index created by the Consumer Financial Protection Bureau -- and questions obtained from other research conducted in California. The EFA identified items that correlated with one another, and demonstrated coverage of several underlying aspects of the "economic difficulties" concept. It was validated and confirmed that this scale measured economic difficulty.") A detailed description of the economic index is found in Exh. PG&E-305 at 40-45.

[17] Exh. PG&E-305 at 133-135.

the hot climate zone was also similar to that of the general population in the hot climate zone. PG&E argues that the survey data on understanding, barriers, and actions taken, combined with the load impact results, indicate that seniors have opportunity and willingness to shift energy usage away from peak hours in order to achieve energy bill savings.

SCE argues that seniors residing in any SCE climate zone should not be excluded from default TOU rates. SCE states that no party has asserted that seniors residing in SCE's hot climate zones experience unreasonable hardship on TOU rates when compared to tiered, non-TOU rates. SCE's witness Samiullah testified that the opt-in pilot results from the First Interim Evaluation do not show a statistically significant difference in the economic index scores, in difficulty paying bills, or in health metrics between seniors on TOU and seniors on the otherwise applicable tariff (OAT).[18]

SDG&E states that the Nexant Report found no statistically significant differences in the economic index scores or in the health index scores between treatment and control customers for any segments of interest in SDG&E's territory.[19] SDG&E also notes that customers in SDG&E's hot climate zone were able to change behavior to offset any structural bill increases.[20]

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[18] Exh. SCE-301 at 14:7-15:4.

[19] Exh. PG&E-305 at 8. SDG&E's small hot climate zone population did not support segmentation by customer type (CARE/FERA/Senior).

[20] SDG&E Opening Brief at 11. Although data suggests that customers in SDG&E's hot climate zone who participated in the opt-in pilot were able to largely offset the negative summer bill impacts, the results are not statistically significant due to the small sample size. Exh. PG&E-305 at 379.

ORA states that absent reasonable evidence showing unreasonable hardship caused by TOU rates, all customers who are not subject to statutory exclusion pursuant to Section 745 should be included in the default TOU. ORA's witness Willis testified that the average bill impacts for households with a senior largely resembled those of the comparable general population, and that none of the economic and health difficulty metrics for the treatment group differed notably from the control group.[21]

TURN states that, based on the opt-in pilot results, it cannot reach a conclusion that seniors in hot climate zones would face unreasonable hardship. TURN notes that the results indicate that the load shifting behavior of seniors in hot climate zones is similar to that of the general population, which assuages TURN's concern regarding the impacts of TOU on stay-at-home seniors.[22] TURN also notes that the distribution of economic index scores for the senior population was similar to that of the general population.[23] However, TURN recommends monitoring this group in future analyses based on the opt-in or default TOU pilots.

UCAN states that it sees no evidence justifying exclusions of whole groups of customers based on the results of the Nexant Report.[24] UCAN states that the customer protections in Section 745, such as the ability of customers to opt out of

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[21] Exh. ORA-301 at 7:3-5.

[22] TURN Opening Brief at 29.

[23] TURN Opening Brief at 33.

[24] UCAN Opening Brief at 5. In the alternative, UCAN states that it would support PG&E's and TURN's recommendations regarding excluding CARE/FERA customers in hot climate zones.

default TOU and receive bill protection, also support the conclusion that no additional customer groups need to be excluded from default TOU.

2.1.1.2. Discussion

No party has recommended that senior citizens in hot climate zones be excluded from default TOU on the basis of unreasonable hardship. We agree with parties that the opt-in pilot data does not suggest that households with seniors experience unreasonable economic or health and safety hardship on TOU rates.[25] Moreover, the data suggest that seniors engage in load shifting to the same extent as the general population.[26] These facts, coupled with the low TOU pilot opt-out rates for seniors, support the conclusion that seniors do not experience unreasonable hardship while on TOU rates. Therefore, we do not find a basis for excluding senior citizens in hot climate zones from default TOU or for otherwise treating this population differently than the general population. As further discussed below, a senior may be excluded from default TOU based on other factors or attributes, such as if the senior is economically vulnerable or receives Medical Baseline.

2.1.2. Do Economically Vulnerable Customers in Hot Climate Zone Experience Unreasonable Hardship under TOU Rates?

In considering whether economically vulnerable customers in hot climate zones experience unreasonable hardship under TOU rates, the Amended Scoping Memo asked parties to consider CARE/FERA eligible customers as a whole and two additional subsets – customers with incomes at or below 100% of

[25] Exh. PG&E-305 at 8.

[26] Exh. PG&E-305 at 5.

the Federal Poverty Level (FPL) and customers with incomes from 101-250% FPL. The purpose for studying these customer groups was to allow the opportunity to evaluate whether sub-groups of potentially economically vulnerable customers faced more hardships than others. For example, studying customers with incomes at or below 100% FPL could show whether this sub-group of CARE-eligible customers faced a greater burden than CARE-eligible customers as a whole under a default TOU rate. The opt-in pilots included customers that are currently enrolled in CARE/FERA and customers that, according to their self-reported income and household size, are eligible to enroll in CARE/FERA. Since data from the opt-in pilots for these three groups follow similar patterns, we consider CARE/FERA eligible customers, customers with incomes at or below 100% FPL and customers with incomes from 101-250% FPL together.

2.1.2.1. Do CARE/FERA Eligible Customers in Hot Climate Zones Experience Unreasonable Economic Hardship?

2.1.2.1.1. Party Positions

The IOUs argue that the opt-in pilot data does not show increased economic hardship for CARE/FERA eligible customers in hot climate zones. PG&E states that the data shows that CARE/FERA eligible customers served on its opt-in pilot TOU rates had similar economic index scores as CARE/FERA eligible customers served on its tiered rate,[27] and that the distributions of

[27] PG&E Opening Brief at 25-26; Exh. PG&E-305 at 135-38.

electricity burden for CARE/FERA customers are not appreciably different under the tiered rate versus the TOU rates.[28]

SCE states that only CARE/FERA eligible customers on its opt-in pilot TOU rate 3 showed higher economic index scores than the control group. SCE argues that this finding should be disregarded because rate 3 does not have a baseline credit and will not be offered during its default TOU pilot,[29] and that its default pilot TOU rates will have smaller bill impacts than its opt-in pilot TOU rates.[30] Additionally, in SCE's territory, CARE/FERA customers on all three of its opt-in pilot TOU rates did not demonstrate higher levels of difficulty paying bills.[31]

SDG&E's hot climate zone has only 17,000 customers total,[32] and SDG&E's recruitment for the opt-in pilot only resulted in enrolling 865 customers in its hot climate zone, and of those only 432 were assigned to a pilot rate.[33] Due to the small sample size, CARE/FERA eligible customers were not separately evaluated and references to customer impacts in the hot climate zone represent hot climate zone customers as a whole. The structural bill impacts for customers in SDG&E's hot climate zone were much smaller than those for customers in

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[28] PG&E Opening Brief at 29.

[29] SCE Opening Brief at 4-5, fn. 5.

[30] The TOU rate used in SCE's opt-in pilot has a greater differential between peak and off-peak rates than the TOU rate it will use in its default pilot, which means the adverse bill impacts from high on-peak usage will be lower than in the opt-in pilot. (*Id.* at 20.)

[31] SCE Opening Brief at 16-17; Exh. PG&E-305 at 287-88.

[32] Exh. SDG&E-302 at 2, 6.

[33] Exh. PG&E-305 at 340.

PG&E and SCE's hot climate zones, and SDG&E states that customers across its hot climate zone were able to offset much of the structural bill impacts,[34] or even save money.[35]

The intervening parties differed in their interpretation of the opt-in pilot results. ORA argues that the data does not show economic hardship to CARE/FERA customers[36] while TURN argues the opposite. ORA opposes excluding CARE/FERA eligible customers in hot climate zones and makes the point that milder rates are proposed for the default pilot and the full rollout of TOU than the rates tested in the opt-in pilot.[37] ORA believes that the milder rates will mitigate negative bill impacts for CARE/FERA eligible customers.

TURN believes that the opt-in pilot's incentive payments likely masked economic hardship,[38] and argues that structural bill impacts demonstrate average summer monthly bill impacts for CARE/FERA customers of $17-20 in PG&E's territory and $24-32 in SCE's territory.[39] Furthermore, TURN states, across all of PG&E and SCE's opt-in pilot TOU rates, approximately 90% of CARE/FERA customers would experience neutral or negative bill impacts on an annual

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[34] The term "structural" is used to denote the impact of a rate assuming no change in the customer's usage. In other words, structural benefiters under a particular TOU rate would experience a lower bill without making any changes to their current pattern and time of usage.

[35] SDG&E Opening Brief at 11; Exh. PG&E-305 at 6.

[36] ORA Opening Brief at 3-4.

[37] ORA Opening Brief at 6-7.

[38] TURN Opening Brief at 7.

[39] TURN Opening Brief at 14.

basis.[40] TURN further argues that CARE/FERA customers demonstrated less ability to shift their load than non-CARE/FERA customers.[41]

CforAT suggests that bill impacts show that customers are at risk of hardship[42] and that customers on the economic margin have difficulty absorbing an unexpectedly high bill.[43] Like TURN, CforAT points to data that indicate that CARE/FERA customers have less ability than non-CARE/FERA customers to shift their usage. CforAT argues that section 745(c)(2) does not require a proof of hardship, but rather that proponents of default TOU are required to demonstrate proof of no hardship.[44]

UCAN does not advance a position on potential economic hardship at this time and believes that existing opt-in pilot data is insufficient to draw conclusions about how customers will respond to default TOU as the data only represents a few summer months.[45]

2.1.2.1.2. Discussion

We agree with SCE that the results from its opt-in TOU rate 3 are likely not representative of the milder TOU rates that will be used in the default pilot and the full rollout of default TOU. We also agree with ORA that these milder TOU rates will mitigate negative bill impacts for CARE/FERA eligible customers.

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[40] *Id.* at 10-15.

[41] *Id*. at 27-28.

[42] CforAT Reply Brief at 7-8.

[43] *Id*. at 5-6.

[44] *Id*. at 2.

[45] UCAN Opening Brief at 6.

Thus, we put little weight on the increased economic index score demonstrated by CARE/FERA eligible customers on rate 3. With respect to TURN's argument that incentive payments masked economic hardships, we note that both control and treatment customers received incentive payments so that any economic impact or bill relief would show up in both treatment and control groups.[46]

However, we also agree with PG&E, TURN, and CforAT that the average monthly summer bill impacts for CARE/FERA customers in hot climate zones are quite high. Two of the mildest rates tested in the opt-in pilot, PG&E's rate 1 and SCE's rate 1, had structural average summer monthly bill impacts of $17 and $24 respectively. Given that the data generally shows that the CARE/FERA customers shifted load less than non-CARE/FERA customers, it is questionable whether these customers would be able to substantially mitigate the structural bill impacts of moving from a tiered rate to TOU rate.

With respect to SDG&E, we note that, unlike PG&E and SCE, SDG&E's tiered rate is seasonally differentiated. Seasonally differentiated rates are rates that reflect the relative cost of service by time of year. For example, in most parts of California generation costs more during the summer months and less during the winter months. This results in generally lower bills during the winter and higher bills during the summer. Because SDG&E's rates already take into account this seasonal differentiation, the structural bill impacts of moving from a tiered rate to a TOU rate in SDG&E's territory are more mild than in PG&E or SCE's territory. However, due to the small sample size, actual bill impact results

[46] Exh. PG&E-305 at 12-13.

were not statistically significant, nor do we have load or actual bill impact results specific to CARE/FERA customers in SDG&E's hot climate zone.

We find that the available evidence is insufficient to conclude that economically vulnerable customers in hot climate zones do not experience unreasonable economic hardship due to TOU rates. With the exception of SCE's TOU opt-in rate 3, the data does not show statistically significant differences in the economic index scores of CARE/FERA eligible customers on TOU rates compared to CARE/FERA eligible customers on tiered rates. However, the data also shows that CARE/FERA customers in the hot climate zones had high summer bill impacts and demonstrated less ability to shift load than non-CARE/FERA customers. Given this data, further study and evaluation is warranted prior to making a determination on the issue of unreasonable economic hardship.

As contemplated in the Amended Scoping Memo, the Commission may re-visit this determination in the 2018 RDWs based on the actual rates proposed in the RDWs and based on additional data from the opt-in pilots, the default TOU pilots, and/or other relevant data.[47] We note that the opt-in pilot programs are ongoing and due to be completed by the end of 2017. Another interim report covering a full year of the opt-in pilots will be issued in November 2017 and a final report on the completed opt-in pilots will be issued at the end of first quarter of 2018.

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[47] Amended Scoping Memo at 6.

2.1.2.2. Do CARE/FERA Eligible Customers in Hot Climate Zones Experience Unreasonable Health or Safety Hardship on TOU Rates?

2.1.2.2.1. Party Positions

The IOUs and ORA do not believe that CARE/FERA eligible customers experience unreasonable health or safety hardship while on TOU rates, while TURN's analysis of the survey results indicate that TOU rates may have adverse health impacts on CARE/FERA customers in hot climate zones, at least in SCE's service territory.

TURN states that CARE/FERA customers on SCE's rates 1 and 3 who have a self-reported disability that requires cooling and also have air conditioning in their home demonstrated statistically significantly higher instances of needing to seek medical attention due to excess heat.[48] SCE argues that CARE/FERA customers with a self-reported disability that requires cooling who also have air conditioning in their home make up only a small portion of CARE/FERA customers, and that, therefore, the results for these customers cannot be generalized to all CARE/FERA customers.[49]

In PG&E opt-in pilot, among customers with a self-reported disability that requires cooling who also have air conditioning in their home, there were no differences between treatment and control customers in instances of needing to seek medical attention due to excess heat.[50]

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48 TURN Opening Brief at 30-31.

49 SCE Opening Brief at 16-19.

50 Exh. PG&E-305 at 187, 189.

PG&E and SCE also state that CARE/FERA customers on the opt-in pilot TOU rates did not report being uncomfortably hot any more than CARE/FERA customers who remained on the tiered rate, with the exception of SCE's opt-in TOU rate 3.[51]

UCAN reiterates its position that existing opt-in pilot data is insufficient to draw conclusions regarding how customers will respond to default TOU rates and whether TOU rates cause unreasonable health and/or safety impacts.[52]

2.1.2.2.2. Discussion

As in our assessment of economic hardship, we find that the results from SCE's opt-in TOU rate 3 are likely not representative of the milder TOU rates that will be used in the default pilot and the full rollout of default TOU. Thus, we put little weight on the increased instances of needing to seek medical attention demonstrated by certain CARE/FERA customers on rate 3. We also agree with SCE that the results for CARE/FERA customers with a self-reported disability that requires cooling who also have air conditioning in their home make up only a small portion of CARE/FERA customers and that these results are likely not representative of CARE/FERA customers as a whole.

With respect to SDG&E, we do not have results specific to CARE/FERA customers in SDG&E's hot climate zone on the health-related survey questions.

We find that the available evidence is insufficient to conclude that TOU rates do not cause unreasonable health and/or safety hardship for economically vulnerable customers in hot climate zones. We note that the 2017 survey for the

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51 SCE Opening Brief at 16; PG&E Opening Brief at 33; Exh. PG&E-305 at 154.

52 UCAN Opening Brief at 5-6.

opt-in pilots includes many more health-related questions than the 2016 survey, and, therefore, may provide additional insight into this question. Therefore, as contemplated in the Amended Scoping Memo, the Commission may re-visit this determination in the 2018 RDWs based on the actual rates proposed in the RDWs and based on additional data from the opt-in pilots, the default TOU pilots, and other relevant data.[53]

2.1.2.3. Should Economically Vulnerable Customers Be Excluded from Default TOU?

2.1.2.3.1. Party Positions

PG&E, TURN and CforAT recommend that the Commission exclude CARE/FERA eligible customers in hot climate zones from default TOU rates. PG&E states its concern with the impacts of high summer TOU bills on customers who already have a high electricity burden,[54] and argues that economically vulnerable customers may lack the economic reserves to absorb several months of higher bills.[55] In addition, PG&E points out that CARE/FERA customers also demonstrated less ability to shift load. If economically vulnerable customers are unable to shift their load, TURN argues against unnecessarily increasing financial and health hardship for these customers when it will not help achieve state energy goals.[56] CforAT is skeptical that the right to opt-out and bill protection are sufficient safeguards against hardship; it does not believe

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53 Amended Scoping Memo at 6.

54 PG&E Opening Brief at 29.

55 *Id*. at 24, 29.

56 TURN Opening Brief at 40.

that all customers will be aware of their right to opt-out and is concerned that shock over high bills can cause economically vulnerable customers to forego payment of other bills or avoid energy use to the detriment of health and safety.[57]

SCE, SDG&E, ORA, and UCAN are against excluding economically vulnerable customers from TOU rates. SCE and UCAN argue that right to opt-out, bill protection, and marketing, education, and outreach (ME&O) are sufficient to ensure that default TOU rates do not cause unreasonable hardship for economically vulnerable customers in hot climate zones.[58] In light of PG&E's argument for exclusion, SCE proposes that the Commission need not require the same exclusions for all IOUs. Thus, if the Commission were to exclude economically vulnerable customers in PG&E's territory from default TOU, it could still include these customers in SCE's territory.[59]

SDG&E believes that its economically vulnerable customers would benefit from TOU rates and argues against exclusion. SDG&E states that because its hot climate zone has such a small customer population, it can increase customer engagement, education and outreach to these customers in order to maximize potential bill savings for its economically vulnerable customers.[60]

ORA argues that the mild TOU rates used in the default pilot and the full rollout of default TOU will substantially minimize the bill impacts of moving

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[57] CforAT Reply Brief at 10-12.

[58] SCE Reply brief 5-6; UCAN Opening Brief at 9-10.

[59] SCE Opening Brief at 27-28.

[60] SDG&E Opening Brief at 19-20.

from a tiered rate to a TOU rate.[61] ORA also argues that the right to opt-out, bill protection, the availability of balanced/level payment plans and its proposed moratorium on disconnections for CARE/FERA customers are sufficient to protect economically vulnerable customers.[62]

2.1.2.3.2. Discussion

We share the concerns articulated by PG&E, TURN and CforAT regarding the high summer bill impacts for economically vulnerable customers who have not demonstrated an ability to shift load and mitigate these bill impacts. Although we recognize that the results in SDG&E's territory as a whole were quite different from those in PG&E and SCE's territories, the data for SDG&E's CARE/FERA customers in hot climate zones is limited. And while we agree with SCE and UCAN that the right to opt-out, bill protection and ME&O are useful tools to mitigate harm, it is unclear at this point that these tools will be sufficient to ensure that economically vulnerable customers do not experience unreasonable hardship.

Therefore, to ensure that economically vulnerable customers do not experience unreasonable economic hardship on TOU rates, we exclude CARE/FERA eligible customers in hot climate zones from all three of the IOUs' default pilots. We order the IOUs to use the exclusion procedures for CARE/FERA eligible customers that were approved in their respective default pilot resolutions.[63]

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[61] ORA Opening Brief at 6-8.

[62] *Id.* at 8-10.

[63] Resolutions E-4846 (PG&E), E-4847 (SCE), E-4848 (SDG&E).

The Commission will further consider whether economically vulnerable customers in hot climate zones should be excluded from the full rollout of default time-of-use rates in the IOUs' 2018 RDWs. The Amended Scoping Memo states that the Section 745 decision is to be used for the default TOU pilots, as well as applied to the 2018 RDWs. However, the Amended Scoping Memo also states that additional data and analysis will be considered in the 2018 RDWs.[64] Analysis of the 2018 RDWs will consider new relevant data from the remainder of the opt-in pilots and the default pilots, and the actual rates proposed for the full rollout of default TOU.

Specifically, the Commission will have access to a full year and two summers worth of data from the opt-in pilot, including more robust data on health and safety impacts. Additionally, CARE/FERA customers in moderate and cool climate zones will participate in the default pilot. Their participation will allow us to assess:

- whether or not CARE/FERA structural non-benefiters exercise their right to opt-out of default TOU;
- CARE/FERA customers' levels of awareness of TOU/satisfaction with TOU /understanding of TOU; and
- how CARE/FERA customers respond to ME&O materials.

2.1.2.4. Should Zone 10 be reclassified from a Moderate Climate Zone to a Hot Climate Zone?

TURN recommends that Zone 10 be reclassified from a moderate zone to a hot zone since consumption and bills in Zone 10 are similar to those in currently

[64] Amended Scoping Memo at 6.

identified hot climate zones.[65] If Zone 10 is re-classified, TURN further recommends that CARE/FERA eligible customers in Zone 10 be excluded from default TOU.[66] SCE reiterates its opposition to excluding its CARE/FERA eligible customers from TOU rates and is also against the reclassification of Zone 10 from a moderate zone to a hot climate zone.

Zone 10 exhibits similar temperatures as the currently identified hot climate zones. Furthermore, consumption and bills in Zone 10 are also similar to those in the current hot climate zones. CARE/FERA eligible customers in Zone 10 are subject to similar energy burden and hardships as CARE/FERA eligible customers in the currently identified hot zones. Therefore, the justification for protecting CARE/FERA eligible customers in currently identified hot climate zones equally applies to CARE/FERA eligible customers in Zone 10. As such, we direct the re-classification of Zone 10 from a moderate climate zone to a hot climate zone, and exclude CARE/FERA eligible customers in Zone 10 from the default TOU pilot.

2.1.3. TURN's Proposal Regarding a FERA Penetration Rate Party Positions

2.1.3.1. Party Positions

The Commission has defined "economically vulnerable customers" under Section 745(c)(2) as including all CARE/FERA eligible customers.[67] As part of its argument for the exclusion of CARE/FERA eligible customers from TOU rates,

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[65] TURN Reply Brief at 24-25.

[66] TURN Reply Brief at 7.

[67] D.16-09-016 at Ordering Paragraph 2.

TURN argues that the utility proposals to identify economically vulnerable customers are targeted to CARE-eligible customers and are not sufficient to ensure the exclusion of all FERA-eligible customers. The CARE program is mandated by statute; FERA was created through Commission decision. TURN states that FERA penetration rates lag significantly behind CARE penetration rates. In order to support the statutory goal of protecting economically vulnerable customers, TURN recommends that if the Commission decides to exclude economically vulnerable customers in hot climate zones from default TOU, the Commission should not authorize any full-scale default of customers in hot climate zones onto TOU rates until the FERA penetration rate reaches 50% for the utility.[68]

PG&E argues TURN's proposal should be rejected as it is beyond the scope of this proceeding and contrary to Commission precedent addressing outreach for the FERA program. PG&E also argues that TURN does not provide an analytic basis for its selection of the 50% penetration target or a detailed showing on which the Commission could base a finding of feasibility, cost, or effectiveness. PG&E notes that its propensity model has already been vetted through the low income proceeding and that TURN has not provided any evidence that its propensity model is not valid. PG&E also notes that the FERA program is much smaller than the CARE program and has a smaller benefit. Instead of a FERA penetration threshold, PG&E recommends that the Commission utilize the default pilots as an opportunity to garner learnings regarding the FERA-eligible population in the moderate and cool climate zones.

[68] TURN does not recommend that the default TOU pilots be delayed based on achieving the recommended FERA penetration rate. (TURN Opening Brief at 45, fn. 82.).

SCE argues that TURN's FERA proposal is untimely, outside the scope of this proceeding, and unsupported by evidence. SCE also argues that the proposal is unnecessary given that FERA households comprise less than 5% of SCE's total residential customers.

2.1.3.2. Discussion

We find TURN's FERA proposal to be within the scope of issues related to implementing Section 745(c)(2). However, we find that there is inadequate support for adopting a FERA penetration threshold at this time.

TURN provides no basis for its proposed penetration threshold of 50%. As with its proposal regarding the MB program, discussed below, TURN does not present any evidence as to why this penetration threshold would be appropriate or reasonable for the FERA program. We agree with PG&E that there is a lack of information regarding the feasibility, cost, or effectiveness of TURN's proposed enrollment threshold.

The Commission has already approved the IOUs' advice letters setting forth their respective approaches for identifying CARE and FERA eligible customers for the default TOU pilots.[69] TURN did not protest this aspect of the IOUs' advice letters nor does TURN recommend delaying the default TOU pilots based on its proposed FERA penetration rate.[70] Therefore, we do not modify the IOUs' approaches we previously approved for identifying CARE and FERA eligible customers for the default TOU pilots.

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[69] Resolutions E-4846 (PG&E); E-4847 (SCE); and E-4848 (SDG&E).

[70] TURN Opening Brief at 45, fn. 82.

However, we share TURN's concerns regarding whether the IOUs' approaches for the default TOU pilots would be sufficient in the event that FERA-eligible customers are excluded from the mass rollout of default TOU. At the workshops in 2017 the IOUs described new, more pro-active measures that they are engaged in to encourage greater enrollment in these programs by eligible customers. We direct the TOU Working Group to further explore and hold a workshop on the issue of whether there are other feasible methods the IOUs could employ to more effectively identify FERA-eligible customers. Parties may make proposals on methods to identify FERA-eligible customers during the IOUs' RDW applications.

2.1.4. ORA's Proposal for a Summer Moratorium on Disconnections

2.1.4.1. Party Positions

ORA recommends that CARE/FERA-eligible customers in hot climate zones be included in the default pilots, but, as mitigation, proposes a summer moratorium on disconnections for all CARE/FERA-eligible customers that are defaulted to TOU rates. ORA believes this measure would offer valuable protection for low-income customers and "an opportunity for utilities to intervene in a timely fashion as customers fall behind on payment."[71]

The utilities counter that such a measure would have little actual benefit for any customers, especially if CARE/FERA-eligible customers are excluded from the default pilots. They argue that there are already adequate consumer protections in place for all customers (such as a lengthy grace period before unpaid bills result in disconnections) and specifically for customers defaulted to

[71] ORA Opening Brief at 8-9.

TOU rates (such as bill protection and the ability to opt-out of TOU rates) that protect CARE/FERA-eligible customers defaulted to TOU as well.[72] Further, PG&E believes this measure would require a time-consuming manual process that adds considerably to the administrative costs of the pilots and that a better option for ensuring that economically vulnerable customers who are most at risk of large adverse bill impacts from default TOU rates in the summer is to simply exclude CARE/FERA-eligible customers in hot climate zones.[73]

2.1.4.2. Discussion

Because we determine that CARE/FERA eligible customers in hot climate zones will be excluded from the default pilots, we see no compelling reason to incur the costs related to ORA's proposed summer moratorium on disconnections for CARE/FERA-eligible customers defaulted to TOU rates. While the parties did not provide specific costs related to implementing ORA's proposal, we agree with the utilities that the benefits derived from this additional protection would be too minimal to justify manually crafting and implementing carve-outs in the existing billing systems. The customers potentially most protected by such a policy, CARE/FERA-eligible customers in hot climate zones, will not be defaulted to TOU during the pilots and may be excluded from the initial migration if additional data suggests they suffer unreasonable hardship under TOU rates. There is no demonstration of hardship as a result of TOU for CARE/FERA eligible customers that will be included in the default pilots (those not in hot climate zones) and these customers will have additional consumer

[72] PG&E Opening Brief at 47-8; SCE Reply Brief at 26; SDG&E Reply Brief at 7-8.

[73] PG&E Opening Brief at 48.

protections such as bill protection and the ability to opt-out of TOU rates in place to mitigate any potential harmful impacts of default TOU rates.

2.2. Section 745(c)(1)

Section 745(c)(1) identifies specific vulnerable customer groups that must be excluded from default TOU. These customer groups include customers receiving a Medical Baseline (MB) allowance,[74] customers requesting third-party notification,[75] and customers who the Commission has ordered cannot be disconnected from service without an in-person visit from a utility representative.[76] The statute also gives the Commission the discretion to designate other customers that must be excluded from default TOU.

The Amended Scoping Memo included within the scope issues related to the affirmative consent, identification, and exclusion of the customer groups listed in Section 745(c)(1). The Amended Scoping Memo also included the issue of whether the Commission should, in its discretion, exclude any other customer groups from default TOU.[77]

2.2.1. TURN's Proposal Regarding a Medical Baseline Penetration Rate

2.2.1.1. Party Positions

TURN recommends that, in order to ensure the underlying legislative mandate of Section 745(c)(1) can be effectively implemented, the Commission should not order the rollout of mass default TOU until it is certain that at least

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74 As defined in Section 739(c).

75 As defined in Section 779.1(c).

76 D.12-03-054, *Decision on Phase II Issues: Adoption of Practices to Reduce the Number of Gas and Electric Service Disconnections* at 55, Ordering Paragraph 2(b).

77 Amended Scoping Memo at 8-9.

50% of the population eligible for the MB program is enrolled in the program.[78] TURN argues that the current penetration rate of MB is very low with only 2.8% of all PG&E, SCE, and SDG&E accounts having received a MB baseline allowance in 2016.[79] TURN's witness Sandoval estimates that 10% of utility households are eligible for the MB program.[80] Based on this estimate, TURN concludes that the current enrollment of 2.8% would represent a penetration rate of 28%. TURN states that although its recommendation may not be required by law, the Commission should, as a matter of policy, ensure that at least half of the people who are eligible for MB are enrolled in the program.[81]

CforAT agrees with TURN that more efforts are needed to enroll eligible customers in the MB program before the Commission can have confidence that medically vulnerable customers are adequately protected. CforAT states that there is no dispute that many eligible customers are not enrolled in the program and that the response generated by the IOUs in their recent efforts to raise awareness demonstrates that a substantial population of eligible but unenrolled customers remains.

CFC states that in order for the protections under section 745(c)(1) to be effective, the penetration rates for MB should be increased.

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[78] TURN does not recommend that the default TOU pilots be delayed based on achieving the recommended MB penetration rate. (TURN Opening Brief at p. 45, fn. 82.)

[79] Exh. TURN-302 at 4.

[80] Exh. TURN-302 at 6.

[81] TURN Opening Brief at 50.

PG&E argues that TURN's proposal should be rejected as being beyond the scope of this proceeding. To the extent that the Commission decides to consider TURN's proposal, PG&E states that the proposal is not required pursuant to Section 745(c)(1) since that statute clearly applies only to residential customers receiving MB. PG&E also argues that the proposal is based on unreliable evidence and would be challenging and time consuming to implement. PG&E finds TURN's proposal to be unnecessary given that PG&E's increased outreach on MB that started in late 2016 as part of residential rate reform communications has already resulted in a significant increase in its MB program enrollments. PG&E also finds TURN's proposal to be unnecessary since all default customers will have an opportunity to opt out of default TOU or to try the TOU rate for one year under bill protection. PG&E recommends that the Commission instead order the IOUs to provide updates and work with the TOU working group on ongoing MB outreach efforts.

SCE states that the Commission should reject TURN's proposal because it is untimely, outside this proceeding's scope, and risks significantly delaying default TOU on the basis of questionable evidence. SCE argues that a MB threshold is not required to fulfill Section 745(c)(1). SCE notes that the IOUs have provided supplemental testimony on the MB program outreach efforts and that the Commission should instead order TURN and the IOUs to work together to explore ways to increase awareness of the MB program.

SDG&E opposes TURN's proposal. SDG&E argues that TURN's proposal is outside of the scope of this proceeding. SDG&E also argues that TURN's proposal is unnecessary due to a default customer's ability to opt out of TOU, the availability of bill protection for default customers, and its extensive ME&O activities. SDG&E highlights its recent MB outreach efforts, which has resulted in a 44% increase in its MB participation since June 2015. SDG&E states that it plans to continue with a robust outreach program to educate all of its customers about TOU.

2.2.1.2. Discussion

We find TURN's proposal to be within the scope of this proceeding. TURN argues that a MB threshold is necessary in order to ensure that the underlying legislative mandate of Section 745(c)(1), that MB customers be excluded from default TOU, can be effectively implemented.

In considering TURN's proposal, we do not find sufficient basis for adopting a MB penetration threshold or for delaying default TOU until a MB penetration threshold is reached. As acknowledged by TURN, there is no statutory requirement that the Commission adopt a MB penetration threshold prior to defaulting customers onto TOU rates. Section 745(c)(1) only requires that customers receiving MB be excluded from default TOU.

TURN argues that the Commission should nevertheless adopt TURN's proposal based on policy reasons. However, we find TURN's evidence on this issue to be unpersuasive. TURN's witness Sandoval estimates that 10% of utility households are eligible for the MB program. According to Dr. Sandoval, most of the public health professionals she has spoken to throughout the state estimate that approximately 20% of California residents are eligible to receive MB. Based on these discussions, Dr. Sandoval then conservatively assumes that 10% of utility households would be eligible.[82] We find the information that forms the basis of Dr. Sandoval's estimate to be unreliable. The qualifications and expertise

[82] Exh. TURN-302 at 7:15-20.

of these various public health professionals are unknown and there is a lack of information regarding how the 20% estimate was developed. Dr. Sandoval herself testified as to difficulty of arriving at a reliable estimate of the eligible MB population.[83]

There is also insufficient basis for TURN's proposed 50% penetration threshold. TURN does not present any evidence as to why this penetration threshold would be appropriate for the program. PG&E's witness O'Neill testified that, unlike the income-based CARE program, the MB program results in a diverse set of potential participants that vary significantly in income, energy usage profiles, and location, resulting in varying customer interest or perceived necessity to join the program.[84] Some MB participants may have a temporary condition or only have higher energy usage needs for the short-term.[85] TURN's witness acknowledged that there may be reasons that customers who are eligible for MB choose not enroll in the program.[86]

TURN argues that the adoption of a MB penetration goal is analogous to the penetration goals that the Commission has pursued for the CARE program. However, the Commission adopted the CARE penetration rate goals based on a statutory requirement and after an extensive process, which included the

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[83] Exh. TURN-302 at 3-6; TR 4186:4-6.

[84] Exh. PG&E-303 at 8:6-10.

[85] TR 4187:27-4188:9.

[86] TR 4197:19-4198:17.

consideration of a report that estimated the percentage of low income customers that would be unwilling or unlikely to participate in CARE.[87]

Based on the foregoing, we find inadequate support for TURN's proposal for adoption of a MB enrollment penetration threshold in this proceeding. We note that customers who may be eligible for MB but not enrolled in the program will still have the ability to opt out of default TOU and will receive bill protection for a period of one year if they elect to remain on the default TOU rate.

We, however, agree with TURN and CforAT that the IOUs' supplemental testimony regarding increased MB enrollment as a result of recent outreach efforts, although encouraging, suggests that there may be many customers eligible for MB that are unaware of the program. The IOUs shall continue their outreach on MB and continue to provide information regarding the MB program in their rate reform communications. We also direct the IOUs to provide periodic updates to the TOU working group and in their Progress on Residential Rate Reform reports on the status of their outreach efforts.

2.3. Section 745(c)(4)

Section 745(c)(4) sets forth certain consumer protections related to default TOU. Section 745(c)(4) states:

> A residential customer shall not be subject to a default time-of-use rate schedule unless that residential customer has been provided with 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

[87] D.08-11-031 at 181-188; TURN Opening Brief at 51-53.

> shall not exceed the amount that would have been payable by the residential customer under that customer's previous rate schedule.

The Amended Scoping Memo included within the scope implementation issues regarding Section 745(c)(4)'s requirement that customers receive one year of interval usage data prior to being defaulted to a TOU rate and the requirement that defaulted customers receive one year of bill protection.

2.3.1. Initial Default TOU Migration

To assist in understanding and resolving implementation issues related to Section 745(c)(4), the Amended Scoping Memo used the term "Initial Default TOU Migration" (IDTM). The Amended Scoping Memo defined the IDTM as "the period of time starting on the date the specific IOU begins migrating customers to default TOU and ending one year later." PG&E, SDG&E, ORA and UCAN support this definition.[88] SCE proposed in Application (A.) 17-04-015 to complete its migration in two waves and so instead defines the end of the IDTM as the end of its second wave.[89] Each IOU will propose specific timing and duration for its default TOU migration in its January 1, 2018 RDW application. For purposes of resolving Section 745(c)(4) implementation issues in today's decision, we use the definition of the IDTM proposed in the Amended Scoping Memo.

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[88] PG&E Opening Brief at 36, Exh. SDG&E-302 at 11, Exh. ORA-301 at 23, Exh. UCAN-301 at 17.

[89] SCE-301 at 26. On August 24, 2017, the Commission adopted D.17-08-024, which dismissed SCE's application without prejudice.

2.3.2. One Year of Interval Usage Data

It is clear that pursuant to Section 745(c)(4), residential customers receiving service on the tiered, non-time-varying rate at the start of the IDTM must be provided with one year of interval usage data prior to being defaulted to a TOU rate. The Amended Scoping Memo asked if, after the IDTM, customers must receive one year of interval usage data prior to being defaulted to a TOU rate. The Amended Scoping Memo also asked what rules should apply for new accounts opened during or after the IDTM and for customer accounts transferred during or after the IDTM.

2.3.2.1. Party Positions

PG&E argues that the provisions of 745(c)(4) only apply to a customer who is being migrated from one rate schedule ("the customer's previous rate schedule") to the default TOU rate schedule.[90] Customers who start or transfer service do not have a previous rate schedule, and therefore, the provisions of 745(c)(4) do not apply to those customers. ORA agrees with PG&E and offers that if new customers were obligated to first go on tiered rates for a year during the IDTM, it would create a "bizarre and likely unintended legacy of [t]iered rates when the rest of the non-exempt, non-opted out population is already on TOU rates."[91]

Concurrent with the start of the IDTM, PG&E proposes to change its current process of automatically placing customers onto its tiered rate, E-1, at service start/transfer. Instead, PG&E would engage customers in a rate

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[90] PG&E Opening Brief at 37.

[91] ORA Opening Brief at 12.

conversation in which PG&E assists them in selecting the best rate for them. Should the customer decline to choose a rate, PG&E would place the customer on the default TOU rate. In this way, the default TOU rate would become the "standard turn-on rate" at the start of the IDTM.

ORA and UCAN support PG&E's approach for new customers who start service with an IOU, but argue that the IOUs should retain a customer's rate choice if that customer transfers service to a new premise within the same service territory.[92] PG&E states that a customer's rate choice is stored in PG&E's system for a particular premise address, and that it would be costly and difficult to track that rate choice to a new premise address.[93] Additionally, PG&E argues that the rate choice a customer makes for one premise may not be the best choice for a new premise, given the potential for changes in load and usage patterns.

SCE and SDG&E agree with PG&E that customers who transfer service to a new premise within the same service territory should be treated the same as new customers, but argue that TOU should not become the "standard turn-on rate" until the end of the IDTM.[94] Under their approach, customers who start/transfer service during the IDTM would be placed on their IOUs' respective tiered rate and then be transitioned to the default TOU rate one year later. SCE argues that this approach complies with the plain language of 745(c)(4) and allows customers to review their usage data before being defaulted to or selecting a TOU rate. SCE also argues that each IOU should retain

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[92] ORA Opening Brief at 11-13, Exh. UCAN-301 at 19.

[93] PG&E Opening Brief at 38.

[94] SCE Opening Brief at 8, Exh. SDG&E-302 at 11-12.

flexibility to determine its own rate education approach, as opposed to the requiring the IOUs to have rate conversations with customers at service start/transfer.[95]

TURN agrees with SCE and SDG&E that TOU should become the "standard rate" at the end of the IDTM.[96]

2.3.2.2. Discussion

Pursuant to Section 745(c), subject to certain conditions, the Commission may authorize the use of default TOU rates for residential customers. To be a default rate means that the TOU rate at some point becomes the "standard turn-on rate" for new customers. Otherwise, there would be a potentially indefinite transition to default TOU since there will always be new customers starting and customers transferring service within an IOU's service territory. We interpret the requirements of Section 745(c)(4) with the understanding that the Legislature did not intend for an indefinite transition to default TOU. No party disputes that the default TOU rate will at some point become the "standard turn-on rate."

We find that the default TOU rate should become the "standard rate" at the start of the IDTM. There are several advantages to this approach. This approach would eliminate the need for subsequent "clean-up" waves of default TOU, which could result in increased costs and customer confusion. Moreover, if there is a prolonged transition to default TOU, customers would not benefit from the rate-related ME&O that will be in the market during the IDTM.

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[95] SCE Opening Brief at 8.

[96] TURN Opening Brief at 54.

With respect to customers who transfer service to a new premise within the same service territory, we find it unnecessary to require the IOUs to implement potentially difficult and costly processes to track a customers' rate choice across premises given the potential for a customer's load and usage patterns to change across premises. Therefore, the IOUs may continue to treat customers who transfer service to a new premise within the same service territory as new customers.

Since the default TOU rate will become the "standard rate" at the start of the IDTM, we find that the requirement for one year of interval usage data applies to those customers receiving service on the tiered, non-time varying rate at the start of the IDTM, and does not apply to customers who sign-up for electric service, or transfer their electric service to a new address, after the IDTM has begun.

SCE argues that Section 745(c)(4) contains no explicit exception from the 12-month interval data requirement for new customers after the IDTM period has started.[97] However, the IDTM is not defined by statute, but rather is a term used by the Commission to aid in implementing the transition to default TOU. As discussed above, the Commission has the authority to require the IOUs to make the default TOU rate the "standard turn-on rate" at some point and there is nothing in Section 745(c)(4) that dictates that the Commission make the default TOU rate the "standard turn-on rate" either at the start or at the end of IDTM.

The Commission has previously required the IOUs to develop and test "rate conversation" scripts similar to those currently in use by Arizona Public

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[97] SCE Opening Brief at 32.

Service.[98] We find that engaging customers in considering all their rate choices will better enable customers to choose the rate that is right for them, given lifestyle and usage preferences and patterns.

In the interest of enabling customers to choose the rate that is best for them, PG&E, SCE and SDG&E are ordered to complete development and testing of rate conversation scripts in time for the start of the IDTM. Beginning at the start of the IDTM, the IOUs must engage customers who start/transfer service in making a rate selection. These customers will only be placed on the "standard [TOU] rate" if they decline to make a rate selection.

2.3.3. One Year of Bill Protection

Section 745(c)(4) requires the IOUs to provide at least one year of bill protection to residential customers that are subject to a default TOU rate schedule. Under bill protection, the amount the customer pays while receiving service on the default TOU rate may not exceed the amount the customer would have paid under that customer's previous rate schedule. If the amount paid while on the TOU rate is higher, the customer must be credited the difference.

The Amended Scoping Memo included within the scope the issue of whether bill protection should be provided to new customer accounts opened during or after the IDTM and to customer accounts transferred during or after the IDTM. It also included the issue of whether bill protection should be offered to customers who opt-in to a more complex TOU rate during the IDTM.

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[98] The IOUs presented sample scripts as part of the quarterly Progress on Residential Rate Reform (PRRR) reporting in 2016 and scripts were included with the IOU advice letter filings for ME&O plans.

2.3.3.1. Party Positions

Based on their recommendation to make the default TOU rate the "standard turn-on rate" at the start of the IDTM, PG&E and ORA argue that Section 745(c)(4) does not require one year of bill protection to be provided to new customers placed on the default TOU rate, during or after the IDTM, because these customers do not have a "previous rate schedule" to which to compare the TOU rates for purposes of offering bill protection.

SCE, SDG&E and TURN recommend making the default TOU rate the "standard turn-on rate" at the end of the IDTM, and as a consequence recommend that the IOUs would provide bill protection to customers defaulted to a TOU rate during the IDTM and in their respective "clean-up" waves, but not to customers who start or transfer service after the IDTM.

All IOUs argue that bill protection should be limited to the default TOU rate and should not apply to any optional TOU rates.[99] They argue that if a customer is electing to take service on an opt-in rate instead of the default TOU rate it is likely because they would be better off on the opt-in TOU rate, and thus, bill protection would be unnecessary. Additionally, PG&E states that offering bill protection requires complex and costly information technology work, and that to duplicate that work for multiple TOU rates is not cost-effective.[100] ORA and UCAN argue that bill protection should be made available for opt-in TOU rates.[101]

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99 Exh. SCE-305 at 2-3.

100 PG&E Reply Brief at 39-40.

101 UCAN Opening Brief at 6-7; Exh. SCE-305 at 3.

However, parties agree that bill protection should be offered to customers who opt-in to the default TOU rate during the IDTM.[102] PG&E argues for three exceptions to this expansion of bill protection:

- customers currently receiving service on a TOU rate other than its default TOU rate,
- customers receiving service under the Net Energy Metering (NEM) Successor Tariff which requires them to take service on a TOU rate, and
- customers billed through PG&E's Advanced Billing System (such as virtual net metering customers).[103]

2.3.3.2. Discussion

In the previous section we concluded that the default TOU rate will become the "standard turn-on rate" at the start of the IDTM. Section 745(c)(4) requires bill protection such that the amount a residential customer pays while receiving service on the default TOU rate does not exceed the amount the customer would have paid under "that customer's previous rate schedule." Because new customers enrolling in the default TOU rate schedule during or after the IDTM will not have a previous rate schedule to which to compare the TOU rate, we find that the bill protection provisions of Section 745(c)(4) do not apply to these customers. Because customers accounts transferred during or after the IDTM are treated as new customer accounts, we find that the bill protection provisions of Section 745(c)(4) also do not apply to accounts that are transferred onto a default TOU rate during or after the IDTM.

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102 Exh. SCE-305 at 1-2; PG&E Opening Brief at 39; SCE Opening Brief at 34; Exh. SDG&E-302 at 14:9-10; ORA Opening Brief at 10.

103 PG&E Reply Brief at 39; Exh. PG&E-301 at 47.

With regard to the applicability of bill-protection to optional TOU rates, we agree that customers will likely opt-in to a more complex TOU rate if their rate comparison demonstrates that they would be better off on the optional TOU rate, and are therefore unlikely to need bill protection. Additionally, the expense to provide bill protection on additional TOU rates outweighs its likely limited application. There is also no requirement in Section 745(c)(4) that bill protection be extended to optional TOU rates. Therefore, the bill protection provisions of Section 745(c)(4) shall be limited to the default TOU rate.

Although we find that bill protection need not be provided to customers enrolling in an optional TOU rate, we find that bill protection should be provided to customers that opt-in to the default TOU rate during the IDTM. This is consistent with the procedure established for the default pilots and would protect customers who elect to opt-in to the default TOU rate ahead of their default date. Moreover, unlike with more complex TOU rates, offering bill protection to these customers will not entail much additional expense because the IOUs' systems will already be programmed to offer bill protection for the default TOU rates.

We agree with PG&E, ORA and UCAN that customers already taking service on a TOU rate need not be provided with protections intended to help smooth the transition for customers without experience with TOU rates. We also agree that NEM Successor Tariff customers should not be provided with bill protection as they are no longer eligible to receive service on a their previous tiered rate schedule. Finally, we agree that the cost to provide bill protection to customers billed through PG&E's Advanced Billing System is not warranted given the small number of customers served by this system. As with PG&E's

default pilot, customers billed through PG&E's Advanced Billing system will not be defaulted to a TOU rate, given that PG&E cannot offer them bill protection.

Therefore, the IOUs are directed to provide bill protection to all customers who opt-in to the default TOU rate during the IDTM, with the exception of customers already on a TOU rate, NEM Successor Tariff customers, and PG&E customers who are billed through PG&E's Advanced Billing System.[104] Additional exceptions to the requirement for bill protection may be considered in the IOUs' January 1, 2018 RDW applications. The IOUs shall provide bill protection for a period of 12 months from the customer's enrollment on the default TOU rate or until the customer unenrolls from the default TOU rate, whichever occurs first.

2.4. Section 754(d)

Sections 745(d)(1) and 745(d)(2) require that prior to requiring or authorizing an electrical corporation to default residential customers onto TOU rates, the Commission consider evidence addressing the extent to which default TOU rates will cause hardship to "[c]ustomers 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 Amended Scoping Memo included within the scope the issue of what standards or methods the Commission should use to complete the analysis required under Section 745(d). It also included the issue of whether the

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[104] Exh. PG&E-301 at 47.

Commission is required to perform the Section 745(d) analysis each time an IOU proposes to change its default TOU rate structure.

2.4.1. Standards or Methods to Complete Section 745(d) Analysis

Initial steps in understanding the analysis required under Section 745(d) were addressed in D.16-09-016 and through the TOU Working Group.[105] D.16-09-016 defined key terms and determined that "hot, inland areas" refer to the same geographic areas as "hot climate zones" for each IOU:

- SCE: Baseline Territories 13, 14, and 15;
- PG&E: Baseline Territories P, R, S and W; and
- SDG&E: Mountain and Desert Baseline Territories.[106]

The TOU Working Group concluded that "areas with hot summer weather" include all the baseline territories listed above, as well as SCE's baseline territory 10.

Section 745(d) asks the Commission to assume no changes in summertime usage or usage during peak periods. Therefore, the required analyses can be completed using customers' historical usage data. At the request of Energy Division, the IOUs provided bill impact, electricity burden, and bill volatility data for the geographic regions described above in their Opening Testimony.

The results of the Section 745(d) analysis represent a "worst case" scenario, in that the results show the effect on each customer's bill of moving from a tiered to TOU rate assuming that the customer does not respond by shifting load in order to avoid higher peak period prices. To the extent customers can and do

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105 D.16-09-016 at 17-24.

106 D.16-09-016 at 18.

shift load, those who the analysis show would see bill increases might see smaller increases or even decreases, and those who the analysis show would see bill decreases might see even greater decreases.

Pursuant to Section 745(d), we have considered how moving from the IOUs' tiered rates to the default pilot TOU rates would impact customers' bills, electricity burden and bill volatility, and the extent to which these impacts may cause hardship to customers in hot, inland areas and areas with hot summer weather. The relevant data and analyses for the IOUs' tiered and default pilot TOU rates are presented in Appendix A. As discussed above, we find that the bill impacts of moving from the IOUs' tiered rates to the default pilot TOU rates potentially present some risk of hardship to CARE/FERA eligible customers in PG&E zones P, R, S and W, SCE zones 10, 13, 14 and 15, and SDG&E's Mountain and Desert zones.

2.4.2. Future Need to Perform Section 745(d) Analysis

2.4.2.1. Party Positions

The IOUs and ORA argue that the Section 745(d) analysis does not need to be conducted each time an IOU updates its default TOU rate structure.[107] ORA argues that "[the] statute requires explicit consideration of hardship analysis prior to the IOUs being authorized to employ default TOU rates, but does not speak to the matter of future rate changes after the initial default."[108]

ORA argues that future changes to the default TOU rate should be considered in the same way the Commission currently considers changes to the

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107 PG&E Opening Brief at 41; SCE Opening Brief at 6-7; Exh. SDG&E-302 at 15:16-21; ORA Opening Brief at 13.

108 Exh. ORA-301 at 30:18-28.

tiered rate structure, rather than requiring the more extensive Section 745(d) analysis. PG&E concurs and notes that the Commission typically assesses bill impacts when an IOU proposes rate design changes and that these standard bill analyses are sufficient to assess future changes to the default TOU rate.

CforAT argues that a complete hardship analysis must be performed if an IOU proposes to move from a mild default TOU rate to a more severe default TOU rate.[109]

2.4.2.2. Discussion

In this decision, we considered the bill impacts, electricity burden, and bill volatility of the TOU rates that each IOU will use in its default pilot. We will separately consider the bill impacts, electricity burden and bill volatility of the TOU rates that each IOU proposes to use in its full rollout of default TOU, if they are substantially different from the rates considered here. We determine that completing the Section 745(d) analysis with regard to the default pilot rates and the default TOU rates to be used in the full rollout satisfies the requirements of Section 745(d). We agree with the IOUs and ORA that Section 745(d) requires the Commission to undertake this analysis before authorizing default TOU rates but does not require the Commission to undertake this analysis for all future rate changes. Although the Commission is not required to undertake the specific analysis required by Section 745(d) on an ongoing basis, the Commission will continue to consider bill impacts, electricity burden, or bill volatility analyses of any proposed rate changes consistent with its obligation under Section 451 to ensure just and reasonable rates for customers.

[109] CforAT Reply Brief at 12.

3. Comments on Proposed Decision

The proposed decision of the ALJs in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on _________ ; and reply comments were filed on _________.

4. Assignment of Proceeding

Michael Picker is the assigned Commissioner and Jeanne M. McKinney, Sophia J. Park, and S. Pat Tsen are the assigned Administrative Law Judges in this proceeding.

Findings of Fact

1. There is no evidence that households with seniors in hot climate zones experience unreasonable economic or health and safety hardship on TOU rates.

2. Available opt-in pilot data shows that seniors engage in load shifting to the same extent as the general population.

3. The only customer groups that showed statistically significant higher economic index scores than the control group were CARE/FERA customers on SCE's opt-in Rate 3.

4. The Commission has previously addressed the option of creating a default TOU rate with a mild differential. Such a rate is referred to as "TOU-Lite."

5. The results from SCE's opt-in rate 3 are not representative of a "TOU-Lite" rate.

6. Available opt-in pilot data shows high average monthly summer bill impacts for CARE/FERA customers in hot climate zones in PG&E and SCE territory.

7. Available opt-in pilot data generally shows that CARE/FERA customers shifted load less than non-CARE/FERA customers.

8. The Commission has defined economically vulnerable customers as CARE/FERA eligible customers.

9. Available opt-in pilot data does not provide sufficient information to determine that economically vulnerable customers in hot climate zones do not experience unreasonable hardship due to TOU rates.

10. Customers with a disability that require cooling and also have air conditioning in their home are only a small portion of the overall CARE/FERA population.

11. Baseline quantities and bills in SCE's climate zone 10 are similar to those in SCE's other hot climate zones.

12. The IOUs have taken additional efforts in the past year to promote awareness of FERA and MB to eligible customers.

13. There is inadequate justification for adopting a FERA penetration threshold.

14. The Commission has already approved the IOUs' advice letters setting forth their respecting approaches for identifying CARE/FERA eligible customers for the default TOU pilots.

15. Because CARE/FERA eligible customers in hot climate zones will be excluded from the default pilots, there is no compelling reason to adopt ORA's proposal for a summer moratorium on disconnections.

16. There is insufficient basis for adopting a Medical Baseline penetration threshold.

17. There is insufficient basis to delay default TOU until a Medical Baseline penetration threshold is reached.

18. The Initial Default TOU Migration period is appropriately defined as the period of time starting on the date the specific IOU begins migrating customers to default TOU and ending one year later.

19. To be a default rate means that the rate at some point becomes the "standard turn-on rate" for new customers.

20. The default TOU rate should become the "standard turn-on rate" at the start of the IDTM.

21. Customers who start service during or after the IDTM do not have a previous rate schedule.

22. A customer's usage and load patterns may change when the customer moves to a new premise.

23. It is difficult and costly to track a customer's rate schedule across premises.

24. Customers who transfer service within a service territory should not automatically retain their prior rate selection and should be treated the same as new customers.

25. Engaging customers in considering their rate choice will better enable customers to choose the rate that is right for them.

26. It is unlikely that customers who opt-in to a more complex TOU rate would benefit from bill protection.

27. Customers who are excluded from default TOU, but nonetheless elect to take service on the default TOU rate, should receive the same customer protections as customers who are defaulted.

28. NEM 2.0 customers are required to take service on a TOU rate.

29. It is expensive to implement bill protection for complex NEM tariffs.

30. The results of the Section 745(d) analysis represent a "worst case" scenario, in that the results show the effect on each customer's bill of moving from a tiered to TOU rate assuming that the customer does not respond by shifting load in order to avoid higher peak period prices.

Conclusions of Law

1. Senior citizens in hot climate zones should not be excluded from default TOU.
2. SCE's climate zone 10 should be classified as a "hot climate zone" pursuant to Section 745.
3. CARE/FERA eligible customers in PG&E's climate zones P, R, S and W should be excluded from the default TOU pilot.
4. CARE/FERA eligible customers in SCE's climate zones 10, 13, 14 and 15 should be excluded from the default TOU pilot.
5. CARE/FERA eligible customers in SDG&E's Mountain and Desert climate zones should be excluded from the default TOU pilot.
6. No additional measures are necessary to mitigate the impacts of default TOU on economically vulnerable customers.
7. There is no statutory requirement that the Commission adopt a Medical Baseline penetration threshold prior to defaulting customers onto TOU rates.
8. The IOUs should continue to take additional steps to improve customer awareness of the FERA and MB programs.
9. There is nothing in Section 745(c)(4) that dictates that the Commission make the default TOU rate the "standard turn-on rate" either at the start or at the end of IDTM.
10. Customers who start or transfer service after the IDTM has begun do not require one year of interval usage data prior to being placed on a TOU rate.

11. Section 745(c)(4) requires bill protection such that the amount a residential customer pays while receiving service on the default TOU rate does not exceed the amount the customer would have paid under "that customer's previous rate schedule."

12. Because new customers enrolling in the default TOU rate schedule during or after the IDTM will not have a previous rate schedule to which to compare the TOU rate, the bill protection provisions of Section 745(c)(4) do not apply to these customers.

13. Because customers accounts transferred during or after the IDTM are treated as new customer accounts, the bill protection provisions of Section 745(c)(4) do not apply to accounts that are transferred onto a default TOU rate during or after the IDTM.

14. The IOUs should provide bill protection for a period of 12 months from the customer's enrollment on the default TOU rate or until the customer unenrolls from the default TOU rate, whichever occurs first.

15. Section 745(c)(4) does not require bill protection for customers who opt-in to a TOU rate.

16. Section 745(d) requires the Commission to consider certain evidence before authorizing default TOU rates but does not require that the Commission undertake this analysis on an ongoing basis for future rate changes.

17. This decision fulfills the conditions set out in Section 745.

O R D E R

IT IS ORDERED that:

1. Pacific Gas and Electric Company (PG&E) shall exclude California Alternate Rates for Energy (CARE) and Family Electric Rate Assistance (FERA)

eligible customers in climate zones P, R, S and W from the default time-of-use pilot. Unless additional data and analysis in a formal Commission proceeding, such as PG&E's 2018 rate design window, demonstrate good cause for change, these exclusions shall also apply to default time-of-use rates.

2. Southern California Edison Company (SCE) shall exclude California Alternate Rates for Energy (CARE) and Family Electric Rate Assistance (FERA) eligible customers in climate zones 10, 13, 14 and 15 from the default time-of-use pilot. Unless additional data and analysis in a formal Commission proceeding, such as SCE's 2018 rate design window, demonstrate good cause for change, these exclusions shall also apply to default time-of-use rates.

3. San Diego Gas & Electric Company (SDG&E) shall exclude California Alternate Rates for Energy (CARE) and Family Electric Rate Assistance (FERA) eligible customers in its Mountain and Desert climate zones from the default time-of-use pilot. Unless additional data and analysis in a formal Commission proceeding, such as SDG&E's 2018 rate design window, demonstrate good cause for change, these exclusions shall also apply to default time-of-use rates.

4. No later than January 2018, Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall work with the TOU Working Group to hold a workshop to further explore whether there are other feasible methods the utilities could employ to more effectively identify Family Electric Rate Assistance eligible (but not enrolled) customers. A report on the workshop's findings shall be filed in this docket no later than February 2018.

5. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall provide periodic updates to the TOU working group and in their Progress on Residential Rate Reform reports of

their ongoing efforts to increase awareness and enrollment in the Medical Baseline program.

6. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company (collectively, the Utilities) shall make time-of-use the "standard turn-on rate" for new and transferred customers at the start of the initial default migration period. Beginning at the start of the initial default migration period, the Utilities shall engage customers who start or transfer service in affirmatively selecting a rate.

7. Pacific Gas and Electric Company (PG&E), Southern California Edison Company, and San Diego Gas & Electric Company must provide one year of bill protection to customers who opt-in to the default time-of-use rate during the initial default migration period, except for customers who are already receiving service on a time-of-use rate, a net energy metering (NEM) Successor Tariff, or customers billed through PG&E's Advanced Billing System.

8. The assigned Commissioner and assigned Administrative Law Judge are authorized to take all procedural steps to promote the objectives in this decision and, in response to any appropriate motions filed with the Commission and served on the service list of this proceeding, to provide clarification and direction as required to assure the effective, fair and efficient implementation of this decision.

9. If further clarification of implementation issues related to default time-of-use rates is necessary, and such clarification is ministerial in nature, the Director of Energy Division is authorized to provide clarification via letter served on the service list and filed in this docket. The investor-owned utilities may also seek guidance on implementation issues that are ministerial in nature through the advice letter process in accordance with General Order 96B.

10. Rulemaking 12-06-013 remains open.

This order is effective today.

Dated ______________________________, at Chula Vista, California.

APPENDIX A

Public Utilities Code Sections 745(d)(1) and 745(d)(2) require the Commission to consider evidence addressing the extent to which default time-of-use (TOU) rates will cause hardship to "[c]ustomers 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 utilities' bill impact, electricity burden, and bill volatility data for "hot, inland areas" and "areas with hot summer weather" is provided here.

The results of the Section 745(d) analysis represent a "worst case" scenario, in that the results show the effect on each customer's bill of moving from a tiered to TOU rate assuming that the customer does not respond to TOU pricing by shifting load out of peak periods.

Pacific Gas and Electric Company (PG&E) Bill Impacts, Electricity Burden, and Bill Volatility

PG&E provides bill impacts of moving from the tiered rate (E-1) to its default pilot time-of-use (TOU) rate (E-TOU-C3).[1] PG&E also provides an analysis of electricity burden and analyses of bill volatility under the tiered rate and its default pilot TOU rate.

Default Pilot TOU Rate, Summer Rate Structure

Rate Name	*Peak Period*	*Tier 1 POPP*[2]	*Tier 2 POPP*
E-TOU-C3	*4-9pm, all days*	*1.32*	*1.23*

Bill Impacts, Hot Inland Areas / Areas with Hot Summer Weather

Table 1: Average Monthly Bill Change[3]

[1] 2018 proxy rates [are] based on 2017 residential sales and revenue requirement, as well as known changes in the rate designs that will be in place in 2018 (For example, PG&E developed its 2018 proxy Schedule E-1 rates using the Glidepath rate ratios for 2018 directed by the Commission in D.15-07-001). (Exh. PG&E-301 at 13.)

[2] Peak to off-peak ratio.

				Non-CARE/FERA	CARE/FERA
Percentage of Customers	Decrease		>$10	1.7%	0.5%
			$5-10	0.4%	0.8%
			$2-5	0.5%	3.9%
			$0-2	11.5%	21.9%
	Total Structural Benefiters			**14.2%**	**27.1%**
	No Change		-	**1.1%**	**0.1%**
	Increase		$0-2	20.8%	35.9%
			$2-5	21.3%	30.1%
			$5-10	26.5%	6.3%
			>$10	16.1%	0.5%
	Total Structural Non-Benefiters			**84.8%**	**72.9%**
Total*				**100%**	**100%**

*Percentages in the table may not add to exactly 100% due to rounding.

Table 1 demonstrates that, assuming no changes in usage, 84.8% of non-CARE/FERA customers would experience average monthly bill increases when moving from a tiered rate to PG&E's default pilot TOU rate. Table 1 also shows that 16.1% of non-CARE/FERA customers would see average monthly bill increases of greater than $10.

Likewise, Table 1 demonstrates that 72.9% of CARE/FERA customers would experience average monthly bill increases when moving from a tiered rate to PG&E default pilot TOU rate. Table 1 also shows that 6.8% of CARE/FERA customers would see average monthly bill increases of greater than $5 and 0.5% would see average monthly bill increases of greater than $10.

Electricity Burden, Hot Inland Areas / Areas with Hot Summer Weather

[3] Exh. PG&E-301 at B-102, B-114

The concept of "electricity burden" is defined as the percentage of a household's annual income that is spent on electricity. PG&E provides an analysis of electricity burden, using customer bills and household income data, the latter of which was acquired from Experian.[4]

Table 2: Electricity Burdens[5]

	Non-CARE/FERA		*CARE/FERA*	
	E-1	*E-TOU-C3*	*EL-1*	*EL-TOU-C3*
0% to 1%	15.9%	15.5%	16.1%	15.8%
1% to 2%	25.2%	24.2%	27.3%	26.9%
2% to 3%	19.7%	19.6%	18.4%	18.5%
3% to 4%	12.2%	12.5%	10.9%	11.0%
4% to 5%	7.4%	7.7%	6.7%	6.9%
5% to 6%	4.7%	4.9%	4.6%	4.6%
6% to 7%	3.2%	3.3%	3.3%	3.4%
7% to 8%	2.3%	2.4%	2.5%	2.5%
8% to 9%	1.7%	1.8%	1.9%	1.9%
9% to 10%	1.3%	1.4%	1.5%	1.5%
10% to 15%	3.7%	3.8%	4.3%	4.4%
Over 15%	2.8%	3.0%	2.5%	2.6%
*Total**	100.0%	100.0%	100.0%	100.0%

*Percentages in the table may not add to exactly 100% due to rounding.

Table 2 demonstrates how little the distribution of electricity burden changes when moving from a tiered rate to PG&E's default pilot TOU rate. Where the distribution does change, it is most often only by a few tenths of a percent in either direction.

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[4] *Id.* at C-4, C-8.

Experian's household income data are estimated using several individual and household-level variables. These variables are inputted into Experian's proprietary statistical models to predict income levels for each household unit. When sufficient customer-level data are not available to produce a predicted income level for an individual household, Experian based its estimated income on the median estimated income in the household's zip+4 area.

[5] *Id.* at 23.

Bill Volatility, Hot Inland Areas / Areas with Hot Summer Weather

PG&E provides multiple analyses of bill volatility. Items one through four are representative of between-season bill volatility, while items five and six are representative of within-season bill volatility.

Table 3: Bill Volatility

		Non-CARE/FERA[6]		*CARE/FERA*[7]	
		E-1	*E-TOU-C3*	*EL-1*	*EL-TOU-C3*
1	*Difference between average summer bill and average winter bill is greater than $50, % of customers*	54.6%	66.0%	41.1%	56.1%
2	*Highest average bill*	$239	$261	$138	$154
	Lowest average bill	$120	$117	$64	$59
	Range between highest and lowest average bill	$119	$144	$74	$95
3	*Largest increase in average bill, month over month*	$57	$75	$34	$50
	Largest decrease in average bill, month over month	$(45)	$(62)	$(29)	$(43)
4	*Standard deviation of bill, annually*	$61	$68	$38	$44
5	*Standard deviation of bill, summer*	$46	$47	$26	$27
6	*Standard deviation of bill, winter*	$37	$34	$23	$20

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6 *Id.* at D-3, D-9, D-13.

7 *Id.* at D-5, D-11, D-13.

Table 3 demonstrates that, for both non-CARE/FERA and CARE/FERA customers:

1. A higher percentage of customers see differences of greater than $50 between their average summer bill and their average winter bill under PG&E's default pilot TOU rate than under the tiered rate.
2. The range between the highest average bill and lowest average bill is wider under PG&E's default pilot TOU rate than under the tiered rate.
3. Both the largest increase and the largest decrease in average bill, month over month, are greater under PG&E's default pilot TOU rate than under the tiered rate.
4. The standard deviation of all bills, annually, is larger under PG&E's default pilot TOU rate than under the tiered rate.
5. The standard deviation of all bills, in the summer, is larger under PG&E's default pilot TOU rate than under the tiered rate.
6. The standard deviation of all bills, in the winter, is smaller under PG&E's default pilot TOU rate than under the tiered rate.

Southern California Edison Company (SCE) Bill Impacts, Electricity Burden, and Bill Volatility

SCE provides bill impacts of moving from the tiered rate (D) to its two default pilot TOU rates Default Rate 1 (TOU 4 to 9) and Default Rate 2 (TOU 5 to 8).[8] SCE also provides an analysis of electricity burden under the tiered rate and each of its default pilot TOU rates, and analyses of bill volatility under the tiered rate and each of it default pilot TOU rates.

[8] The default TOU rates are compared to the anticipated 2018 tiered rate structures, which reflect the bill impacts customers transitioning to default TOU in 2018 should experience. (Exh. SCE-301 at 38.)

Default TOU Pilot and Hypothetical TOU Rates, Summer Rate Structure

Rate Name	*Peak Period*	*Tier 1 POPP*	*Tier 2 POPP*
TOU 4 to 9	*4-9pm, weekdays*	*2.28*	*1.82*
TOU 5 to 8	*5-8pm, weekdays*	*2.65*	*2.08*

Bill Impacts, Hot Inland Areas (Zones 13, 14, and 15) and Zone 10

SCE provides bill impact analyses for hot inland areas and zone 10 separately.

Table 1: Average Monthly Bill Changes, Non-CARE/FERA

			Hot Inland Areas[9]		*Zone 10*[10]	
			TOU 4 to 9	*TOU 5 to 8*	*TOU 4 to 9*	*TOU 5 to 8*
Percentage of Customers	*Decrease*	*>$10*	4.7%	4.9%	3.0%	3.1%
		$5-10	2.8%	2.9%	1.9%	1.8%
		$2-5	5.1%	4.5%	3.7%	3.6%
		$0-2	16.8%	15.5%	13.3%	12.0%
	Total Structural Benefiters		**29.4%**	**27.8%**	**21.9%**	**20.5%**
	No Change	**-**	**-**	**-**	**-**	**-**
	Increase	*$0-2*	21.3%	22.4%	19.2%	20.8%
		$2-5	20.6%	21.4%	22.1%	23.4%
		$5-10	19.2%	19.7%	25.0%	25.0%
		>$10	9.5%	8.7%	11.8%	10.3%
	Total Structural Non-Benefiters		**70.6%**	**72.2%**	**78.1%**	**79.5%**
Total*			**100%**	**100%**	**100%**	**100%**

[9] *Id.* at B-13, B-32.

[10] *Id.* at B-15, B-34.

*Percentages in the table may not add to exactly 100% due to rounding.

Table 2: Average Monthly Bill Changes, CARE/FERA customers

			Hot Inland Areas[11]		*Zone 10*[12]	
			TOU 4 to 9	*TOU 5 to 8*	*TOU 4 to 9*	*TOU 5 to 8*
Percentage of Customers	*Decrease*	*>$10*	0.3%	0.3%	0.3%	0.4%
		$5-10	0.8%	0.7%	0.6%	0.5%
		$2-5	2.8%	3.1%	2.3%	2.5%
		$0-2	23.1%	21.2%	22.2%	21.9%
	Total Structural Benefiters		**27.0%**	**25.3%**	**25.5%**	**25.3%**
	No Change	-	-	-	-	-
	Increase	*$0-2*	30.4%	31.7%	31.6%	32.7%
		$2-5	26.8%	28.6%	27.5%	28.4%
		$5-10	14.7%	13.5%	14.5%	12.9%
		>$10	1.1%	0.8%	1.0%	0.8%
	Total Structural Non-Benefiters		**73.0%**	**74.7%**	**74.5%**	**74.7%**
Total*			**100%**	**100%**	**100%**	**100%**

*Percentages in the table may not add to exactly 100% due to rounding.

Table 1 demonstrates that, in hot inland areas, assuming no changes in usage, 70.6-72.2% of non-CARE/FERA customers would experience average monthly bill increases when moving from a tiered rate to one of SCE's default pilot TOU rates. Table 1 also shows that 8.7-9.5% of non-CARE/FERA customers on default pilot TOU rates would see average monthly bill increases of greater than $10. For non-CARE/FERA customers in zone 10, these figures are 78.1-79.5% and 10.3-11.8%, respectively.

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11 *Id.* B-12, B-31.

12 *Id.* at B-14, B-33.

Likewise, Table 2 demonstrates that 73.0-74.7% of CARE/FERA customers would experience average monthly bill increases when moving from a tiered rate to one of SCE's default pilot TOU rates. Table 2 additionally shows that 14.3-15.8% of CARE/FERA customers on default pilot TOU rates would see average monthly bill increases of greater than $5 and 0.8-1.1% would see average monthly bill increases of greater than $10. For CARE/FERA customers in zone 10, these figures are 74.5-74.7%, 13.7-15.5%, and 0.8-1.0%, respectively.

Electricity Burden, Hot Inland Areas (Zones 13, 14, and 15) and Zone 10

SCE provides an analysis of electricity burden, using customer bills and household income data.

Table 3: Non-CARE/FERA Electricity Burdens[13]

	Hot Inland Areas			*Zone 10*		
Electricity Burden	*D*	*TOU 4 to 9*	*TOU 5 to 8*	*D*	*TOU 4 to 9*	*TOU 5 to 8*
0% to 1%	13.7%	13.2%	13.3%	13.3%	12.4%	12.4%
1% to 2%	21.7%	21.2%	21.1%	29.2%	28.5%	28.5%
2% to 3%	18.1%	18.5%	18.6%	21.5%	21.6%	21.6%
3% to 4%	13.0%	12.8%	12.6%	11.5%	11.7%	11.8%
4% to 5%	7.8%	8.2%	8.3%	6.8%	7.0%	7.0%
5% to 6%	5.4%	5.5%	5.4%	3.6%	4.2%	4.3%
6% to 7%	3.9%	3.8%	3.9%	2.9%	2.9%	2.8%
7% to 8%	3.0%	2.9%	3.1%	2.4%	2.4%	2.4%
8% to 9%	1.8%	2.2%	2.1%	1.9%	1.8%	1.8%
9% to 10%	1.7%	1.4%	1.4%	1.3%	1.6%	1.5%
10% to 15%	5.1%	5.3%	5.3%	3.2%	3.3%	3.3%
Over 15%	4.9%	4.9%	4.8%	2.5%	2.6%	2.6%
*Total**	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

*Percentages in the table may not add to exactly 100% due to rounding.

Table 4. CARE/FERA Electricity Burdens[14]

13 *Id.* at 40, Footnote 55.

	Hot Inland Areas			*Zone 10*		
Electricity Burden	*D*	*TOU 4 to 9*	*TOU 5 to 8*	*D*	*TOU 4 to 9*	*TOU 5 to 8*
0% to 1%	11.6%	11.6%	11.5%	17.0%	16.3%	16.3%
1% to 2%	21.7%	20.9%	21.0%	27.7%	27.7%	27.7%
2% to 3%	17.4%	17.2%	17.1%	17.3%	17.0%	17.0%
3% to 4%	12.6%	12.0%	12.2%	9.4%	9.5%	9.4%
4% to 5%	7.5%	8.5%	8.1%	7.6%	8.1%	8.3%
5% to 6%	4.5%	4.8%	5.0%	4.4%	4.4%	4.4%
6% to 7%	4.0%	3.8%	3.8%	3.2%	3.4%	3.3%
7% to 8%	3.2%	3.6%	3.7%	2.9%	2.6%	2.6%
8% to 9%	3.3%	2.7%	2.7%	1.9%	2.2%	2.1%
9% to 10%	2.6%	2.8%	2.7%	1.4%	1.4%	1.5%
10% to 15%	7.4%	7.7%	7.8%	5.5%	5.4%	5.5%
Over 15%	4.2%	4.4%	4.3%	1.8%	2.0%	2.0%
*Total**	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

*Percentages in the table may not add to exactly 100% due to rounding.

Tables 3 and 4 demonstrate how little the distribution of electricity burden changes when moving from a tiered rate to one of SCE's default pilot TOU rates. Where the distribution does change, it is most often only by a few tenths of a percent in either direction.

Bill Volatility, Hot Inland Areas (Zones 13, 14, and 15) and Zone 10

SCE provides multiple analyses of bill volatility. Items one through four are representative of between-season bill volatility, while items five and six are representative of within-season bill volatility.

[14] *Id.* at 40, Footnote 55.

Table 5: Bill Volatility, Non-CARE/FERA

		Hot Inland Areas[15]			*Zone 10*[16]		
		D	*TOU 4 to 9*	*TOU 5 to 8*	*D*	*TOU 4 to 9*	*TOU 5 to 8*
1	*Difference between average summer bill and average winter bill is greater than $50, % of customers*	59.0%	65.3%	65.3%	59.3%	68.5%	68.3%
2	*Highest average bill*	$219	$236	$236	$202	$219	$219
	Lowest average bill	$90	$86	$87	$91	$88	$88
	Range between highest and lowest average bill	$129	$150	$149	$111	$131	$131
3	*Largest increase in average bill, month over month*	$44	$65	$65	$45	$50	$50
	Largest decrease in average bill, month over month	$(45)	$(64)	$(65)	$(61)	$(81)	$(80)
4	*Standard deviation of bill, annually*	$146	$141	$141	$130	$124	$124
5	*Standard deviation of bill, summer*	$179	$182	$182	$156	$152	$152
6	*Standard deviation of bill, winter*	$119	$100	$100	$108	$93	$93

Table 6: Bill Volatility, CARE/FERA

		Hot Inland Areas[17]	*Zone 10*[18]

15 Exh. SCE-302 at B-57, B-9, B-71.

16 *Id.* at B-59, B-11, B-71.

17 *Id.* at B-58, B-10, B-72.

18 *Id.* at B-60, B-12, B-72.

		D	*TOU 4 to 9*	*TOU 5 to 8*	*D*	*TOU 4 to 9*	*TOU 5 to 8*
1	*Difference between average summer bill and average winter bill is greater than $50, % of customers*	44.6%	51.6%	51.5%	34.2%	43.6%	43.5%
2	*Highest average bill*	$128	$139	$139	$111	$121	$121
	Lowest average bill	$50	$48	$48	$49	$47	$48
	Range between highest and lowest average bill	$78	$91	$91	$62	$74	$73
3	*Largest increase in average bill, month over month*	$30	$40	$41	$24	$28	$28
	Largest decrease in average bill, month over month	$(30)	$(41)	$(41)	$(33)	$(43)	$(43)
4	*Standard deviation of bill, annually*	$64	$68	$68	$55	$59	$59
5	*Standard deviation of bill, summer*	$79	$85	$85	$69	$75	$75
6	*Standard deviation of bill, winter*	$47	$45	$45	$41	$40	$40

Tables 5 and 6 demonstrate that, for both non-CARE/FERA and CARE/FERA customers on measures one through three:

1. A higher percentage of customers in both hot inland areas and zone 10 see differences of greater than $50 between their average summer bill and their average winter bill under each of SCE's default pilot TOU rates than under the tiered rate.
2. The range between the highest average bill and lowest average bill is wider under each of SCE's default pilot TOU rates than under the tiered in both hot inland areas and zone 10.

3. Both the largest increase and decrease in average bill, month over month, are larger under each of SCE's default pilot TOU rates than under the tiered rate in both hot inland areas and zone 10.

Tables 5 and 6 also demonstrate that:

4. For non-CARE/FERA customers, the standard deviation of all bills, annually, is smaller under each of SCE's default pilot TOU rates than under the tiered rate in both hot inland areas and zone 10. For CARE/FERA customers, the standard deviation of all bills, annually, is higher in both hot inland areas and zone 10.
5. For non-CARE/FERA customers, the standard deviation of all bills, in the summer, is larger under each of SCE's default pilot TOU rates than under the tiered rate in hot inland areas, and lower in zone 10. For CARE/FERA customers it is higher in both hot inland areas and zone 10.
6. For both non-CARE/FERA and CARE/FERA customers, the standard deviation of all bills, in the winter, is smaller under each of SCE's default pilot TOU rates than under the tiered rate in both hot inland areas and zone 10.

San Diego Gas & Electric Company (SDG&E) Bill Impacts, Electricity Burden, and Bill Volatility

SDG&E provides bill impacts of moving from the tiered rate (E-1) to its default pilot TOU rates (TOU-DR2 and TOU-DR3). SDG&E also provides an analysis of electricity burden under the tiered rate and each of it default pilot TOU rates, and analyses of bill volatility under the tiered rate and each of it default pilot TOU rates.

Hypothetical TOU Rates, Summer Rate Structure

Rate Name	*Peak Period*	*Tier 1 POPP*	*Tier 2 POPP*

TOU-DR2[19]	*4-9pm, all days*	*2.51*	*1.97*
TOU-DR3	*4-9pm, all days*	*1.82*	*1.57*

Bill Impacts, Hot Inland Areas / Areas with Hot Summer Weather

Table 1: Average Monthly Bill Changes

			Non-CARE/FERA[20]		*CARE/FERA*[21]	
			TOU-DR2	*TOU-DR3*	*TOU-DR2*	*TOU-DR3*
Percentage of Customers	*Decrease*	*>$10*	4.0%	0.8%	2.7%	0.2%
		$5-10	4.3%	7.0%	11.6%	10.7%
		$2-5	11.0%	15.7%	27.3%	28.3%
		$0-2	31.3%	22.4%	13.5%	14.8%
	Total Structural Benefiters		**50.6%**	**45.9%**	**55.1%**	**54.0%**
	No Change	**-**	**-**	**-**	**-**	**-**
	Increase	*$0-2*	21.6%	39.0%	7.9%	6.3%
		$2-5	13.9%	8.5%	8.1%	9.1%
		$5-10	11.0%	2.9%	8.7%	9.4%
		>$10	2.9%	3.6%	20.1%	21.1%
	Total Structural Non-Benefiters		**49.4%**	**54.0%**	**44.8%**	**45.9%**
Total*			**100%**	**100%**	**100%**	**100%**

*Percentages in the table may not add to exactly 100% due to rounding.

Table 1 demonstrates that 50%-54% of Non-CARE/FERA customers would experience average monthly bill increases when moving from a tiered to TOU

[19] Exh. SDG&E-301 at 6.

For TOU-DR2 the POPP is calculated as the ratio between the "On-Peak: Summer" Total Rate and the "Super Off-Peak: Summer" Total Rate.

[20] *Id.* at B-13, B-17.

[21] *Id.* at B-25, B-21.

rate. Table 1 also shows that 2.9-3.6% of Non-CARE/FERA customers on default TOU pilot rates would see average monthly bill increases of greater than $10.

Likewise, Table 1 demonstrates that 44.8-45.9% of CARE/FERA customers would experience average monthly bill increases when moving from a tiered to TOU rate. Table 1 additionally shows that 28.8-30.5% of CARE/FERA customers on default TOU pilot rates would see average monthly bill increases of greater than $5 and 20.1-21.1% would see average monthly bill increases of greater than $10.

Electricity Burden, Hot Inland Areas / Areas with Hot Summer Weather

"Electricity Burden" is defined as the percentage of a household's annual income that is spent on electricity. SDG&E provides an analysis of electricity burden, using customer bills and household income data.

Table 2: Electricity Burdens[22]

	Non-CARE/FERA			*CARE/FERA*		
Electricity Burden	*Tiered*	*TOU-DR2*	25.6%	*Tiered*	*TOU-DR2*	*TOU-DR3*
0% to 1%	26.2%	25.5%	24.9%	17.6%	17.3%	17.5%
1% to 2%	24.8%	24.8%	18.6%	29.4%	28.5%	28.9%
2% to 3%	18.2%	18.6%	10.7%	21.3%	21.8%	21.5%
3% to 4%	10.7%	10.7%	6.6%	12.6%	12.7%	12.9%
4% to 5%	6.4%	6.7%	3.8%	6.9%	7.6%	7.1%
5% to 6%	3.8%	3.8%	2.7%	3.9%	3.8%	3.9%
6% to 7%	2.6%	2.6%	1.6%	2.1%	2.1%	2.0%
7% to 8%	1.5%	1.6%	1.2%	1.7%	1.6%	1.6%
8% to 9%	1.1%	1.2%	0.8%	0.9%	0.9%	1.0%
9% to 10%	0.8%	0.8%	2.2%	0.9%	0.9%	0.9%
10% to 15%	2.2%	2.2%	1.4%	1.4%	1.4%	1.3%
Over 15%	1.6%	1.4%	100.0%	1.5%	1.4%	1.4%
*Total**	100.0%	100.0%	25.6%	100.0%	100.0%	100.0%

*Percentages in the table may not add to exactly 100% due to rounding.

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22 *Id.* at D-4, D-12, D-8.

Table 2 demonstrates for hot climate zones how little the distribution of electricity burden changes when moving from a tiered to TOU rate. Where the distribution does change, it is most often only by a few tenths of a percent in either direction.

Bill Volatility, Hot Inland Areas / Areas with Hot Summer Weather

SDG&E provides multiple analyses of bill volatility. Items one through four are representative of between-season bill volatility, while items five and six are representative of within-season bill volatility.

Table 3: Bill Volatility

		Non-CARE/FERA[23]			*CARE/FERA*[24]		
		Tiered	*TOU-DR2*	*TOU – DR3*	*Tiered*	*TOU – DR2*	*TOU-DR3*
1	*Difference between average summer bill and average winter bill is greater than $50, % of customers*	36.1%	36.3%	35.9%	23.8%	23.0%	22.7%
2	*Highest average bill*	$192	$188	$186	$124	$121	$119
	Lowest average bill	$117	$115	$115	$92	$92	$91
	Range between highest and lowest average bill	$75	$73	$71	$32	$29	$28
3	*Largest increase in average bill, month over month*	$36	$32	$32	$25	$22	$22

23 *Id.* at C-19, C-28, C-13, C-9, C-5; Standard Deviation for 2016 only (a 1-in-10 hot year)

24 *Id.* at C-23, C-29, C-13, C-9, C-5; Standard Deviation for 2016 only (a 1-in-10 hot year)

	Largest decrease in average bill, month over month	$(29)	$(27)	$(27)	$(25)	$(21)	$(21)
4	*Standard deviation of bill, annually*	$155	$122	$122	$81	$66	$64
5	*Standard deviation of bill, summer*	$179	$141	$141	$92	$76	$74
6	*Standard deviation of bill, winter*	$146	$114	$115	$80	$65	$63

Table 3 demonstrates that, for both non-CARE/FERA and CARE/FERA customers

1. The percentage of customers who see differences of greater than $50 between their average summer bill and their average winter bill is approximately the same under both of SDG&E's default pilot TOU rates and the tiered rate.
2. The range between the highest average bill and lowest average bill is narrower under both of the SDG&E's default pilot TOU rates than under the tiered rate for both Non-CARE/FERA and CARE/FERA customers.
3. Both the largest increase and decrease in average bill, month over month, are smaller under both of SDG&E's default pilot TOU rates than under the tiered rate for both Non-CARE/FERA and CARE/FERA customers.
4. The standard deviation of all bills, annually, is smaller under both of SDG&E's default pilot TOU rates than under the tiered rate for both Non-CARE/FERA and CARE/FERA customers.
5. The standard deviation of all bills, in the summer, is smaller under both of SDG&E's default pilot TOU rates than under the tiered rate for both Non-CARE/FERA and CARE/FERA customers
6. The standard deviation of all bills, in the winter, is smaller under both of SDG&E's default pilot TOU rates than under the tiered rate for both Non-CARE/FERA and CARE/FERA customers.

(END OF APPENDIX A)