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**PACIFIC GAS AND ELECTRIC COMPANY**

**LONG-TERM RESIDENTIAL ELECTRIC RATE DESIGN REFORM  
PROPOSAL**

**PHASE 1**

**PREPARED TESTIMONY**

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PACIFIC GAS AND ELECTRIC COMPANY  
LONG-TERM RESIDENTIAL ELECTRIC RATE DESIGN REFORM PROPOSAL  
PHASE 1  
PREPARED TESTIMONY

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**PACIFIC GAS AND ELECTRIC COMPANY**  
**CHAPTER 1**  
**LONG-TERM RATE DESIGN REFORM POLICY**

PACIFIC GAS AND ELECTRIC COMPANY  
CHAPTER 1  
LONG-TERM RATE DESIGN REFORM POLICY

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1                                   **PACIFIC GAS AND ELECTRIC COMPANY**  
2   **CHAPTER 1**  
3                                   **LONG-TERM RATE DESIGN REFORM POLICY**

4   **A. Introduction**

5           The purpose of my testimony is to summarize Pacific Gas and Electric  
6   Company's (PG&E) long-term proposal in Phase 1 of this proceeding, for  
7   residential electric rate reform over the 2015 to 2018 period.<sup>1</sup> PG&E's proposed  
8   rate design changes during this transition period will provide significant benefits  
9   to those upper tier-consuming households who have been burdened over the  
10   past 13 years by very high rates well in excess of cost of service, while  
11   moderating the bill increases seen by lower-tier consuming households and  
12   households participating in the California Alternate Rates for Energy (CARE)  
13   program over a reasonable transition period. PG&E's rate reform proposal is  
14   consistent with recently enacted Assembly Bill (AB) 327<sup>2</sup> and the California  
15   Public Utilities Commission's (CPUC or Commission) rate design principles.<sup>3</sup>  
16   PG&E's proposal also is generally in line with the Energy Division's "Staff  
17   Proposal for Residential Rate Reform in Compliance with R.12-06-013 and  
18   AB 327" issued on January 3, 2014.

19   **B. PG&E's Long-Term Rate Reform Proposal for 2015-2018**

20           Since the energy crisis ended 13 years ago, residential electric rates in  
21   California have moved far from basic rate design principles, including the key  
22   principles that rates should be based on cost to serve and should be  
23   understandable to customers. This is simply unsustainable. Accordingly, the  
24   CPUC opened this Order Instituting Rulemaking (OIR), and the Legislature took  
25   action in AB 327 to restore the necessary ratemaking flexibility to the CPUC.  
26   In addition, PG&E and many other parties to this proceeding agree that a  
27   significant reform of residential rates is needed.

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1   For ease of exposition, PG&E refers throughout this testimony to the period from 2015 through 2018 the "transition period" for rate reform.

2   Assembly Bill (AB) 327 (Perea), Stats. 2013, Chapter 611.

3   Ten rate design principles are described in Attachment A to the Administrative Law Judge's (ALJ) March 19, 2013 Ruling Requesting Residential Rate Design Proposals.

1           On January 28, 2014, in Phase 2 of this proceeding, PG&E served amended  
2 Summer 2014 rate proposals that take a first step in beginning to implement  
3 much-needed rate reform. Phase 2, which is pending before the Commission,  
4 is expected to be decided by June 2014. Those proposed rates, once approved,  
5 will be in effect until such time as the CPUC authorizes the longer-term rate  
6 reforms requested here in Phase 1.

7           In this Phase 1 testimony, PG&E takes the next important step to begin to  
8 implement electric rate design reforms consistent with those summarized in  
9 PG&E's Electric Rate Design Reform Proposal filed in this proceeding on  
10 May 29, 2013 and further discussed in PG&E's comments on rate design  
11 proposals on July 12 and 26, 2013. PG&E recognizes that changes must be  
12 made gradually during this transition period in order to allow customers  
13 adequate time to understand, choose, and adapt to the new rate design pricing  
14 structures. Specifically, PG&E's Phase 1 filing proposes a gradual process for  
15 narrowing the differential between the top and bottom tier non-CARE rates and a  
16 similarly gradual process for steadily decreasing PG&E's CARE discount  
17 percentage in small steps to reach the 30 to 35 percent range required by  
18 AB 327.<sup>4</sup> PG&E's proposal has four primary objectives:

- 19       1) Introduce a fixed monthly service fee in 2015 and, over the transition period,  
20       move it closer toward a cost-based level.
- 21       2) Reduce the number of tiers over the four-year period from four to two, and  
22       significantly reduce the differential between the top-tier and bottom-tier rates  
23       to establish a more appropriate gradual differential.<sup>5</sup>
- 24       3) Gradually but steadily reduce the average CARE discount percentage over  
25       the transition period so that by 2018 it reaches the average 30 to 35 percent  
26       range mandated by statute.
- 27       4) Introduce a voluntary non-tiered time-of-use (TOU) rate option to continue to  
28       offer customers meaningful rate plan choices, and phase out and eliminate  
29       the existing tiered TOU and seasonal rates by January 1, 2016.<sup>6</sup>

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4   Public Utilities Code (Pub. Util. Code) Section 739.1(c)(1).

5   Pub. Util. Code Section 739(d)(1). The number of tiers on CARE rate schedules would be reduced from three to two.

6   A discounted version of this voluntary non-tiered TOU rate option will be offered to CARE customers.

1 Table 1-1 shows the proposed transition path for PG&E’s standard tiered  
 2 rates (Schedules E-1 and EL-1):

**TABLE 1-1  
 PACIFIC GAS AND ELECTRIC COMPANY  
 RATE STRUCTURE TRANSITION FOR STANDARD SCHEDULES E-1 AND EL-1**

Line No.	Objectives	2015	2016	2017	2018
1	Monthly Service Fee(a)				
2	1.1 Non-CARE	\$5	\$10	\$10.21(a)	\$10.42(a)
3	1.2 CARE	\$2.50	\$5.00	\$5.11(a)	\$5.21(a)
4	Fewer and Narrower Tiers	Reduce number of tiers from four to three	Retain three tiers	Retain three tiers	Reduce number of tiers to two, with 1.2:1 tier price ratio
5	Reduce CARE Discount	43%	39%	36%	35%

(a) AB 327 allows up to a \$10 (\$5 for CARE) monthly service fee. After the monthly service fee reaches these levels, AB 327 allows for increases tied to changes in the Consumer Price Index (CPI). This table shows an illustrative monthly service fee assuming an annual 2.1 percent increase in the CPI, per the direction provided in the February 13, 2014 Assigned Commissioner’s Ruling (ACR). The actual CPI may be different at the time these fees go into effect.

3 PG&E is proposing a “glide path” of gradual rate changes over time in order  
 4 to achieve all of these objectives by 2018 with consideration of the bill impacts  
 5 on affected customers.<sup>7</sup> These proposed changes would apply in an analogous  
 6 fashion to PG&E’s existing voluntary rate options, as well as the standard  
 7 Schedules E-1 and EL-1.<sup>8</sup>

8 As noted above, in addition to these proposed changes to the structure of its  
 9 standard tiered rates, PG&E is proposing to introduce a new voluntary (opt-in)  
 10 TOU rate without tiers—Schedule E-TOU (for non-CARE households). The  
 11 non-tiered TOU rate would be available to CARE households as well  
 12 (Schedule E-TOU CARE). These non-tiered TOU rates are more cost-based  
 13 than PG&E’s current four-tiered TOU rate schedules, and will be easier for  
 14 customers to understand.

15 PG&E is also proposing a number of changes to certain other tiered rate  
 16 options which are described in Chapter 2, either to make them more cost-based  
 17 or to adjust discounts for particular rate schedules. For example, the discounts  
 18 or credits currently provided to customers taking service on the Medical

<sup>7</sup> Only some customers will be adversely affected. Others, notably upper-tier consuming non-CARE households who today pay bills well in excess of average rates, will benefit from PG&E’s rate reform proposal.

<sup>8</sup> The specific analogous changes proposed for each of PG&E’s voluntary rate options are described in Chapter 2, Section F.



1 Baseline, Federal Energy Rate Assistance (FERA), and SmartRate™  
2 (i.e., Critical Peak Pricing (CPP)) programs are currently based on a four-tiered  
3 rate structure. Since PG&E's proposal is to reduce the number of tiers, PG&E  
4 has proposed new ways of providing the discounts that result in roughly the  
5 same level of aggregate benefits to participants in those programs.<sup>9</sup>

6 Table 1-1 shows PG&E's proposed plan for implementing a monthly service  
7 fee on all of its non-CARE and CARE rate tariffs, including its optional and  
8 seasonal rates.<sup>10</sup> PG&E is proposing in 2015 to introduce monthly service fees  
9 of \$5.00 and \$2.50 per month, respectively, for non-CARE and CARE  
10 customers. These monthly service fees will begin the process of making  
11 PG&E's residential rates more cost-based, by collecting at least a portion of  
12 PG&E's fixed costs of service through a fixed charge, as is done for all of  
13 PG&E's other customer classes. This will end the current disproportionate  
14 recovery of such fixed costs which are now embedded in volumetric charges,  
15 such that customers with upper tier usage are paying more than their fair share  
16 of fixed costs, while customers who remain in the lower tiers are paying less  
17 than their fair share of the fixed costs they impose on the system. In 2016,  
18 PG&E is proposing to increase these monthly service fees to \$10.00 and \$5.00,  
19 respectively, for non-CARE and CARE customers. In 2017 and 2018, the  
20 monthly service fees would be adjusted according to the year-over-year change

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<sup>9</sup> Per the February 13, 2014 ACR, PG&E's proposal does not cover issues like the CARE program structure, TOU period definitions, or customer outreach including enabling technologies. These issues are to be considered either in a later phase of this Residential Rates OIR proceeding or in different proceedings. (See ACR, p. 6.)

<sup>10</sup> PG&E optional seasonal rates for non-CARE and CARE, Schedules E-8 and EL-8, already have monthly service fees, and PG&E is proposing to leave those fees at their current levels. Also, PG&E is not proposing to add a monthly service fee for its tiered electric vehicle charging rate, Schedule E-9, because that rate is scheduled to be eliminated in the near future.

1 in the CPI.<sup>11</sup> The levels of these proposed monthly service fees are fully  
2 consistent with AB 327.<sup>12</sup>

3 Table 1-1 illustrates PG&E's proposed timeline for redefining tiers, and  
4 reducing their number over the transition period.<sup>13</sup> PG&E is proposing to  
5 reduce the number of tiers on its non-CARE rates from four to three in 2015,  
6 by combining the current Tiers 2 and 3. For CARE, which currently has  
7 three tiers, PG&E is proposing to redefine the tier boundaries so that there are  
8 still three tiers but with the same definitions as the non-CARE rate schedules.  
9 After these changes, Tier 1 will apply to usage up to 100 percent of baseline,  
10 Tier 2 to usage between 100 and 200 percent of baseline, and Tier 3 to usage  
11 above 200 percent of baseline. PG&E proposes to retain this three-tier structure  
12 in 2016 and 2017, with a further reduction to two tiers in 2018.<sup>14</sup> Under PG&E's  
13 proposal, in 2018 both non-CARE and CARE schedules would have two-tier  
14 designs with the same tier definitions that applied prior to the energy crisis:  
15 with a Tier 1 rate applicable to usage up to baseline and a Tier 2 rate applicable  
16 to usage above baseline. This would simplify rates and more closely reflect cost  
17 of service.

18 Over time, as described earlier, PG&E's proposal would not just introduce  
19 monthly service fees and reduce the number of tiers, it also would reduce the

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**11** For the purpose of developing proposed levels of the monthly service fees in 2017 and 2018, PG&E assumed 2.1 percent growth in the CPI each year, per the February 13, 2014 ACR. As described in Chapter 2, Section B, the monthly service fee will still only collect a portion of PG&E's fixed costs to serve residential customers.

**12** See Pub. Util. Code Section 739.9, added by Stats. 2013, Chapter 611, Sec. 5. Section 739.9 (a) indicates that this section relates to "fixed charges'...not based on the volume of electricity consumed." Under Section 739.9 (e) "the commission may adopt new, or expand existing, fixed charges for the purpose of collecting a reasonable portion of the fixed costs of providing electric service to residential customers...." Section 739.9 (f) provides that "the Commission may, beginning January 1, 2015, authorize fixed charges that do not exceed ten dollars (\$10) per residential customer account per month for [non-CARE] customers...and five dollars (\$5)...for...CARE customers. Beginning January 1, 2016, the maximum allowable fixed charge may be adjusted by no more than the annual percentage increase in the CPI for the prior calendar year."

**13** These proposed reductions in the number of tiers apply to all of PG&E's tiered rate schedules, with the exception of the aforementioned Schedule E-9 that will soon be eliminated.

**14** PG&E may propose additional changes to the tiers subsequent to 2018, consistent with statutory requirements.

1 rate differential between the top and bottom tier rates, while reducing the CARE  
2 discount percentage to the mandated range. The February 13, 2014 ACR  
3 directs the utilities to design illustrative rates under two scenarios, one where the  
4 revenue requirement is assumed to remain constant at its current level  
5 throughout the transition period, and the other where it is assumed to increase at  
6 2.1 percent per year.<sup>15</sup> The constant revenue scenario isolates the effects of  
7 PG&E's rate design proposal from changes in revenue requirements, as is  
8 typically done in General Rate Case Phase II proceedings where the focus is on  
9 the effects of rate design in a single year. Here, however, the focus is on rate  
10 reform implemented gradually over a multi-year transition period during which  
11 revenue requirements are expected to increase. Thus, PG&E's testimony  
12 focuses on the second scenario, where revenues grow at 2.1 percent per year,  
13 and the rates and bill impacts reflect the combination of those increases and the  
14 changes in rate structure each year.<sup>16</sup> These illustrative rates, assuming  
15 revenue requirements grow by 2.1 percent, are shown in Table 1-2 below.

16 The rates in Table 1-2 show how, under PG&E's proposal, non-CARE  
17 Tiers 2 and 3 are first combined in 2015 leading to a three-tiered structure.  
18 This 3-tiered structure is then maintained, while the top-tier rate is gradually  
19 reduced, over the 2016-2017 period. Finally, in 2018, the top two tiers are  
20 combined, resulting in a two-tiered design with a 1.2:1 ratio between the two rate  
21 tiers. For CARE, the tiers are initially redefined in 2015, and then CARE rates  
22 are gradually increased each year in order to move the CARE discount  
23 percentage to the required range. By 2018, the CARE rates would also have  
24 two tiers and a 1.2:1 ratio between the two rate tiers. In addition, the discounts  
25 relative to non-CARE rates in both tiers will be the same, 31.5 percent, yielding

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<sup>15</sup> See Instruction 2 of the February 13, 2014 ACR, p. 7.

<sup>16</sup> Detailed illustrative rates for the 2.1 percent growth scenario are presented in Appendix A-1. Similar illustrative rates for the constant revenue requirement scenario are shown in Appendix B-1. Per Instruction 6 of that ACR, PG&E has also designed illustrative rates for the transition period for a third scenario, Scenario C, where the revenue requirement is the same as Scenario B, but under the assumption that PG&E's proposal in its 2012 Rate Design Window proceeding to reduce baseline quantities from 55 to 50 percent of historical average levels (which has been fully litigated but is pending a Commission decision) is not approved. Those results are presented in Appendix C-1.

1 an overall CARE discount of approximately 35 percent.<sup>17</sup> Table 1-2 also shows  
2 PG&E's proposal to implement the monthly service fees for non-CARE and  
3 CARE customers over time. As described in Chapter 2, the gradual nature of  
4 PG&E's proposed movement to the new rate structures for CARE and  
5 non-CARE result in acceptable levels of bill impacts for adversely impacted  
6 customers.<sup>18</sup> PG&E will undertake appropriate customer education and  
7 outreach to help minimize confusion and inform customers of the 2015-2018  
8 changes adopted by the Commission. In addition to promoting general  
9 awareness of these changes, PG&E will undertake actionable customer  
10 education and outreach for the most impacted customers. PG&E will fully  
11 address its customer education and outreach plan and related annual  
12 expenditures in its March 21, 2014, responses as directed by the February 13,  
13 2014 ACR.

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<sup>17</sup> Since the CARE monthly service fee is discounted by 50 percent, in order for the *overall* CARE discount to be about 35 percent, the two CARE energy rates must be discounted by less than 35 percent.

<sup>18</sup> Under the constant revenue scenario, as shown in Appendix B-1, the movement to an end-state 2-tiered rate structure with the same monthly service fees can be achieved with similarly acceptable bill impacts one year sooner, in 2017.

**TABLE 1-2  
PACIFIC GAS AND ELECTRIC COMPANY  
PRESENT AND PROPOSED STANDARD RESIDENTIAL RATES  
SCENARIO B: ASSUMING 2.1 PERCENT GROWTH IN REVENUE REQUIREMENT**

Non-CARE Rates	Current (Jan 2014)	Current (SB 695- Adjusted)	Proposed (Assuming 2.1 Percent Growth in Revenue Requirement)				
			Summer 2014	2015	2016	2017	2018
Monthly Service Fee	NA	NA	NA	\$5.00	\$10.00	\$10.21	\$10.42
Energy Charges							
0 to 100% of BQ	\$0.132	\$0.136	\$0.147	\$0.147	\$0.147	\$0.162	\$0.177
100% to 130% of BQ	\$0.150	\$0.155	\$0.170	\$0.202	\$0.202	\$0.202	\$0.212
130% to 200% of BQ	\$0.324	\$0.314	\$0.249	\$0.202	\$0.202	\$0.202	\$0.212
Over 200% of BQ	\$0.364	\$0.354	\$0.309	\$0.304	\$0.274	\$0.245	\$0.212

CARE Rates	Current (Jan 2014)	Current (SB 695- Adjusted)	Proposed (Assuming 2.1 Percent Growth in Revenue Requirement)				
			Summer 2014	2015	2016	2017	2018
Monthly Service Fee	NA	NA	NA	\$2.50	\$5.00	\$5.11	\$5.21
Energy Charges							
0 to 100% of BQ	\$0.083	\$0.086	\$0.091	\$0.097	\$0.103	\$0.112	\$0.121
100% to 130% of BQ	\$0.096	\$0.099	\$0.104	\$0.118	\$0.124	\$0.136	\$0.145
130% to 200% of BQ	\$0.140	\$0.140	\$0.148	\$0.118	\$0.124	\$0.136	\$0.145
Over 200% of BQ	\$0.140	\$0.140	\$0.148	\$0.148	\$0.148	\$0.148	\$0.145

1           These rate reforms are needed to fix PG&E’s broken electric rate design  
2           structure to be consistent with AB 327 and comply with the Principles of Optimal  
3           Residential Rate Design adopted in this proceeding. If approved, by 2018 the  
4           resulting rates will be dramatically closer to cost of service, and the CARE  
5           discounts will be at a level compliant with the AB 327 required range. Over a  
6           reasonable transition period, the cumulative effect of PG&E’s expected overall  
7           rate design reform proposals will provide many upper-tier consuming residential  
8           electric customers with relief from volatile electric bills, and also provide price  
9           signals that better reflect cost for all customers. Such proposals will make  
10          PG&E’s residential rates simpler and more equitable, by flattening the current  
11          steep tier differentials that cause too many PG&E customers to pay rates far  
12          above their actual cost of service.

13   **C. PG&E’s Current Residential Rates Are Highly Inequitable**

14          As noted above, absent rate reform, the current broken residential electric  
15          rate structure will continue to punish upper-tier consuming households by  
16          charging rates well in excess of actual costs. Currently, PG&E’s average  
17          residential rate is 17.5 cents per kilowatt-hour (kWh), yet electricity consumed by  
18          non-CARE customers in Tier 4 is charged a rate *more than double* that level, at

1 36.4 cents per kWh. At the same time, non-CARE customers consuming in  
2 Tiers 1 and 2 pay just 13.2 and 15.0 cents per kWh, respectively.<sup>19</sup> These  
3 gaping differences between the highest and lowest tiers are highly inequitable,  
4 and do not in any way comport with the longstanding principle that rate design  
5 should reflect cost of service.<sup>20</sup> Maintaining the current broken rate structure  
6 would continue to send inaccurate price signals to customers, particularly those  
7 non-CARE customers consuming in the lower tiers, as well as CARE customers  
8 whose rates are lower today than they were 21 years ago (despite inflation and  
9 increases in the cost of providing electric service). Fortunately, the recent  
10 enactment of AB 327 has removed many of the legal constraints that prevented  
11 the Commission from fixing these problems, and the current proceeding  
12 represents an opportunity to bring reform to the structure of residential rates.

13 Figure 1-1 graphically illustrates the unsustainable state of present rates.  
14 As shown, there is currently a huge 23.1 cent per kWh gap between the lowest  
15 and highest tier non-CARE rates. Prior to the energy crisis, PG&E's non-CARE  
16 and CARE rates each had just two tiers, with the upper-tier rate having only a  
17 modest price differential compared to the lower-tier rates. In January 2001, the  
18 ratio of the highest to the lowest non-CARE rate was just 1.15:1 and the CARE  
19 discounts were set at a modest 15.3 percent. Today, after years of legislative  
20 restrictions on raising CARE rates and lower-tier non-CARE rates, the ratio of

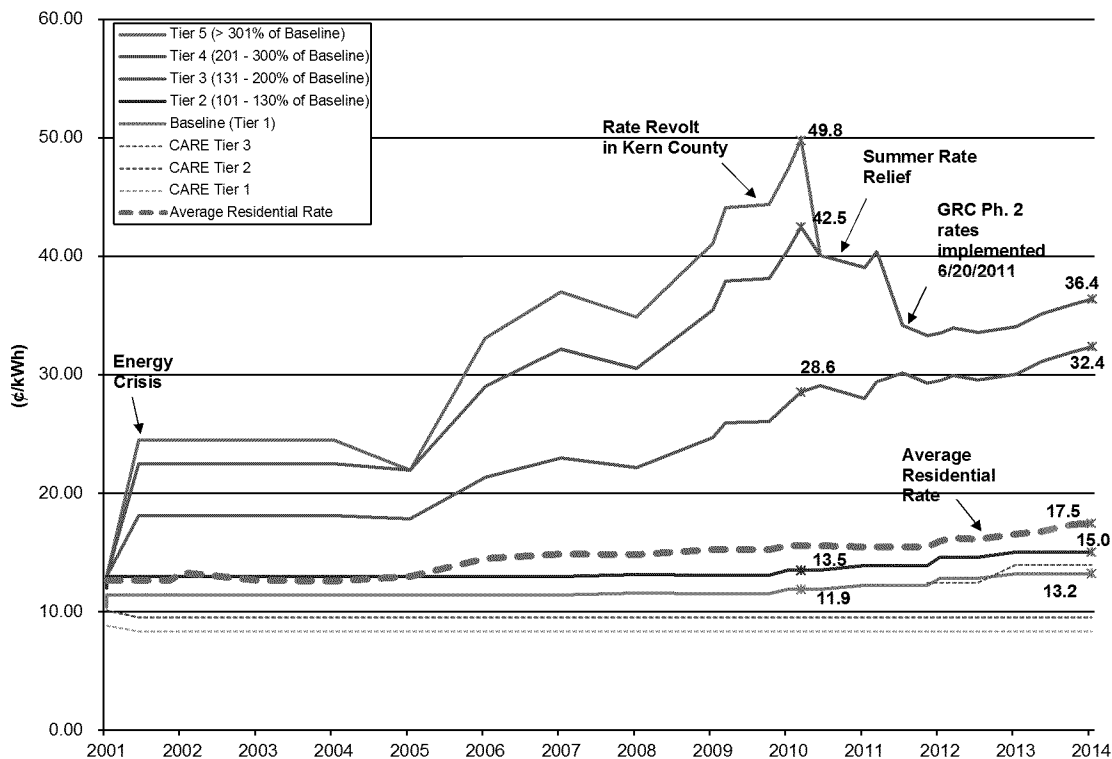
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<sup>19</sup> CARE customers consuming in Tier 1 and 2 pay far less. Currently CARE customers consuming in Tiers 1 and 2 pay 8.3 and 9.6 cents per kWh, respectively, and will pay 8.6 and 9.9 cents per kWh, respectively, once the Senate Bill (SB) 695 adjustment to PG&E's rates takes effect on March 1, 2014.

<sup>20</sup> The lack of cost basis is easily seen by examining how residential rates are designed. Tier 1 and 2 rates for both non-CARE and CARE customers have in recent years been set exogenously under the formulas adopted in SB 695. The CARE Tier 3 rate was similarly set exogenously by the Commission in Decision 11-05-047. The non-CARE Tier 3 and 4 rates are then solved for at whatever levels are required to collect the residual revenue not collected by the exogenously set rates, with Tiers 3 and 4 currently set at 4 cents apart. So these rates are clearly not based upon PG&E's marginal costs, or any other measure of cost of service.

1 the highest to the lowest non-CARE rate has grown to a whopping 2.75:1, and  
 2 the average CARE discount is now 48.9 percent.<sup>21</sup>

**FIGURE 1-1  
 PACIFIC GAS AND ELECTRIC COMPANY  
 HISTORICAL PG&E CARE AND NON-CARE RATES  
 2001-2014**



3 The huge gap between the highest and lowest tier non-CARE rates means  
 4 that the former are well above the average residential rate, while the latter are  
 5 well below it. Figure 1-1 shows that there is an 18.9 cent per kWh gap between  
 6 the current top-tier rate (36.4 cents per kWh) and the average rate paid by all of

<sup>21</sup> Based on January 1, 2014 rates. Pub. Util. Code Section 739(d)(1) mandates that “In establishing these [baseline] rates, the commission shall avoid excessive rate increases for residential customers, and shall establish an appropriate gradual differentiation between the rates for the respective blocks of usage.” In 2001, the Commission believed a top-to-bottom tier ratio of 1.15-to-1 was “an appropriate gradual differentiation.” Clearly, today’s steeply tiered rates are very far away from this mandate for gradual differentiation. Now that the Commission has the flexibility to do so, it should promptly begin and continue to steadily narrow the tier differentials so that, after a reasonable transition period, the statutory requirement of an “appropriate gradual differential” is once again met.

1 PG&E's residential customers, represented by the dotted purple line  
2 (17.5 cents/kWh). As noted earlier, Tier 4 sales are currently being charged  
3 more than twice the average residential rate.<sup>22</sup> The customers harmed by  
4 today's unfair rate structure are not limited to a particular geographic area, such  
5 as the Central Valley, but are spread across most of PG&E's service territory.<sup>23</sup>  
6 The majority of these customers are not rich, and they are not eligible for  
7 low-income discounts.<sup>24</sup> More than half a million customers charged for usage  
8 at or above Tier 3 are middle class families with household incomes of less than  
9 \$75,000 per year.<sup>25</sup> Nor are their overpayments trivial. In fact, one-fifth of  
10 PG&E's residential electric customers—about 1 million—now pay an average of  
11 over \$500 per year in excess of the average residential rate.<sup>26</sup>

12 Today's skewed, severely inclining tiered electric rates, and their inequitable  
13 impact on customers throughout PG&E's service territory are also very  
14 challenging for customers to understand. High upper-tier rates create bill  
15 volatility. A typical customer with only modest amounts of usage can experience  
16 drastically higher bills during the hottest summer months, merely by driving their  
17 usage from Tier 2 up into the sharply higher-priced Tiers 3 and 4. This bill  
18 volatility tends to lead to customer frustration, confusion and dissatisfaction  
19 because bill increases are disproportionate compared to the customers' actual  
20 changes in usage.

---

**22** While not quite as severe of a premium, non-CARE Tier 3 sales, too, are charged a rate far in excess of the average rate (a differential of 14.9 cents per kWh, or 1.85 times as much).

**23** PG&E Rate Data Analysis, 2012 Annual Statistics for Residential Customers by City, April 2013.

**24** Based on a sample of PG&E's residential customers responding to 2009 Residential Appliance Saturation Survey, PG&E matched reported income levels to 2012 usage data from PG&E billing files.

**25** *Id.* Of the 865,000 non-CARE, lower-income households with annual incomes between \$30,000 and \$60,000, over one-third have high usage and pay an average annual rate that exceeds the residential class average. Similarly, of the 1 million non-CARE moderate income households in the \$60,000 to \$100,000 annual income range, over half have high usage and pay an average annual rate that exceeds the residential class average. In contrast, over 40 percent of the nearly 1.1 million higher income households with incomes exceeding \$100,000 per year have *low* usage and pay an annual average rate *below* the residential class average.

**26** PG&E Rate Data Analysis, 2012 Annual Statistics for Residential Customers by City, April 2013.



1 Over the next several years, in keeping with California’s energy and  
2 environmental policy goals and requirements, PG&E needs to make significant  
3 investments in infrastructure to improve system reliability and safety, as well as  
4 to increase its clean energy resources. If the costs are not shared more evenly  
5 among all customers, PG&E and the other California Investor-Owned Utilities  
6 (IOU) and policymakers risk a significant consumer backlash against these  
7 policies because of their disproportionate rate impacts.

8 **D. PG&E’s Phase 1 Rate Reform Proposal Conforms to the Commission’s**  
9 **Rate Design Principles and Supports the Policies in AB 327**

10 Rate design must balance a number of different objectives that can  
11 sometimes come into conflict with one another. In this proceeding, to guide the  
12 development of an optimal residential rate design structure, the ALJ set forth  
13 ten guiding principles, after extensive comments were solicited.<sup>27</sup> PG&E  
14 presents below a summary of how its Phase 1 rate reform proposals for the  
15 transition period meet these rate design objectives, grouped by like topics for  
16 convenience of the reader:

17 Principles 2, 3, 8, 9 and 10: Rates should be based on marginal costs and  
18 cost-causation principles, should encourage economically efficient decision  
19 making, and include incentives that are explicit and transparent, with rates  
20 that generally avoid cross-subsidies unless such cross-subsidies  
21 appropriately support explicit state policy goals.

22 A primary driver of PG&E’s Phase 1 proposals is to transition residential  
23 rates to be more “just and reasonable” (per Pub. Util. Code Section 451), which  
24 has traditionally meant ensuring rates are based on the cost of service.<sup>28</sup> The  
25 costs of providing utility services vary with customer usage characteristics and  
26 with the facilities and activities needed to serve a customer. Keeping rates as  
27 close as possible to cost of service is equitable, in contrast to the current state of  
28 residential rates in which post-energy crisis restrictions on changes to rates for  
29 Tiers 1 and 2 have caused upper-tier non-CARE rates to bear a disproportionate  
30 and highly inequitable share of residential cost of service.

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27 See ALJ Ruling Requesting Residential Rate Design Proposals, March 19, 2013, Appendix A.

28 See Bonbright, Danielson, and Kanerschen, Principles of Public Utility Rates, specifically, Chapter 5, entitled “Cost of Service as a Basic Standard of Reasonableness.”

1 PG&E's Phase 1 rate reform proposal will, by 2018, transition PG&E's  
2 current Tier 1 and 2 rates—which are significantly below cost—and its current  
3 Tier 3 and 4 rates—which are far above cost—to rate levels that are much closer  
4 to cost of service. By 2018, Schedules E-1 and EL-1 will be returned to a more  
5 cost-based two-tier structure, as was in place before the energy crisis, with a  
6 gradually differentiated tier ratio (of 1.2:1) that removes most of the current  
7 cross-subsidy. Likewise, PG&E proposes the phase-in of a monthly service fee  
8 based on the fixed costs all customers impose on the system. Adding a monthly  
9 service fee, as is used for all other customer classes to cover a portion of fixed  
10 costs, creates clearer, more cost-based and equitable rates. Currently,  
11 upper-tier users pay more than their fair share of these fixed costs, while  
12 lower-tier users pay less than their fair share. PG&E's proposed monthly service  
13 fee will further reduce the current, unfair, cross-subsidy. Similarly, PG&E's  
14 Phase 1 proposal will gradually reduce the CARE discount, between now and  
15 2018, to a level within AB 327's prescribed 30 to 35 percent range, thus moving  
16 these rates somewhat closer to cost of service, while still maintaining a  
17 substantial and explicit discount for these lower income customers.

18 Principle 1: Low-income and medical baseline customers should have  
19 access to enough electricity to ensure basic needs (such as health and  
20 comfort) are met at an affordable cost.

21 Under PG&E's Phase 1 proposals, medical baseline customers will continue  
22 to receive additional baseline allowances, and low income customers who  
23 qualify for CARE will receive CARE discounts of between 30 and 35 percent,  
24 levels that are far greater than the 15 percent CARE discount that was in place  
25 prior to the energy crisis. This discount range of 30 to 35 percent is now  
26 required by the statutory language in AB 327 (2013).

27 Principle 4: Rates should encourage conservation and energy efficiency.

28 PG&E's Phase 1 rate proposal will, by 2018, restore the standard residential  
29 rate schedules (E-1 and EL-1) to a two-tiered rate with a higher ratio (1.2:1) than  
30 the 1.15:1 ratio that, prior to the energy crisis, the CPUC consistently found was  
31 adequate to incent conservation. In addition, fixing the problem that usage in  
32 Tiers 1 and 2 for many years now has been significantly below cost of service  
33 will send a more appropriate price signal to encourage larger numbers of  
34 customers to conserve. PG&E's proposal also includes expanded participation

1 in a simplified optional TOU rate as well as continuation of its SmartAC™  
2 program and further growth in enrollment for its opt-in CPP rate—SmartRate—  
3 which is already the largest residential CPP program in the country with  
4 successful load reduction.

5 Principle 5: Rates should encourage reduction of both coincident and  
6 non-coincident peak demand.

7 For non-residential customer classes, dollar-per-kilowatt demand charges  
8 are generally used to send price signals to incent customers to reduce their  
9 coincident and non-coincident demands. While PG&E’s Phase 1 residential rate  
10 proposal does not include demand charges, PG&E’s non-tiered TOU rate will  
11 provide a rough price signal to incent customers to shift loads out of the on-peak  
12 period that would be expected to reduce coincident demand on the PG&E  
13 system (which occurs during the summer on-peak period).

14 Principles 6 and 10: Rates should be stable and understandable and  
15 provide customer choice, and transitions to new rate structures should  
16 emphasize customer education and outreach to enhance customer  
17 understanding and acceptance of new rates, and minimize and appropriately  
18 consider the bill impacts associated with such transitions.

19 While a primary driver of rate design should be to move toward more  
20 appropriate, economically efficient and cost-based price signals, rates should be  
21 as simple and understandable as possible, to better empower customers to take  
22 actions to control their energy expenses and usage, while retaining appropriate  
23 price signals and offering meaningful choices to customers. Cost-based rate  
24 changes should be tempered with a concern for mitigating sudden and unduly  
25 large bill increases. This means that the full extent of “cost-based rates” cannot  
26 be implemented in one step. PG&E’s Phase 1 rate reform proposal  
27 encompasses a multi-year transition, under which reforms to the residential rate  
28 structure are gradually implemented over a reasonable period. PG&E’s  
29 proposal balances the need to move as quickly as possible to fix the current  
30 inequitable rate imbalances with a desire to mitigate the bill impacts that would  
31 occur if all the necessary reforms were implemented all at once. PG&E’s  
32 gradual proposal results in bill impacts that are modest for the vast majority of  
33 customers.<sup>29</sup>

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**29** Year-to-year bill impacts resulting from PG&E’s rate proposal are summarized in various sections of Chapter 2, while detailed bill comparisons are provided in Appendices A-3 and A-4.

1 PG&E's Phase 1 proposal simplifies rates and makes them more  
2 understandable, by gradually reducing the number of tiers to two by 2018 for the  
3 default E-1 and EL-1 rates, while introducing a new non-tiered opt-in TOU rate  
4 starting in 2015—removing a major barrier to the current lack of broad-based  
5 understanding of TOU pricing. These less complicated designs will be easier for  
6 customers to understand and manage their energy usage and bills.

7 PG&E's proposed approach offers meaningful customer choice, and seeks  
8 to ramp up adoption by customers who affirmatively seek engagement, thus  
9 avoiding the potential for customer dissatisfaction where rate options are not  
10 subject to affirmative customer choice.<sup>30</sup> PG&E's proposal is designed to be  
11 practical to implement, and contemplates robust customer education and  
12 outreach to enhance customer understanding and acceptance of PG&E's  
13 proposed new rate structure.

#### 14 **E. PG&E's Phase 1 Rate Reform Proposal Protects CARE Customers**

15 AB 327 requires that discounted rates to low-income CARE customers be  
16 transitioned to the range of 30 to 35 percent. PG&E's current average CARE  
17 discount is about 48 percent, well above the upper limit of 35 percent. Under  
18 PG&E's Phase 1 proposal, and in combination with PG&E's Phase 2 proposal  
19 for Summer 2014 rate reform filed on January 28, 2014, the CARE discount will  
20 gradually decrease over a four-year period to reach the statutorily mandated  
21 range. As a result, CARE customers will necessarily see some bill increases.  
22 However, the gradual transition proposed by PG&E ensures that CARE  
23 customers are protected against excessive year-to-year bill impacts and can  
24 manage their energy usage to limit bill increases to modest levels.<sup>31</sup>

25 In addition, PG&E is implementing CARE program and eligibility reforms that  
26 were agreed to by the utilities and consumer groups and enacted by AB 327,  
27 including updating income guidelines to reflect the change in eligibility for  
28 one-person households to two-person household income levels and providing

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<sup>30</sup> See Chapter 2, Section G, for specific examples of consumer backlash to default time varying pricing programs.

<sup>31</sup> Each year, the overwhelming majority of CARE customers see increases in their average monthly bills of less than \$10 (and some actually see bill decreases in two of the four years). In no year during the transition period do more than 3 percent of CARE customers see average monthly bill increases above \$10.

1 guidance on categorical income eligibility verification requirements.  
2 Furthermore, PG&E is working to improve the targeting and delivery of CARE  
3 assistance to eligible customers, and will work in consultation with consumer  
4 advocacy groups to develop and propose program changes to make the CARE  
5 program more effective and efficient, in the Commission's triennial low-income  
6 programs proceeding based on the findings presented in the 2013 Needs  
7 Assessment study for the Energy Savings Assistance and CARE programs.  
8 With this balanced approach, both PG&E's overall and its Phase 1 rate reform  
9 proposals will ensure that energy assistance levels for CARE customers among  
10 California's electric utilities are more consistent and closer to the historical  
11 discount levels endorsed by consumer advocates and the utilities during  
12 non-energy crisis periods.

13 **F. PG&E's Phase 1 Rate Reform Proposal Should Be Approved Promptly**

14 As demonstrated in PG&E's testimony and its comments and filings in the  
15 Commission's Rate Design rulemaking, California's current IOU residential  
16 electric rate design structure is neither cost-based nor equitable, and therefore  
17 fails to meet the Commission's rate design principles.<sup>32</sup> About a million PG&E  
18 residential electric customers across all income levels and all parts of PG&E's  
19 service territory are paying millions of dollars a year in higher electric bills  
20 because of the broken rate design structure.

21 The broken rate structure cannot be fixed in a single step. But it must be  
22 fixed soon and through a series of meaningful steps, starting with timely  
23 approval of both PG&E's amended Summer 2014 rate reform proposal by  
24 June 2014, and this Phase 1 proposal by the end of 2014. Without significant  
25 and prompt residential electric rate reform, the current unfair shifting of costs  
26 among customers will get worse and potentially derail California's ambitious  
27 energy and environmental agenda. The Legislature has enacted and the  
28 Governor has approved AB 327, giving the Commission the tools to fix and  
29 reform today's broken rate structure. The Commission should expeditiously  
30 approve the rate reforms needed to fully implement AB 327, starting with a first  
31 step in Summer 2014 and continuing with gradual changes in this Phase 1

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32 After workshops and comments by parties, the ALJ's March 19, 2013 Ruling Requesting Residential Rate Design Proposal listed 10 rate design principles. (See Attachment A to that Ruling, p. A-1.)

1 proceeding over the transition period, to reach an end-state by 2018 and beyond  
2 of more equitable rates that much more closely reflect cost of service and  
3 comply with AB 327.

4 As discussed in PG&E's testimony and in its earlier rate proposal and  
5 comments in this rulemaking, PG&E's Phase 1 proposal here is fully supported  
6 by the facts and demographics of PG&E's customers and costs of service, and  
7 is consistent with the Commission's principles for optimal rate design and the  
8 requirements of AB 327. The Commission should adopt PG&E's Phase 1 rate  
9 reform proposal in a timely fashion so that PG&E can build on the rate changes  
10 that the Commission approves in Summer 2014 and continue along the  
11 transition path to more equitable rates where customers pay monthly bills that  
12 much more closely reflect what it costs to serve them, and have available  
13 simpler, easier-to-understand rate structures and options from which to choose.

**PACIFIC GAS AND ELECTRIC COMPANY**  
**CHAPTER 2**  
**LONG-TERM RESIDENTIAL RATE DESIGN**

PACIFIC GAS AND ELECTRIC COMPANY  
 CHAPTER 2  
 LONG-TERM RESIDENTIAL RATE DESIGN

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1                                   **PACIFIC GAS AND ELECTRIC COMPANY**  
2   **CHAPTER 2**  
3                                   **LONG-TERM RESIDENTIAL RATE DESIGN**

4   **A. Introduction**

5           Over the last 13 years since the California energy crisis, largely due to  
6   statutory restrictions that limited the California Public Utilities Commission’s  
7   (CPUC or Commission) rate-setting flexibility, rates for Pacific Gas and Electric  
8   Company’s (PG&E) upper-tier consuming households who are not in the  
9   California Alternate Rates for Energy (CARE) program (non-CARE customers)  
10   have grown to disproportionately high levels, far above cost of service. At the  
11   same time, rates for lower-tier consuming non-CARE households have remained  
12   well below average cost.<sup>1</sup> In addition, post-energy crisis, the average discount  
13   received by PG&E’s CARE households has grown from a modest 15 percent in  
14   early 2001, to its current level of 48.9 percent.<sup>2</sup> Thus, PG&E’s current  
15   residential rates are substantially misaligned from the cost of providing service.  
16   As described in Chapter 1, effective January 1, 2014 Assembly Bill (AB) 327 has  
17   removed many of the restrictions on the Commission that led to today’s broken  
18   residential rates. With the restoration of its previous discretionary ratemaking

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1   Throughout this testimony, PG&E uses “upper tiers” to refer to its current Tier 3 and 4  
(i.e., consumption in excess of 130 percent of baseline), and “lower tiers” to refer to  
Tier 1 and 2 usage (i.e., usage up to 130 percent of baseline).

2   Based on rates effective January 1, 2014. The CARE discount is calculated by taking  
the difference between (a) CARE sales by tier priced at non-CARE rates and (b) CARE  
sales by tier priced at CARE rates, then dividing this difference by (a) to yield a CARE  
percent discount from non-CARE rates. When PG&E is authorized in the Greenhouse  
Gas (GHG) Order Instituting Rulemaking (OIR) to implement GHG costs and revenue  
returns into rates sometime during 2014, this formula will be modified to account for  
California Climate Credit (CCC) revenue returns in both the numerator and  
denominator. The CCC, formerly called the “Climate Dividend,” was authorized in the  
GHG OIR by the CPUC in Decision 12-12-033. PG&E will also take into account any  
Commission-adopted changes in the ratemaking for GHG costs and revenue returns,  
including the Commission staff’s proposal that the Commission consider removing the  
use of GHG allowance revenues to volumetrically offset cap-and-trade related  
compliance costs in residential electric rates. (See *Staff Proposal for Residential Rate  
Reform in Compliance with R.12-06-013 and Assembly Bill 327*, CPUC Energy Division  
(ED), January 3, 2014, p. 71.) Because the CCC is returned to customers on a  
twice-a-year, non-volumetric, lump-sum basis, it does not directly impact the tiered rate  
levels under PG&E’s rate design proposal. However, it does affect the annualized  
average monthly bills of residential electricity customers.

1 authority, the Commission is now able, over a reasonable period of time, to  
2 restore residential rates—both their structures and the levels of specific rate  
3 components—to more equitable levels that more closely reflect cost of service.

4 This chapter presents PG&E’s Phase 1 proposal for changes in its  
5 residential rate design to take effect during the period from 2015 through 2018  
6 (also referred to as the “transition period”). These reforms simplify rates, move  
7 them much closer to cost of service, reduce the CARE discount to the mandated  
8 range of 30 to 35 percent, and for the first time offer PG&E residential customers  
9 the opportunity to take service on a simple, non-tiered time-of-use (TOU) rate.<sup>3</sup>  
10 PG&E’s proposals also provide significant rate relief for its upper-tier consuming  
11 non-CARE customers, who unfairly have paid excessive rates for over a decade.

12 Specifically, PG&E proposes the following changes to residential rates:

- 13 • In 2015, introduce a fixed monthly service fee of \$5.00 for all non-CARE rate  
14 schedules, increasing it over time, to collect a portion of the fixed costs of  
15 serving residential customers through a fixed charge.
- 16 • In 2015, similarly introduce a monthly service fee of \$2.50 for all CARE  
17 schedules, increasing it over time as well to collect a portion of fixed costs of  
18 service.<sup>4</sup>
- 19 • Reduce the number of tiers for all non-CARE rate schedules from four to  
20 three in 2015, and further reduce the number from three to two in 2018,  
21 while progressively narrowing the rate differential between the top-tier and  
22 bottom-tier rates until it reaches a 1.2:1 ratio in 2018.
- 23 • Redefine the current three-tiered rate structures for all CARE rate schedules  
24 in 2015 to match the same three-tier definitions proposed for non-CARE  
25 schedules, and then similarly reduce the number of tiers on all CARE rate

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3 PG&E currently offers one non-tiered residential TOU rate option, Schedule EV.  
However, it is only available for customers with electric vehicle charging loads.

4 For Schedules E-8 and its CARE counterpart, Schedule EL-8, PG&E’s only  
two residential rates that already have fixed monthly service fees (of \$12.50 and  
\$10.00, respectively), PG&E proposes no changes to those levels. PG&E also  
proposes no changes to its Schedule E-9 for customers with electric vehicle charging  
loads. Although that rate does not currently have a monthly service fee, PG&E  
proposes not to introduce one because the CPUC has already ordered this schedule to  
be eliminated soon (in favor of the non-tiered TOU option, Schedule EV, available to  
customers today). For multi-family rate schedules, the monthly service fee would be  
calculated based on the number (and mix, between non-CARE and CARE) dwelling  
units served by each account.

1 schedules from three to two in 2018, with a similar 1.2:1 ratio between the  
2 top-tier and bottom-tier rates.<sup>5</sup>

- 3 • Gradually reduce the wide price differentials that exist today between CARE  
4 and non-CARE rates, in order to reduce the CARE discount percentage to  
5 between 30 and 35 percent by 2018.
- 6 • Introduce a simple two-period, voluntary (opt-in), non-tiered TOU rate option  
7 in 2015 that is more cost-based and customer-friendly than PG&E's current  
8 complex hybrid TOU rate schedules with both tiers and TOU periods.
- 9 • Once the non-tiered TOU rate option is introduced in 2015, phase out the  
10 existing tiered TOU rate options (Schedules E-6, E-7, EL-6 and EL-7),  
11 closing them to new customers on January 1, 2015 and eliminating them on  
12 January 1, 2016.<sup>6</sup>
- 13 • Adjust the methods for providing discounts on the Medical Baseline and  
14 Family Electric Rate Assistance (FERA) programs (which are currently  
15 based on a four-tiered rate structure) so that the benefits received by  
16 participating customers are approximately equivalent to their levels today.
- 17 • Adjust SmartRate™, to reflect transition period changes to residential rate  
18 structures, while continuing to offer this program as a demand response rate  
19 option available to all residential customers.

20 The details of how PG&E's proposed rates were designed, as well as the  
21 specific proposed rate values, are presented in the following sections of this  
22 chapter.

23 PG&E's Phase 1 rate reform proposals are generally consistent with the  
24 Energy Division's "Staff Proposal for Residential Rate Reform in Compliance

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5 PG&E's proposals for reducing tiers and narrowing the rate differentials between the top-tier and bottom-tier rates are applicable also to its tiered rates for master-metered customers (Schedules E-M, E-T, etc.).

6 Schedules E-7 and EL-7 are already closed to new customers. Under PG&E's proposal, Schedules E-6 and EL-6 would similarly be closed to new customers on January 1, 2015. All four schedules would then be eliminated on January 1, 2016, with customers on those rate options migrated to the corresponding new non-tiered TOU rate (Schedule E-TOU or E-TOU CARE), although customers would still have the option to choose the standard Schedules E-1 or EL-1 if they preferred. During 2015, PG&E proposes the same changes to these four existing tiered TOU rates that are proposed for the standard rates (i.e., adding monthly service fees, reducing the number of tiers and narrowing tier differentials).

1 with R.12-06-013 and AB 327” issued on January 3, 2014<sup>7</sup> and comply with the  
2 guidelines provided by the February 13, 2014 Assigned Commissioner’s Ruling  
3 (ACR). Those guidelines direct the utilities to design illustrative rates under  
4 two scenarios, one where the revenue requirement is assumed to remain  
5 constant at its current level throughout the transition period, and the other where  
6 it is assumed to increase at 2.1 percent per year.<sup>8</sup>

7 The constant revenue scenario isolates the effects of PG&E’s rate design  
8 proposal from changes in revenue requirements, as is typically done in  
9 General Rate Case (GRC) Phase II proceedings where the focus is on the  
10 effects of rate design in a single year. Here, however, the focus is on rate  
11 reform implemented gradually over a multi-year transition period during which  
12 revenue requirements are expected to increase. Thus, PG&E’s testimony  
13 focuses on the second scenario, where revenues grow at 2.1 percent per year,  
14 and the rates and bill impacts reflect the combination of those increases and the

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7 Also referred to as the Energy Division Staff Report or ED Report

8 See February 13, 2014 Amended Scoping Memo, Instruction 2, p. 7. Additionally, the ACR instructs the utilities to include multiple versions of rate impacts in instances where there are pending applications for rate changes. PG&E has three such pending applications, which creates a great deal of uncertainty as to future residential revenue requirements and baseline definition. First, there is a pending request for a revenue requirement increase in Application 12-11-009, Phase I of PG&E’s 2014 GRC, that will affect the amount of revenue to be collected from the Residential class. Second, PG&E has a pending proposal in Application 13-04-012, Phase II of the 2014 GRC, that would revise the shares of revenue allocated to the various customer classes, and thus will also affect the Residential class revenue requirement. Third, PG&E has a pending proposal in Application 12-02-020, its 2012 Rate Design Window (RDW) proceeding, to reduce baseline quantities from 55 to 50 percent of historical average usage. The outcomes of the first two are very uncertain, with wide ranges of potential outcomes for the Residential class revenue requirement (and, of course, they interact in terms of their effects). Consequently, it is very difficult to determine a likely stream of revenue requirements for the transition period, and PG&E has not tried to do so here. Instead, PG&E proposes to update its illustrative rates if appropriate when those outcomes become known. The outcome of the third proceeding, though, is more bounded, since the Commission is likely to either approve PG&E’s proposal, reject it, or set baseline quantities somewhere in between 55 and 50 percent. So PG&E has prepared a set of illustrative “contingency rate calculations” for the transition period assuming the revenue requirement grows at 2.1 percent per year, but also assuming that the Commission does not approve PG&E’s proposal for lower baseline quantities. Comparing these rates to those calculated assuming 2.1 percent growth in revenue requirements but baselines set at 50 percent of historical usage, provides a set of “bookends” to cover the range of likely outcomes resulting from the 2012 RDW.

1 changes in rate structure each year.<sup>9</sup> These illustrative rates, assuming  
2 revenue requirements grow by 2.1 percent, are provided in Sections D and E for  
3 standard non-CARE and CARE rate schedules, respectively. The gradual  
4 nature of PG&E's proposed movement to the new rate structures for CARE and  
5 non-CARE result in acceptable levels of bill impacts for adversely impacted  
6 customers, under the assumption that the revenue requirement grows at  
7 2.1 percent per year between now and 2018.

8 The remainder of this chapter is organized as follows:

- 9 • Section B describes PG&E's fixed monthly service fee proposal, its  
10 rationale, and the specific rate levels proposed each year.
- 11 • Section C describes PG&E's proposal to reduce the number of tiers and  
12 narrow tier differentials on its standard rates.
- 13 • Section D presents PG&E's proposal for standard non-CARE rates  
14 (Schedule E-1), with specific rate values for each year during the 2015-2018  
15 period and resulting bill impacts. This section also includes adjustments  
16 needed for the Medical Baseline, Family Electric Rate Assistance and  
17 SmartRate programs as a result of tier changes.
- 18 • Section E similarly presents PG&E's proposal for standard CARE rates  
19 (Schedule EL-1), and the resulting bill impacts.
- 20 • Section F describes PG&E's proposal for its optional tiered rates  
21 (Schedules E-6, E-7, and E-8, and the CARE versions thereof).
- 22 • Section G describes the design of PG&E's newly proposed voluntary, opt-in,  
23 non-tiered TOU rate (Schedule E-TOU).
- 24 • Section H discusses how PG&E's rate reform proposal impacts overall  
25 electricity conservation.
- 26 • Section I discusses how PG&E's proposals should be coordinated with other  
27 proceedings.
- 28 • Section J discusses PG&E's customer education and outreach strategy.

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<sup>9</sup> These illustrative rates are shown in Appendix A-1. Similar illustrative rates for the constant revenue requirement scenario are shown in Appendix B-1. Per Instruction 6 of that ACR, and as described in footnote 9, PG&E has also designed illustrative rates for the transition period for a third scenario where the revenue requirement grows at 2.1 percent per year, but under the assumption that PG&E's proposal in its 2012 RDW proceeding to reduce baseline quantities from 55 to 50 percent of historical average levels (which has been fully litigated but is pending a Commission decision) is not approved. Those results are presented in Appendix C-1.

1 **B. Monthly Service Fees**

2 A fundamental principle for an equitable rate design is that rates should  
3 reflect cost of service, so that customers pay bills roughly consistent with how  
4 the utility incurs the costs to serve its customers.<sup>10</sup> The cost of providing  
5 electric service to residential customers has both fixed and variable elements.  
6 For example, the cost of printing and mailing a bill does not vary with a  
7 customer's monthly usage. Indeed, PG&E incurs this cost each month even if a  
8 customer uses no electricity at all. An appropriate cost-based rate design would  
9 thus charge customers for this and other fixed costs via a fixed monthly charge,  
10 or service fee, and employ a variable charge or charges (e.g., separate prices  
11 for different TOU periods) to collect variable costs that do differ depending upon  
12 the customer's usage.<sup>11</sup> All of PG&E's rates for non-residential customers  
13 include such a rate component to help cover fixed costs. However, to date,  
14 PG&E's residential electric rates do not do this. Instead, all costs are collected  
15 through variable (sometimes called volumetric) energy charges. This rate  
16 structure is not cost-based, since low users do not pay their fair share of the  
17 fixed costs they impose on the system, and high users pay an unfairly high  
18 share of those costs.

19 A monthly fixed fee to recover fixed costs of utility service is a key tool for  
20 fulfilling the very important ratemaking principle that rates should be based on  
21 cost-causation. In the context of residential rate design, there are a number of  
22 categories of costs that do not vary with the volumes of kilowatt-hours (kWh)  
23 consumed by customers. First, there are customer access and revenue cycle  
24 service costs that, for non-residential customers, are generally collected via  
25 monthly fixed charges. These include the costs of connecting a customer to the  
26 grid and maintaining that connection and service to the account—including  
27 metering, preparing and sending bills, processing payments, providing service

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10 See Bonbright, Danielson and Kanerschen, *Principles of Public Utility Rates*, specifically, Chapter 5, entitled "Cost of Service as a basic standard of reasonableness." See also Rulemaking 12-06-013 Attachment A of the Administrative Law Judge (ALJ) Ruling dated March 19, 2013, where the CPUC stated that rates should be based on cost-causation principles.

11 Marginal customer costs, which include revenue cycle services costs, are driven by the number of customers served. In addition, as described below, there are other quasi-fixed costs that are driven by customer coincident and non-coincident kW loads, independent of kWh usage.

1 center resources, and other grid-related costs. Second, there are  
2 capacity-related costs associated with generation, transmission, and distribution  
3 assets. These generation and grid costs are driven by customers' coincident  
4 and non-coincident demands on the PG&E system, and for non-residential  
5 customers are generally collected via demand charges.<sup>12</sup> For a customer class  
6 like residential, though, where demand charges are not currently employed, it is  
7 more appropriate to collect these types of costs through a fixed monthly charge  
8 rather than through volumetric charges—since the costs are incurred by the  
9 utility on behalf of each individual customer and do not change based on the  
10 volume of electricity that the customer consumes.

11 In situations where certain costs are fixed and cannot be avoided, setting a  
12 rate to recover these costs through monthly fixed fees, rather than through  
13 volumetric rates, more appropriately reflects cost causation, and supports more  
14 equitable recovery of PG&E's fixed costs among customers. These fixed costs  
15 should be paid by all customers, rather than shifted unfairly from some onto  
16 others, as is currently the case. Consistent with this fair and efficient cost-  
17 causation principle, the CPUC has approved fixed monthly fees<sup>13</sup> for every  
18 single one of PG&E's *non-residential* rate schedules—in recognition that this is  
19 an appropriate way to collect fixed costs. Because PG&E incurs these same  
20 types of fixed costs to serve residential customers, a monthly fixed fee that  
21 similarly does not vary with consumption would be appropriate for these  
22 customers as well.

23 In addition, a monthly service fee provides revenue that allows for a  
24 reduction in higher tiered volumetric rates, providing for further movement of  
25 overall residential electric rates towards cost. Thus, establishing a monthly  
26 service fee will help mitigate the inequity in the current inclining block rate  
27 design and the associated rate disparities between the lower and higher tier  
28 non-CARE rates and between CARE and non-CARE rates.

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<sup>12</sup> There is also another category of costs—the cost of programs like those that provide incentives for energy efficiency—which do not vary with customers' usage, yet are collected through volumetric charges that force higher users to bear a greater proportion of the program costs.

<sup>13</sup> See, e.g., Schedule A-1 which includes a “customer charge” to recover fixed costs.



1           The ED Report recognizes the need for a fixed charge, and recommends  
2 either a monthly fixed fee or a monthly minimum bill amount, as a means to  
3 more appropriately collect fixed costs from customers. PG&E has analyzed the  
4 introduction of a monthly service fee, instead of a minimum bill, and concluded  
5 that a monthly service fee is a superior alternative to a minimum bill amount.<sup>14</sup>  
6 First, fixed costs are incurred to serve all customers. Consistent with this cost-  
7 causation, a monthly service fee, that is, a fixed amount each month regardless  
8 of usage, appropriately applies to *all* customers. In contrast, a minimum bill  
9 amount is applied only to a *very small percentage* of customers with little or no  
10 usage in a given month. For example, for the current minimum bill on PG&E's  
11 residential rate Schedule E-1 to apply, a customer would have to use 34 kWh or  
12 less in a month (since 34 kWh times 13.2 cents equals \$4.50). Only about  
13 3 percent of PG&E's total E-1 customers have usage this low in any given  
14 month. Consequently, the minimum bill amount yields only a small amount of  
15 revenue (less than \$4 million per year). In contrast, a \$5.00 monthly service fee  
16 would yield over \$150 million in annual revenue.

17           The monthly service fee also is more equitable because it charges all  
18 customers on a rate schedule the same amount, every month, to cover a portion  
19 of PG&E's fixed costs. For example, a \$5.00 monthly service fee on PG&E's  
20 rate Schedule E-1 would apply to each and every customer's monthly bill,  
21 regardless of the customer's usage (coupled with lower volumetric charges on  
22 their usage). In contrast, the minimum bill amount "bumps up" different low  
23 usage customers' bills by different amounts. In the example above, a customer  
24 with zero usage has its bill increased by \$4.50 for a total bill of \$4.50, while a  
25 customer using 10 kWh would have its bill increased by just \$3.18 (to get to the  
26 same \$4.50 total bill). Put another way, both customers pay the same total bill  
27 of \$4.50 even though the second one (under the minimum bill) should pay more  
28 since the customer is getting the benefit of 10 additional kWh.<sup>15</sup>

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**14** It is notable that no rate schedule applicable to PG&E's non-residential customers employs a minimum bill amount to collect fixed costs. All use monthly fixed fees.

**15** These problems with the minimum bill amount do not go away if it is set at a higher level (e.g., at \$10 per month). It still will only apply to a fraction of customers and it still will unfairly charge the same bill to customers with different amounts of low usage.

1 Surveys of the residential rates charged by other California utilities reveal  
2 inclusion of fixed charges such as monthly fixed fees is a wide-spread practice.  
3 In February 2014, PG&E researched the residential rates of 33 publicly owned  
4 utilities (municipal utilities, municipal utility districts, irrigation districts, etc.),  
5 to see which ones had fixed monthly charges. The results are shown in  
6 Table 2-1 below. A total of 25 out of 33 have tariffs that include fixed monthly  
7 charges. For example the Sacramento Municipal Utility District (SMUD)  
8 currently has a \$14.00 residential “system infrastructure fixed charge per  
9 month,” which it is planning to increase gradually over the next three years to  
10 reach \$20.00 in 2017. Other publicly owned utilities with monthly charges of  
11 \$10.00 or more today include the cities of Gridley, Redding, Riverside, Roseville,  
12 and Shasta Lake, Lassen Municipal Utility District, and Modesto and Turlock  
13 Irrigation Districts. As recently as 2012, the CPUC itself adopted an increase to  
14 California Pacific Electric Company’s (CalPeco) residential customer charge.  
15 (D.12-11-030, 2012 Cal PUC Lexis \*556; see *a/so* D.13-05-006). In that  
16 CalPeco GRC proceeding, the CPUC adopted a joint settlement that included a  
17 customer charge of \$6.98 per month, which was the level that had originally  
18 been proposed by the Office of Ratepayer Advocates. The Utility Reform  
19 Network (TURN) had also originally proposed a moderate increase to CalPeco’s  
20 electric customer charge in that proceeding.

21 Nationally, fixed monthly fees are common, as well. In PG&E’s 2011 GRC  
22 Phase II proceeding (A.10-03-014), Dr. Ahmad Faruqui sponsored testimony  
23 showing that, of the 22 largest utilities nationwide, 21 have residential rates with  
24 fixed monthly charges. Setting a monthly service fee to recover at least a  
25 portion of the fixed costs of serving residential customers on a fixed basis  
26 appropriately reflects cost causation, and supports more equitable recovery of  
27 PG&E’s fixed costs among customers. These costs should be paid by all  
28 customers, as opposed to avoided by some and thus shifted to and paid  
29 by others.

**TABLE 2-1  
PACIFIC GAS AND ELECTRIC COMPANY  
RESIDENTIAL FIXED MONTHLY CHARGES OF CALIFORNIA PUBLICLY OWNED UTILITIES(a)**

Line Number	Publicly-Owned Utility	Fixed Monthly Charge
1	Alameda	\$2.50
2	Anaheim	\$3.37
3	Azusa	No
4	Banning	\$3.00
5	Biggs	No
6	Burbank	\$4.96
7	Colton	\$3.00
8	Corona	\$0.88
9	Glendale	\$9.13
10	Gridley	\$10.50
11	Healdsburg	No
12	Hercules	No
13	Imperial ID	\$3.60
14	Lassen MUD	\$10.00
15	Lodi	No
16	Lompoc	No
17	Los Angeles	No
18	Merced ID	\$3.00
19	Modesto ID	\$12.50
20	Palo Alto	No
21	Pasadena	\$5.60-\$83.29 <sup>1</sup>
22	Island Energy (Mare Island)	\$4.56
23	Redding	\$11.30
24	Riverside	\$18.06
25	Roseville	\$14.00
26	Sacramento MUD	\$14.00
27	Silicon Valley (Santa Clara)	\$3.05
28	Shasta Lake	\$14.00
29	Truckee/Donner	\$6.76
30	Turlock ID (Turlock)	\$11.00
31	Turlock ID (Westside)	\$11.00
32	Ukiah	No
33	Vernon	\$2.37

**Note:**

1. Pasadena's monthly fixed charge varies over the range shown, depending on the customer's kWh usage level.

(a) As of January 28, 2014.

- 1 Major water utilities in PG&E's service territory have routinely included
- 2 monthly service charges to recover the fixed costs of service in their residential

1 water rates, while at the same time continuing robust water conservation  
 2 programs. For example, the Marin Municipal Water District states that its fixed  
 3 service charge “is based on meter size and covers the cost of billing, customer  
 4 service, meter replacement and repair, meter reading, water conservation and a  
 5 portion of general administrative overhead.”<sup>16</sup> The following Table 2-2  
 6 summarizes the monthly service charges currently provided by several major  
 7 water utilities in PG&E’s service territory.

**TABLE 2-2  
 PACIFIC GAS AND ELECTRIC COMPANY  
 WATER UTILITIES IN PG&E’S SERVICE AREA  
 MONTHLY RESIDENTIAL SERVICE CHARGES**

Line No.		
1	City and County of San Francisco(a)	\$10.30
2	San Jose Water Company(b)	\$17.70
3	Marin Municipal Water District(c)	\$11.90
4	East Bay Municipal Utility District(d)	\$14.67
5	City of Sacramento(e)	\$32.32

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- (a) <http://sfwater.org/index.aspx?page=168>.
  - (b) <http://www.sjwater.com/files/documents/Schedule1.pdf>.
  - (c) <http://www.marinwater.org/controller?action=menuclick&id=210>.
  - (d) <https://www.ebmud.com/water-and-wastewater/rates-and-charges/water-rates-service-charges>.
  - (e) <http://www.cityofsacramento.org/utilities/customer-service/documents/201220132014WATER.pdf>.

Note: All charges are for standard 3/4” water meter residential service where specified, except City of Sacramento (all residential service to homes with 1-3 rooms). Larger meters require higher monthly service charges.

8 As noted earlier, there is a spectrum of cost items from fixed to variable. On  
 9 the one end, there are items like revenue cycle service costs that are clearly  
 10 fixed. At the other end are items like as-available energy that are clearly  
 11 variable. In between are capacity costs (for generation, transmission and  
 12 distribution) that are demand-related, but in the absence of a demand charge  
 13 are more fixed than variable. Finally, there are costs like the administrative  
 14 costs of offering energy efficiency programs to customers that are not driven by

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<sup>16</sup> <http://www.marinwater.org/controller?action=menuclick&id=210>.

1 kWh usage but have traditionally been collected via a volumetric charge. PG&E  
2 believes that many (if not all) of these cost items (e.g., capacity costs, program  
3 costs, etc.) would more appropriately be collected with fixed charges than with  
4 variable ones. In this proceeding, however, AB 327's \$10.00 limit on the  
5 maximum allowable fixed month charge makes the issue of which costs are  
6 fixed somewhat moot. This is because, even if you define fixed costs in the  
7 most narrow way, to include just the equal percentage of marginal cost adjusted  
8 residential marginal customer costs, they would exceed \$10.00. In PG&E's  
9 2014 GRC Phase II proceeding, PG&E recently updated its estimate of the  
10 marginal customer cost for the residential class. The equal percent of marginal  
11 cost adjusted residential marginal customer cost estimate is \$198.09 per  
12 customer-year, or \$16.51 per customer-month.<sup>17</sup> So at \$10.00 per month, the  
13 fixed monthly fee still will not collect all of PG&E's fixed costs to serve residential  
14 customers, even with fixed costs defined in the most narrow way.

15 Table 2-3 shows PG&E's proposed levels of monthly service fees for  
16 non-CARE and CARE rates schedules over the transition period. Consistent  
17 with AB 327, which permits the Commission to approve a monthly fixed fee  
18 beginning January 1, 2015, PG&E is proposing to introduce monthly service fees  
19 of \$5.00 and \$2.50,<sup>18</sup> respectively, on its non-CARE and CARE rates beginning  
20 in 2015.<sup>19</sup> A monthly service fee will begin the process of making PG&E's  
21 residential rates more cost-based, by starting to collect at least a portion of  
22 PG&E's fixed costs of service through a fixed monthly charge. In 2016, PG&E is  
23 proposing to increase these monthly service fees to \$10.00 for non-CARE and  
24 \$5.00 for CARE. In 2017 and 2018, the monthly service fees would be adjusted  
25 according to the year-over-year change in the California Consumer Price Index

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<sup>17</sup> See PG&E's August 16, 2013 update testimony in the 2014 GRC Phase II proceeding.

<sup>18</sup> AB 327, Section 739.9(f) specifies that: "the commission may, beginning January 1, 2015, authorize fixed charges that do not exceed ten dollars (\$10) per residential customer account per month for customers not enrolled in the CARE program and five dollars (\$5) per residential customer account per month for customers enrolled in the CARE program. Beginning in January 2016, the maximum allowable fixed charge may be adjusted by no more than the annual percentage increase in the CPI for the prior calendar year."

<sup>19</sup> This proposal is for all residential rate schedules except E-8, which already has a fixed monthly service fee.

1 (CPI).<sup>20</sup> The levels of these proposed monthly service fees are fully consistent  
 2 with the limits on fixed charges in AB 327, which allow for levels up to \$10.00,  
 3 adjusted upward by the CPI (and half those levels for CARE). These charges  
 4 would, in general, replace today's minimum bill amounts.<sup>21</sup>

**TABLE 2-3  
 PACIFIC GAS AND ELECTRIC COMPANY  
 PROPOSED MONTHLY SERVICE FEES**

Line No.	Rates Schedules	Summer 2014	2015	2016	2017	2018
1	Non-CARE	None	\$5.00	\$10.00	\$10.21	\$10.42
2	CARE	None	\$2.50	\$5.00	\$5.11	\$5.21

5 **C. Changes to Tiered Rate Structures**

6 **1. Current Steeply Inclining Tiered Rates Are Neither Cost-Based Nor Fair**

7 Steeply inclining tiered rate structures (sometimes called inclining block  
 8 rates) like Schedule E-1 are not cost-based. The cost to serve an individual  
 9 household does not increase with its cumulative consumption over the  
 10 month. Consequently, such rate structures inequitably overcharge  
 11 upper-tier consuming customers and undercharge lower-tier consuming  
 12 ones. This is particularly true if, as is the case today, there are multiple tiers  
 13 and the upper-tier rates are set at levels much higher than the lower-tier  
 14 ones. Moreover, the complexity of tiered rates makes it difficult for many  
 15 customers to understand how their usage affects their bill. For example,  
 16 a household that is using in Tier 2 during a mild summer month, but due to  
 17 very hot weather the next month increases its usage and ends up in Tier 4,  
 18 can see a disproportionately large bill increase compared to its increased  
 19 usage (and also disproportionate to the increase in PG&E's cost to serve the  
 20 customer). Thus steeply differentiated tiered rates produce unnecessary bill

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**20** For the purpose of developing illustrative levels of the monthly service fee in 2017 and 2018, PG&E assumed the CPI increases at 2.1 percent per year, as directed by the February 13, 2014 ACR.

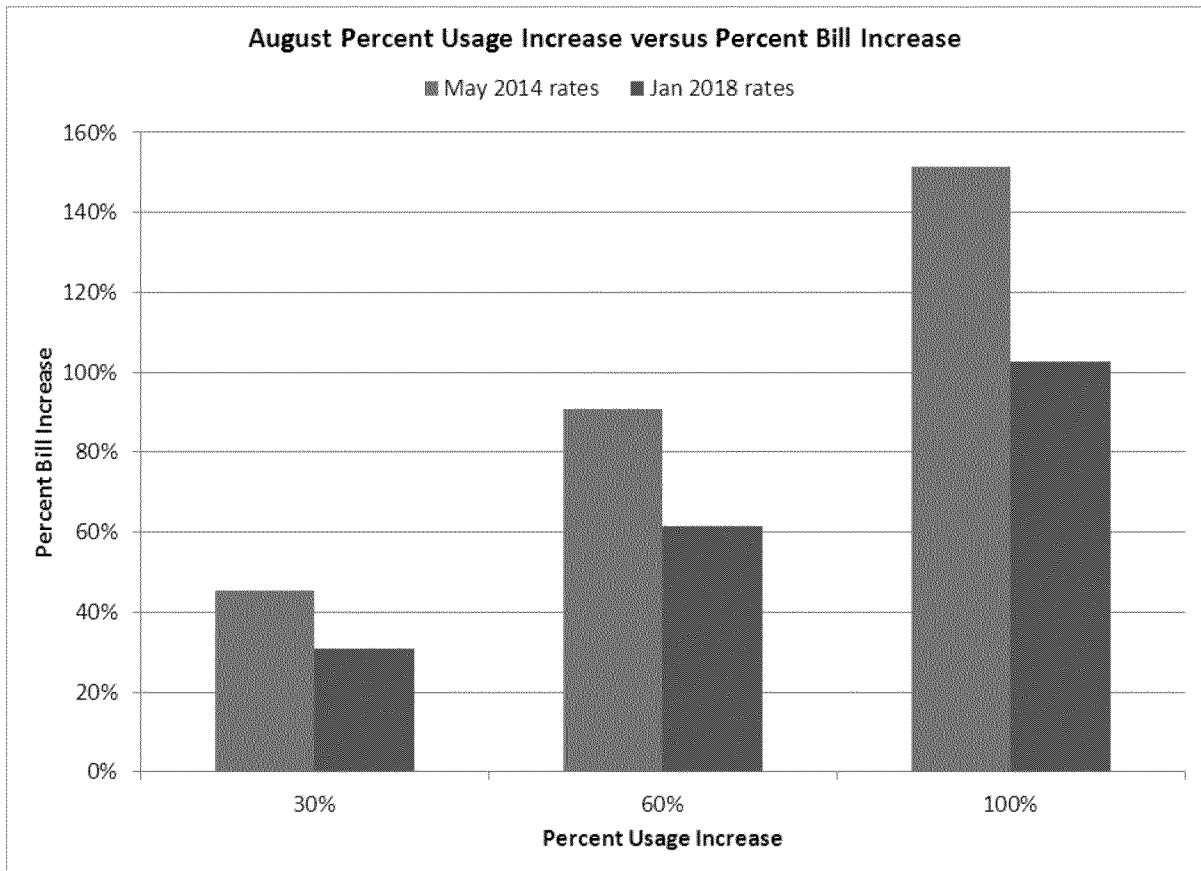
**21** However, PG&E proposes that a zero minimum bill would continue to apply on delivery charges on all residential rate schedules to ensure no negative bills (as is currently the case with Schedules E-7, EL-7 and EL-8).

1 volatility that is upsetting and frustrating for customers and difficult for them  
2 to comprehend.

3 A significant driver behind the Legislature's adoption of AB 327 was the  
4 recognition that the post-energy crisis four- and five-tier structures and  
5 related AB 1x constraints forced almost all rate increases onto a very small  
6 portion (one-quarter or less) of residential sales (i.e., non-CARE sales  
7 occurring in Tier 3 and above), causing a large and inequitable disparity  
8 between the upper- and lower-tier rates. Non-CARE upper-tier rates  
9 skyrocketed and, despite the CPUC's efforts prior to AB 327, the prices paid  
10 by over a million PG&E customers remain at levels that are far above  
11 PG&E's marginal costs or any other measure of cost of service. On the  
12 other hand, non-CARE customers whose usage remains in the lower tiers  
13 currently pay (and have paid for over a decade) prices well below the cost to  
14 serve them.

15 PG&E's upper-tier rates are among the highest tiered rates in the state,  
16 leading to very high, inequitable bills paid by households consuming in the  
17 upper tiers, along with serious bill volatility problems during hot summer  
18 months. Figure 2-1 shows how bill volatility that typically occurs in the  
19 summer months is moderated by PG&E's proposal to add a fixed monthly  
20 service fee, reduce the number of tiers, and narrow the top to bottom tier  
21 rate differential to 1.2:1—when compared to the current rate structure.

**FIGURE 2-1  
PACIFIC GAS AND ELECTRIC COMPANY  
BILL VOLATILITY UNDER PROPOSED 2018 VS. CURRENT RATES**



1 Under today’s steeply tiered rates, when a Central Valley household  
 2 consuming in Tier 4 increases its usage, say due to a prolonged period of  
 3 hot weather, its bill will increase by a disproportionate amount. As shown by  
 4 the red bars, a heat wave-induced 30 percent increase in August usage can  
 5 produce a bill increase of about 45 percent. Similarly, a 60 percent increase  
 6 in usage can cause the bill to increase by over 90 percent, and a  
 7 100 percent increase in usage can cause the bill to increase by over  
 8 150 percent. This excessive bill volatility is due to the steeply inclining block  
 9 rate design and the very high Tier 4 rates, and customers in the  
 10 Central Valley experience this volatility to varying degrees today.<sup>22</sup>

<sup>22</sup> PG&E selected this customer from its Residential Appliance Saturation Study sample to illustrate usage profiles based on actual 2011 usage by a typical customer in San Joaquin County.



1           The green bars, though, show how this bill volatility would be  
2 substantially mitigated by PG&E’s rate proposal. A customer seeing the  
3 same 30, 60 or 100 percent increases in usage due to the heat wave would  
4 see much smaller bill increases. In fact, the bill increases would be  
5 approximately proportional to the usage increases—30, 60 and 100 percent,  
6 respectively—a much more equitable result that customers can understand.

7           PG&E has researched the standard residential energy rates of 35 other  
8 investor-owned and publicly owned utilities in California.<sup>23</sup> Table 2-4 shows  
9 the highest tier rate of each utility, including PG&E, sorted from lowest to  
10 highest (with the three investor-owned utilities’ (IOU) rates shown in bold).<sup>24</sup>  
11 Only two utilities, Hercules Municipal Utility (which is in the process of selling  
12 its distribution system to PG&E) and San Diego Gas & Electric Company  
13 (SDG&E), charge a higher top-tier energy rate than PG&E’s current Tier 4  
14 rate of 36.4 cents per kWh.<sup>25</sup> Indeed, all three of the IOUs have top-tier  
15 rates in the top quartile, in excess of 30 cents per kWh. For PG&E, its Tier 4  
16 rate of 34.6 cents per kWh is more than twice the average rate paid by its  
17 residential customers—far above cost of service.

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**23** “Standard rates” here means non-TOU rates.

**24** Some utilities have different summer and winter rates in each tier. For these utilities, PG&E took the simple average of the two seasonal rates.

**25** Similarly, PG&E’s steep tier differential and high upper-tier rates also appear to be an outlier *nationally*, based on testimony received into evidence in PG&E’s 2012 RDW. During hearings in that proceeding, TURN’s witness, Mr. William Marcus, who works on rate design issues for clients in parts of the country other than California, testified that he did not know of any electric utility in the country with a non-TOU rate anywhere near the level of PG&E’s upper tier rate, or its upper and lower tier differential. And Mr. Marcus stated that he knew of only one other utility in the nation other than those in California (Austin Electric in Texas) that had more than three tiers for its residential rate. (See citations in PG&E’s Opening Brief of November 2, 2012, in A.12-02-020 at p. 10.)

**TABLE 2-4  
PACIFIC GAS AND ELECTRIC COMPANY  
COMPARISON OF TOP TIER RATE OF CALIFORNIA UTILITIES(a)**

	<b>Utility</b>	<b>Highest Tier Rate (\$/kWh)</b>
1	Pasadena	\$0.066
2	Vernon	\$0.069
3	Imperial Valley	\$0.085
4	Santa Clara	\$0.107
5	Lassen	\$0.120
6	Truckee	\$0.132
7	Turlock	\$0.143
8	Redding	\$0.144
9	Turlock (Westside)	\$0.153
10	Azusa	\$0.153
11	Ukiah	\$0.153
12	Modesto	\$0.165
13	LADWP	\$0.167
14	Shasta Lake	\$0.170
15	Palo Alto	\$0.174
16	Burbank	\$0.177
17	Roseville	\$0.178
18	Sacramento	\$0.182
19	Riverside	\$0.187
20	Glendale	\$0.187
21	Anaheim	\$0.191
22	Alameda	\$0.194
23	Biggs	\$0.207
24	Gridley	\$0.261
25	Lompoc	\$0.275
26	Banning	\$0.288
27	Colton	\$0.292
28	<b>SCE</b>	<b>\$0.304</b>
29	Healdsburg	\$0.318
30	Corona	\$0.323
31	Merced	\$0.350
32	Lodi	\$0.350
33	Island Energy	\$0.351
34	<b>PG&amp;E</b>	<b>\$0.364</b>
35	<b>SDG&amp;E</b>	<b>\$0.369</b>
36	Hercules	\$0.499

(a) As of January 28, 2014.

1        **2. Proposal for a Transition to a Two-Tiered Rate Structure by 2018**

2                Although AB 327 does not allow tiers to be eliminated entirely, it does  
3                permit the Commission to reduce the number of tiers on PG&E's standard  
4                rates to two, which is the number that existed prior to the energy crisis.

1 Moreover, by removing many of the restrictions that were previously placed  
2 on the Commission's ability to change rates, AB 327 has allowed the  
3 Commission to once again focus on another statutory mandate, that there  
4 be "an appropriate gradual differentiation" in tiered rates.<sup>26</sup> Consequently,  
5 PG&E is here proposing a return, over a reasonable transition period  
6 between now and 2018, to a two-tiered structure for its standard rates, with  
7 a modest rate differential between the top and bottom tiers of 1.2:1.<sup>27</sup> This  
8 would make standard rates much easier for customers to understand (and  
9 thus help them to better manage their electricity bills), while representing a  
10 dramatic improvement in pricing electric service closer to cost of service.

11 PG&E's proposed timeline for reducing the number of tiers on its  
12 standard rate schedules over the transition period is shown in Table 2-5.<sup>28</sup>  
13 For its non-CARE tiered rate schedules, PG&E is proposing to reduce the  
14 number of tiers from four to three in 2015, by combining the current Tiers 2  
15 and 3. The resulting three-tiered structure (with Tier 1 corresponding to  
16 usage up to 100 percent of baseline, Tier 2 to usage between 100 and  
17 200 percent of baseline, and Tier 3 to usage over 200 percent of baseline)  
18 would continue in 2016 and 2017. Over that time period, PG&E proposes to  
19 gradually move the rates in the new Tiers 2 and 3 closer together so that,  
20 in 2018, those two tiers can be combined, resulting in a simple two-tiered  
21 structure. PG&E may propose additional changes to the tiered rate  
22 structure subsequent to 2018, consistent with Pub. Util. Code criteria.

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**26** See Public Utilities Code (Pub. Util. Code) Section 739(d)(1).

**27** In its January 3, 2014, the ED's Report also recommended that this same 1.2:1 tier ratio be achieved by 2018. (See p. 13.) Prior to the energy crisis, the Commission had reduced the rate differential to 1.15:1; accordingly, PG&E reserves the right to propose a further reduction in the tier differential ratio after 2018.

**28** These proposed reductions in the number of tiers apply to all of PG&E's tiered rate schedules, with the exception of the aforementioned Schedule E-9 that will soon be eliminated.

**TABLE 2-5  
PACIFIC GAS AND ELECTRIC COMPANY  
PRESENT AND PROPOSED TIER DEFINITIONS**

Usage Levels	Present 2014	Proposed			
		2015	2016	2017	2018
<b>Non-CARE</b>					
0 to 100% of BQ	Tier 1	Tier 1	Tier 1	Tier 1	Tier 1
100% to 130% of BQ	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
130% to 200% of BQ	Tier 3	Tier 2	Tier 2	Tier 2	Tier 2
Over 200% of BQ	Tier 4	Tier 3	Tier 3	Tier 3	Tier 2
<b>CARE</b>					
0 to 100% of BQ	Tier 1	Tier 1	Tier 1	Tier 1	Tier 1
100% to 130% of BQ	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
130% to 200% of BQ	Tier 3	Tier 2	Tier 2	Tier 2	Tier 2
Over 200% of BQ	Tier 3	Tier 3	Tier 3	Tier 3	Tier 2

PG&E is proposing that the same tier definitions described in the previous paragraph also apply to its CARE tiered rate schedules. In 2015, the current definitions of the three tiers would change, so that usage between 130 and 200 percent of baseline that today is in Tier 3 would instead be in Tier 2. These redefined three tiers would remain in place in 2016 and 2017. Then, in 2018, a reduction to a two-tiered structure would be achieved by combining Tiers 2 and 3. Under PG&E’s proposal, in 2018 both non-CARE and CARE schedules would have two-tier designs with the same tier definitions that applied prior to the energy crisis: with a Tier 1 rate applicable to usage up to baseline and a Tier 2 rate applicable to usage above baseline. This would simplify rates and more closely reflect cost of service.

**D. Standard Non-CARE Rates**

This section presents illustrative rates under PG&E’s proposal, assuming 2.1 percent per year growth in the revenue requirement between now and 2018.<sup>29</sup> As described earlier, PG&E’s proposal is to gradually move to an end-state rate design by 2018 with two tiers, modest tier differentials, monthly service fees, and a reduced CARE discount percentage. Table 2-6 presents

<sup>29</sup> For simplicity in modeling, PG&E used the Commission-approved 2014 forecast of sales by tier for every year of the transition period. This has the effect of overstating the rates somewhat, since the revenue requirement is increasing each year while sales are not.

1 illustrative rates under PG&E's proposal.<sup>30</sup> As the table shows, a monthly  
2 service fee would be introduced in 2015 for both non-CARE and CARE  
3 schedules, and both would have the same three-tiered rate structure. This  
4 three-tiered design would remain in place in 2016 and 2017, while the monthly  
5 service fee is increased, the non-CARE rate differential between top and bottom  
6 tiers is reduced and the CARE discount percentage is gradually reduced. Then,  
7 in 2018, the number of tiers is further reduced to two, with 1.2:1 differentials  
8 between the top and bottom tier rates. In 2018, the CARE discounts provided  
9 are the same in each of the two tiers, and the overall CARE discount percentage  
10 reaches the statutory range, at about 35 percent.<sup>31</sup> By gradually changing rates  
11 each year in a measured movement towards PG&E's proposed end-state rate  
12 structure, acceptable levels of bill impacts can be achieved for adversely  
13 impacted customers (and some customers, of course, will see lower bills).<sup>32</sup>  
14 PG&E recognizes the importance of informing customers of the 2015-2018 rate  
15 reforms adopted by the Commission. In addition to promoting general  
16 awareness of these changes, PG&E will undertake appropriate customer  
17 education and outreach to the most impacted customers to help minimize  
18 confusion and inform customers of their options. PG&E will fully address its  
19 customer education and outreach plan and related annual expenditures in its  
20 March 21, 2014, responses as directed by the February 13, 2014 ACR.

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**30** Similar tables showing illustrative rate trajectories assuming constant revenue requirement over the transition period for both non-CARE and CARE are presented in Appendix B-1. Per Instruction 6 of the February 13, 2014 ACR, PG&E has also designed illustrative rates for a third scenario, where the revenue requirement is assumed to grow at 2.1 percent but where it is assumed that PG&E's proposal in its 2012 RDW proceeding to reduce baseline quantities from 55 to 50 percent of historical average levels (which has been fully litigated but is pending a Commission decision) is not approved. Those rate trajectories are presented in Appendix C-1.

**31** Since the CARE monthly service fee is discounted by 50 percent, in order for the *overall* CARE discount to be 35 percent, the two CARE energy rates must be discounted by less than 35 percent.

**32** Under the constant revenue scenario, as shown in Appendix B-1, the movement to an end-state two-tiered rate structure with the same monthly service fees can be achieved with similarly acceptable bill impacts one year sooner, in 2017.

**TABLE 2-6  
PACIFIC GAS AND ELECTRIC COMPANY  
PRESENT AND PROPOSED STANDARD NON-CARE RESIDENTIAL RATES  
ASSUMING 2.1 PERCENT GROWTH IN REVENUE REQUIREMENT**

Non-CARE Rates	Current (Jan 2014)	Current (SB 695- Adjusted)	Proposed (Assuming 2.1 Percent Growth in Revenue Requirement)				
			Summer 2014	2015	2016	2017	2018
Monthly Service Fee	NA	NA	NA	\$5.00	\$10.00	\$10.21	\$10.42
Energy Charges							
0 to 100% of BQ	\$0.132	\$0.136	\$0.147	\$0.147	\$0.147	\$0.162	\$0.177
100% to 130% of BQ	\$0.150	\$0.155	\$0.170	\$0.202	\$0.202	\$0.202	\$0.212
130% to 200% of BQ	\$0.324	\$0.314	\$0.249	\$0.202	\$0.202	\$0.202	\$0.212
Over 200% of BQ	\$0.364	\$0.354	\$0.309	\$0.304	\$0.274	\$0.245	\$0.212

1           PG&E has a number of optional tiered rate programs whose discounts or  
2           credits are tied to the current four-tiered rate structure. Specifically, the  
3           discounts or credits currently provided to customers taking service on the  
4           Medical Baseline, FERA and SmartRate (i.e., Critical Peak Pricing) programs  
5           are currently based on a four-tiered rate structure. The following sections  
6           describe PG&E’s proposal for adjusting the way these discounts would be  
7           provided to customers as tiers are “collapsed” and the number of tiers reduced,  
8           in order to preserve the magnitudes of the discounts customers receive at  
9           roughly the same levels as today.

10       **1. Medical Baseline Proposal**

11           PG&E’s proposal to collapse Tiers 2 and 3 into a single Tier 2 (for usage  
12           between 100 and 200 percent of baseline) has implications for Medical  
13           Baseline customers. Currently, Medical Baseline customers receive both  
14           augmented baseline quantities and a discount on usage in excess of  
15           200 percent of baseline. Specifically, they only pay the current Tier 3 rate  
16           for their current Tier 4 usage, which represents a four-cent-per-kWh  
17           discount. PG&E proposes to continue this four-cent-per-kWh discount for  
18           Medical Baseline customers on usage in excess of 200 percent of baseline  
19           under its proposed three-tier structure. So, under PG&E’s Phase 1 reform  
20           proposal, Medical Baseline customers would continue to pay the standard  
21           rates for usage up to 200 percent of their adjusted baseline and receive a  
22           four-cent-per-kWh discount on the standard rate applicable to usage in  
23           excess of 200 percent of their adjusted baseline—just as they do today.

1       **2. FERA Proposal**

2           PG&E’s proposal to reduce the number of tiers by combining current  
3       Tiers 2 and 3 also has implications for customers on the FERA program.<sup>33</sup>  
4       On Schedule E-FERA, qualifying customers currently pay the standard rate  
5       for usage up to 130 percent of baseline, and also pay the standard rate for  
6       usage in excess of 200 percent of baseline. However, FERA customers  
7       only have to pay the Tier 2 rate (instead of the Tier 3 rate) for usage  
8       between 130 and 200 percent of baseline. At current Schedule E-1 rate  
9       levels, this represents a discount of about 17 cents per kWh for current  
10      Tier 3 usage (a 53 percent discount). This is a rather convoluted way to  
11      provide a FERA discount, with usage in the lowest two tiers and in the  
12      highest tier charged at the standard rate while usage in a “middle” tier  
13      (current Tier 3) receiving a very large 17-cent-per-kWh discount. In this  
14      Phase 1 rate reform proposal, PG&E proposes to simplify the FERA  
15      discount by making it a constant percentage off a FERA customer’s bill  
16      calculated at standard rates, so that households will receive a discount  
17      regardless of the tier in which they are consuming.<sup>34</sup> PG&E has calculated  
18      that, over the last five years, FERA customers on average have received a  
19      discount of 12.5 percent off their bills. PG&E is proposing the FERA  
20      discount be provided as a simple 12.5 percent discount off a bill calculated  
21      at standard rates. This simplified proposal would replace today’s confusing  
22      FERA discount structure and ensure that all FERA customers receive an  
23      identical percentage discount regardless of their usage level.

24      **3. SmartRate**

25           PG&E’s SmartRate tariff for Residential customers  
26      (Schedule E-RSMART) is an optional demand response program that  
27      customers may choose as an “overlay” rate, with certain supplemental  
28      charges and credits that are used to adjust the customer’s ordinary bill  
29      under any of the applicable Residential tariffs. PG&E currently provides

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33 To be eligible for the FERA program (Schedule E-FERA), customers must have a maximum annual household income of between 200 percent and 250 percent of federal poverty guidelines and have three or more persons residing full time in their household.

34 Under today’s rates, households consuming less than 130 percent of baseline receive no discount at all.

1 service to over 100,000 customers under this opt-in demand response tariff,  
2 and proposes to continue offering this program throughout the transition  
3 period.

4 SmartRate participants pay higher prices on a limited number of  
5 “Smart Days” each year, usually on hot summer afternoons. These higher  
6 prices are offset by two separate rate credits. The first is a “non-high price  
7 period credit,” which applies to all usage from June through September  
8 except that which occurs during Smart Day event hours. The second is a  
9 “participation credit” that applies only to usage above 130 percent of  
10 baseline during the same June through September period. The higher  
11 charge on Smart Days, as well as the first credit which applies to usage  
12 regardless of tier, will be unaffected by PG&E’s tier collapse proposal.  
13 However, the participation credit will need to be modified, since it is  
14 applicable today to usage above 130 percent of baseline, and that will no  
15 longer be a tier boundary. Instead, for customers on tiered rates, PG&E  
16 proposes that the participation credit apply to all usage over 100 percent of  
17 baseline. Since more kWh would be eligible for the credit, PG&E proposes  
18 to reduce its value from today’s level of 1.0 cents per kWh to 0.75 cents  
19 per kWh. For customers on PG&E’s new non-tiered TOU rate,  
20 Schedule E-TOU, PG&E proposes that the participation credit apply to all  
21 usage, but be further reduced to 0.5 cents per kWh.<sup>35</sup> These changes  
22 would preserve the approximate magnitude of the currently effective  
23 SmartRate participation credit for all participants, with the reductions  
24 approximately reflecting the increased number of kWh that will now be  
25 eligible to receive these credits.

#### 26 **4. Bill Impacts**

27 Although structural rate relief for upper-tier consuming households is  
28 long overdue, PG&E recognizes that the transition to rates with fewer tiers,  
29 lower rate differentials, and lower CARE discounts to more closely align with  
30 the structures allowed in AB 327, will necessarily result in bill increases for  
31 CARE households and lower-tier consuming non-CARE households.

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35 These participation credits would continue to apply only to the June through September period.



1           Consequently, PG&E's proposal works toward undoing the present subsidy  
2           in a series of gradual steps, in order to manage these bill impacts.

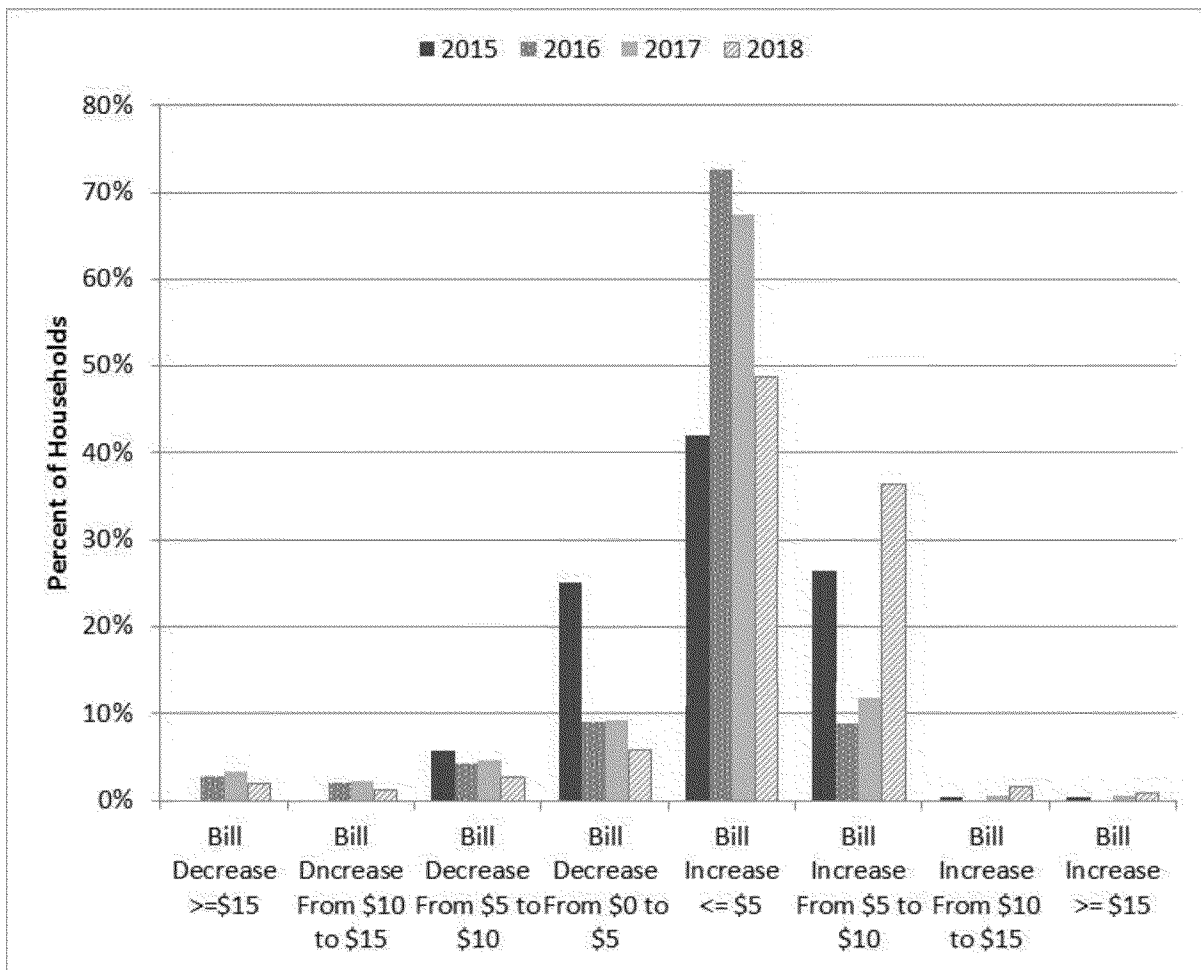
3           In this section (and in Sections E.6, F.4 and F.5 below, summarizing bill  
4           impacts for CARE and optional tiered rate customers), PG&E summarizes  
5           the year-to-year changes in customers' average monthly bills as PG&E's  
6           rates change over the transition period. The bill impacts reported here are  
7           for the rates designed assuming a 2.1 percent growth in revenue  
8           requirements.<sup>36</sup> Figure 2-2 summarizes the distribution of year-to-year bill  
9           impacts. PG&E also presents detailed, year-by-year, bill comparisons for its  
10          proposed Summer 2014 through 2018 rates in Appendices A-3 and A-4.  
11          These detailed bill impacts are shown in two formats. Appendix A-3  
12          presents the standard bill comparison tables that PG&E provides in rate  
13          applications, where the dollar impacts and percentage impacts are shown in  
14          a single table, while Appendix A-4 shows bill impacts using the format  
15          prescribed in the February 13, 2014 ACR.<sup>37</sup>

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**36** As starting point rates for 2014, PG&E designed rates using the rules it proposed for Summer 2014 rates in its January 28, 2014 testimony in Phase 2 of this proceeding, only assuming no revenue increase between now and Summer 2014. These rates correspond to "Scenario A" requested by the ED in Phase 2 of this proceeding (for Summer 2014 rates).

**37** See February 13, 2014 ACR, Instruction 5. Appendices B-3 and B-4 show bill comparisons in these same two formats for the scenario assuming no growth in the revenue requirement, and Appendices C-3 and C-4 show the bill comparisons for the scenario assuming 2.1 percent growth but that baseline quantities remain at 50 percent of historical usage.

**FIGURE 2-2  
PACIFIC GAS AND ELECTRIC COMPANY  
SCHEDULE E-1 – DISTRIBUTION OF YEAR-TO-YEAR AVERAGE  
MONTHLY BILL IMPACTS FROM PG&E'S RATE PROPOSAL**



1           As Figure 2-2 shows, some customers receive lower average monthly  
2 bills while others see higher bills due to PG&E's proposal. This is the  
3 anticipated result, since PG&E's rate reform proposal is designed to  
4 gradually provide bill relief for upper-tier consuming households who,  
5 for over a decade, have paid rates well above the class average—while  
6 beginning to increase the bills of lower-tier consuming households who have  
7 paid below-average rates. In 2015, a total of about 31 percent of the  
8 households would see lower average bills from PG&E's proposed rates.  
9 Of the remaining 69 percent, 42 percent would see average monthly bill  
10 increases of less than \$5.00 and another 26 percent would see increases  
11 between \$5.00 and \$10.00. Less than 1 percent of households would see  
12 average monthly bill increases of more than \$10.00. So over 99 percent of

1 E-1 households would see either bill savings or increases of less than  
2 \$10.00 per month from PG&E’s proposed rates in 2015.

3 In 2016 and 2017, the results are just a little bit different than the 2015  
4 results. The percentage of households saving each year (compared to the  
5 previous year) drops from 30 percent to a little below 20 percent. But the  
6 percentage of households paying bill increases in the \$5.00 to \$10.00 range  
7 drops by even more. These drops are balanced out by large increases in  
8 the percentage of households falling into the “bill increases of less than \$5”  
9 category. The percentages of households seeing increases of more than  
10 \$10.00 remain very small (1 percent or less each year). Finally, in 2018, the  
11 bill impacts slightly worsen relative to those in 2016 and 2017. Still, in 2018,  
12 61 percent of households see either bill decreases or increases of less than  
13 \$5.00, and 97 percent of all households see either decreases or increases  
14 of less than \$10.00. These modest bill increases each year are due to the  
15 gradual nature of PG&E’s proposed rate transition plan, and are at an  
16 acceptable level to reach a reformed rate structure that is more equitable for  
17 upper-tier consuming households who have long suffered excessively  
18 high bills.

19 **E. Standard CARE Rates**

20 **1. Proposed CARE Rates**

21 PG&E’s CARE Schedule EL-1 comprises 99 percent of all CARE  
22 households. Its optional CARE schedules—TOU Schedules EL-6 and EL-7  
23 and seasonal Schedule EL-8—represent the remainder. In this section,  
24 PG&E makes the following specific proposals for Schedule EL-1, which also  
25 apply to optional CARE Schedules EL-6, EL-7, and EL-8.

26 The Legislature has determined in AB 327 that the average CARE  
27 discount shall “be no less than 30 percent and no more than 35 percent of  
28 the revenues that would have been produced for the same billed usage by  
29 non-CARE customers...”<sup>38</sup> The legislation also states that the utilities  
30 “shall not reduce, on an annual basis, the average effective CARE discount  
31 by more than a reasonable percentage decrease below the discount in  
32 effect on January 1, 2013, or that the electrical corporation had been

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38 Pub. Util. Code Section 739.1(c)(1).

1 authorized to place in effect by that date.”<sup>39</sup> Similarly, the ACR for the  
2 Phase 1 proceeding, issued on February 13, 2014, states: “AB 327 requires  
3 that if a utility has an effective CARE discount higher than 35%, the utility  
4 must reduce the level of discount on a reasonable phase-in schedule.  
5 PG&E is currently in that situation. Therefore, it is important that PG&E  
6 include a proposed timeline for reducing the discount in its filing.”<sup>40</sup>

7 PG&E’s CARE transition rate reform proposal builds on its  
8 Summer 2014 proposals filed in January, to comply with AB 327 and the  
9 aforementioned implementation guidelines for making the required transition  
10 to significantly reduce the discount levels over a reasonable transition  
11 period. Specifically, PG&E proposes the following changes in CARE rate  
12 design for Schedule EL-1:

- 13 • Gradually increase the CARE Tier 1 rate for usage between 0 and  
14 100 percent of baseline and the CARE Tier 2 rate for usage that is equal  
15 to 100 percent to 200 percent of baseline.
- 16 • Keep the CARE Tier 3 rate for usage exceeding 200 percent of baseline  
17 at the same level proposed for Summer 2014 for the years 2015  
18 to 2017.
- 19 • Gradually reduce PG&E’s CARE energy rate discount by a modest  
20 amount each year. This will result in approximate discounts from the  
21 non-CARE energy rates of 43 percent in 2015, 39 percent in 2016,  
22 36 percent in 2017, and 35 percent in 2018.
- 23 • Reduce the number of tiers for all CARE rate schedules from three to  
24 two in 2018.
- 25 • Establish a monthly service fee of \$2.50 per month in 2015, \$5.00 per  
26 month in 2016, with increases in 2017 and 2018 based on changes in  
27 the California CPI.

28 Table 2-7 summarizes PG&E’s proposed CARE (EL-1) rates and  
29 total discounts.

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<sup>39</sup> Pub. Util. Code Section 739.1(c)(2).

<sup>40</sup> ACR, p. 5.

**TABLE 2-7  
PACIFIC GAS AND ELECTRIC COMPANY  
PROPOSED CARE RATES (PER KWH)  
WITH 2.1 PERCENT PER YEAR REVENUE INCREASES**

Line No.	CARE Rates	Current (January 2014)	Current (SB 695-Adjusted)	Proposed (Assuming 2.1 Percent Annual Growth in Revenue Requirement)				
				Summer 2014	2015	2016	2017	2018
1	Monthly Service Fee	NA	NA	NA	\$2.50	\$5.00	\$5.11	\$5.21
2	<u>Energy Charges</u>							
3	0 to 100% of Baseline Quantity (BQ)	\$0.083	\$0.086	\$0.091	\$0.097	\$0.103	\$0.112	\$0.121
4	100% to 130% of BQ	\$0.096	\$0.099	\$0.104	\$0.118	\$0.124	\$0.136	\$0.145
5	130% to 200% of BQ	\$0.140	\$0.140	\$0.148	\$0.118	\$0.124	\$0.136	\$0.145
6	Over 200% of BQ	\$0.140	\$0.140	\$0.148	\$0.148	\$0.148	\$0.148	\$0.145
7	Average Rate	\$0.100	\$0.101	\$0.109	\$0.110	\$0.115	\$0.123	\$0.131

1 PG&E’s proposed rates in each successive year are designed to  
2 gradually reduce the overall CARE discount to no more than the legislated  
3 maximum of 35 percent while lowering the CARE Tier 3 discount until all  
4 three-tiered discounts equalize at about 32 percent in 2018.<sup>41</sup> Tier 1 rates  
5 would increase by just 0.6 cents per year in 2015 and 2016, followed by a  
6 0.9 cent increase in 2017 and 2018. Tier 2 rates, after combining total  
7 usage between 100 percent and 200 percent of baseline in 2015, would  
8 increase by 0.6 cents in 2016, 1.2 cents in 2017 and 0.9 cents in 2018. In  
9 contrast, the Tier 3 rate for usage exceeding 200 percent of baseline would  
10 remain constant at 14.8 cents through 2017 as a rapidly dropping  
11 non-CARE Tier 3 rate swiftly lowers the CARE Tier 3 discount relative to  
12 those of Tier 1 and Tier 2. It would drop by 0.3 cents in 2018 as the  
13 discounts for all three CARE rates equalize. PG&E believes that these  
14 proposed rates represent relatively modest increases to CARE rates over  
15 the transition period, especially given the context of how little CARE rates  
16 have increased in the last two decades.

17 In 1993, the CARE discount in each tier was 15 percent, as was the  
18 overall average CARE discount. In the ensuing two decades the CARE  
19 discount has grown tremendously, with the overall average discount more

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<sup>41</sup> Since the CARE monthly service fee is discounted by 50 percent, the two CARE energy rates must be discounted by less than that, about 32 percent in order for the *overall* CARE discount to be 35 percent. PG&E may propose additional reductions in the CARE discount in subsequent years, consistent with the criteria of the Pub. Util. Code.

1 than tripling to today's 49 percent level. Adoption of PG&E's long term rate  
2 reform proposal would gradually lower that figure, reaching 35 percent by  
3 2018, at the high end of the range adopted in AB 327. PG&E chose an  
4 initial target of an overall 35 percent discount by 2018 as a mechanism to  
5 moderate CARE bill increases, but reserves the right to make additional  
6 proposals for post-2018 adjustments to ensure PG&E's effective CARE  
7 discount remains within the 30 percent to 35 percent range required under  
8 AB 327.

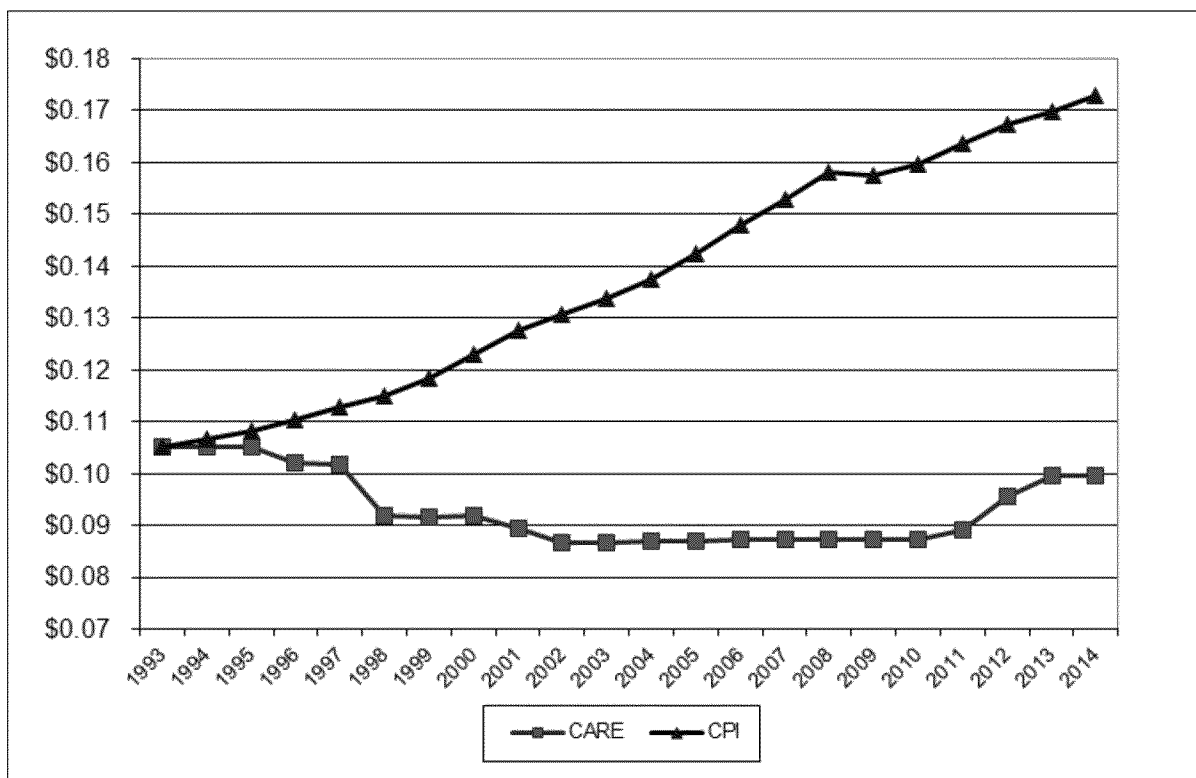
## 9 **2. CARE Rates Remain at a Large Real Discount Compared to Those** 10 **Charged in 1993**

11 Over the last two decades, CARE rates have slipped further and further  
12 below the cost of service and the rate of inflation. The present average  
13 CARE EL-1 rate of 10.0 cents is, in nominal terms, below the EL-1 average  
14 rate of 10.5 cents charged back in 1993. In real terms, it is much lower  
15 today than two decades ago. Figure 2-3 shows that if the  
16 10.5-cent-per-kWh average CARE rate in 1993 had simply increased each  
17 year with the rate of inflation, it would be 17.3 cents per kWh today.<sup>42</sup>  
18 Instead, as of January 1, 2014, it is just 10.0 cents per kWh. This  
19 represents a 42 percent decrease in the average CARE rate in real terms  
20 over the last 21 years. Clearly, electricity has become much more  
21 affordable for CARE customers in real terms, due to nominal CARE rates  
22 slightly decreasing while other prices in the economy and household  
23 incomes rose in nominal terms with inflation. Although PG&E's 2015  
24 proposed Phase 1 CARE rates would increase the average CARE rate from  
25 10.0 cents to 11.0 cents per kWh, this average rate would still remain far  
26 below the 17.3 cent nominal level rate in 2014 that is equivalent, in real  
27 terms, to the CARE rate level approved by the Commission in 1993. Even  
28 in 2018, the estimated CARE average rate of 13.1 cents per kWh would still  
29 remain nearly 25 percent below the 17.3 cent nominal rate in 2014.

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<sup>42</sup> Per Global Insight's Q1 2013 US Economy Forecast for the PG&E service territory, inflation rates are assumed to be at 1.44 percent for 2013 and 1.72 percent for 2014. For comparison purposes, the U.S. CPI rose 1.46 percent in 2013.

**FIGURE 2-3  
PACIFIC GAS AND ELECTRIC COMPANY  
AVERAGE CARE (EL-1) RATE VS. CPI  
1993 TO 2014(a)**



(a) Does not include PG&E's Summer 2014 rate proposal.

**3. The Proposed CARE Rates Would Improve a Relatively Weak Conservation Incentive**

Since CARE rates have remained largely constant for two decades as prices and incomes grew with inflation, there has been a declining incentive for CARE customers to conserve. PG&E's CARE Tier 1 and Tier 2 rates are currently set too low. Although both rates will rise on March 1, 2014—the first increase since 1993—this modest 3 percent increase under SB 695 will still leave them about 15 percent below their nominal levels in 1993.

In addition, despite the modest increase to CARE Tier 3 rates implemented in January 2013, the small increases to CARE Tier 1 and Tier 2 rates scheduled for March 1, 2014 and PG&E's Phase 2 proposal for interim summer 2014 rates (a relatively modest 5.9 percent increase to all CARE

1 rates), CARE rates overall remain too low compared to the class average.<sup>43</sup>  
2 PG&E's proposed CARE rate increases for the transition period through  
3 2018 will further incent conservation by ensuring that all CARE rates move  
4 closer to PG&E's average residential rate, and thus better reflect the actual  
5 cost to serve these customers.

6 As Table 2-8 shows below, total discounts received by CARE customers  
7 in the 12 months ending December 2013 were \$700 million.<sup>44</sup>

8 Three-quarters of the CARE discount, over \$530 million, went to CARE  
9 customers with usage in Tier 4 or higher (usage exceeding 200 percent of  
10 baseline). As a result of the currently low rates they pay, most CARE  
11 customers exceeding 200 percent of baseline still have little incentive to  
12 conserve.<sup>45</sup> PG&E's Phase 1 transitional rate reform proposal will provide a  
13 greater incentive to high-use CARE customers to conserve, and is therefore  
14 likely to reduce the overall cost of the CARE program.

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<sup>43</sup> On March 1, 2014, PG&E expects to implement the last SB 695 adjustment to rates, proposed in Advice Letter 4314-E, and adopted by the CPUC on December 31, 2013.

<sup>44</sup> The CARE discount is calculated by taking the difference between (a) CARE sales by tier priced at non-CARE rates and (b) CARE sales by tier priced at CARE rates, then dividing this difference by (a) to yield a CARE percent discount from non-CARE rates. This calculation includes the impact of the CCC on total net revenues collected from the residential class.

<sup>45</sup> The present CARE Tier 3 rate of 14.0 cents per kWh is still 20 percent below the average residential rate of 17.5 cents per kWh.



**TABLE 2-8  
PACIFIC GAS AND ELECTRIC COMPANY  
CARE HOUSEHOLDS AND ELECTRIC DISCOUNTS THROUGH AUGUST 2013**

Line No.	Highest Monthly Tier Reached Over 12 Months	CARE Households	Total CARE Discounts	% of CARE Households	% of CARE Discounts
1	Tier 1	217,000	\$29,000,000	18%	4%
2	Tier 2	149,000	30,000,000	12%	4%
3	Tier 3	337,000	108,000,000	27%	16%
4	Tier 4(a)	313,000	204,000,000	26%	29%
5	Tier 5(b)	139,000	162,000,000	11%	23%
6	Tier 6(c)	75,000	157,000,000	6%	24%
7	CARE Total	1,230,000	\$700,000,000	100%	100%

- (a) The Tier 4 group includes customers using between 200 percent and 300 percent of baseline for at least one month.
- (b) The Tier 5 group includes customers using between 300 percent and 400 percent of baseline for at least one month.
- (c) The Tier 6 group includes customers with usage exceeding 400 percent of baseline for at least one month.

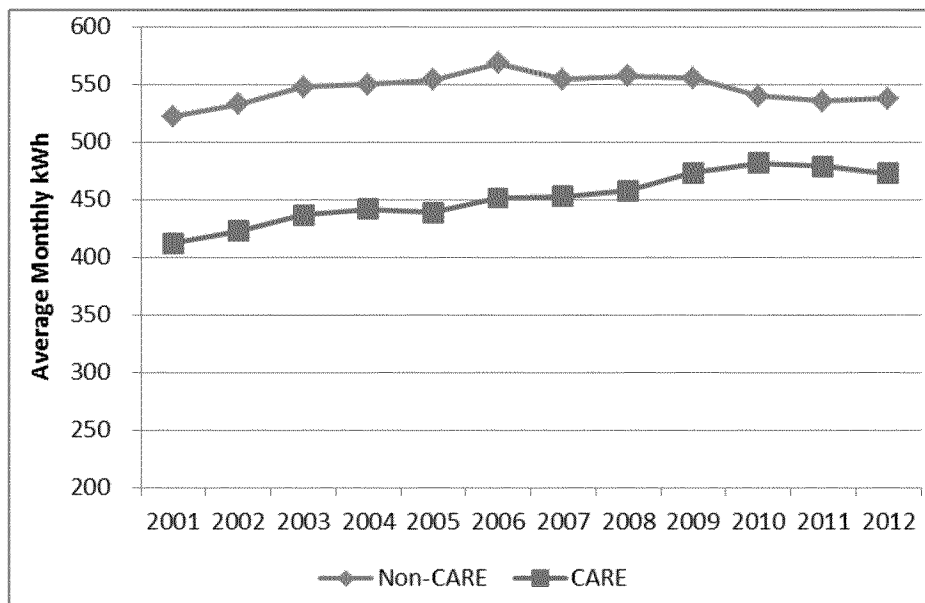
1                    Table 2-9 shows the explosive growth in CARE participation and total  
2                    electric discounts since 2000. The number of households has increased  
3                    more than 4 times while the total discounts today are 23 times their level  
4                    in 2000.

**TABLE 2-9  
PACIFIC GAS AND ELECTRIC COMPANY  
CARE PARTICIPANTS AND DISCOUNTS SINCE 2000**

Line No.	Year	CARE Households	Total CARE Discounts
1	2000	280,000	\$30,000,000
2	2001	400,000	\$80,000,000
3	2002	560,000	\$130,000,000
4	2003	650,000	\$150,000,000
5	2004	730,000	\$190,000,000
6	2005	800,000	\$220,000,000
7	2006	940,000	\$380,000,000
8	2007	970,000	\$390,000,000
9	2008	950,000	\$390,000,000
10	2009	1,020,000	\$520,000,000
11	2010	1,230,000	\$720,000,000
12	2011	1,300,000	\$790,000,000
13	2012	1,280,000	\$740,000,000
14	2013	1,230,000	\$700,000,000

1 Finally, as Figure 2-4 shows below, CARE average usage increased at  
 2 a significantly faster rate than non-CARE usage from 2001 to 2012, on a  
 3 climate zone-adjusted basis.<sup>46</sup> Where the average non-CARE usage had  
 4 exceeded the average CARE usage by 110 kWh per month in 2001, that  
 5 gap has been cut by 40 percent, even after removing from the calculation all  
 6 CARE customers who exceeded 400 percent of baseline in a single month.

**FIGURE 2-4**  
**PACIFIC GAS AND ELECTRIC COMPANY**  
**CLIMATE ADJUSTED AVERAGE MONTHLY USAGE, NON-CARE VS. CARE(a)**  
**2001 TO 2012**



(a) Excludes CARE customers exceeding 400 percent of baseline for at least one month per year.

7 **4. Impact of Decision 12-08-044 on CARE Percentage Discount**

8 Decision 12-08-044 authorized PG&E to begin removing customers  
 9 exceeding 400 percent of baseline in any one month from the CARE  
 10 program if they were unable to satisfy certain requirements. Most of the  
 11 impact of the sales changes resulting from this decision has been included

<sup>46</sup> In total, CARE customers actually use considerably more than non-CARE customers on a per-household basis, but this is because of the significantly higher percentage of Central Valley customers who participate in the CARE program. Therefore, PG&E climate-adjusts the data by assigning weights to CARE usage for each climate zone based on its percent of the *total* population, not just the CARE population.

1 in the 2014 billing determinants authorized by the Commission in PG&E's  
2 2014 Annual Electric True-Up (AET) filing. These billing determinants,  
3 which are held constant through the transition period of this proceeding,  
4 produce the illustrative rates shown herein. As a result, the approved billing  
5 determinants already include about 800 million<sup>47</sup> out of the total  
6 1.1 billion kWh of total CARE usage estimated to be transferred from CARE  
7 to non-CARE status. Consequently, the total CARE discount percentage for  
8 2014 and in PG&E's transition proposal, already reflects most of the impact  
9 from this development. In addition, as the differences in the discount  
10 between tiers disappears by 2018, so too does the impact of CARE  
11 migration on the CARE percentage discount. In other words, once the  
12 CARE percentage discount is the same for each tier, any migration of usage  
13 from CARE to non-CARE status, regardless of the tier, will have virtually no  
14 impact on the total percentage discount.

15 The CARE percentage discount on March 1, 2014, when the last  
16 SB 695 rate increases are implemented along with other rate changes, will  
17 be 48.4 percent. If there had been no CARE migration included in the 2014  
18 sales forecast, the CARE percentage discount would have been  
19 51.6 percent, more than 3 percent higher. And if the full CARE migration  
20 had been included, the CARE percentage discount would be 47.4 percent,  
21 1.0 percent lower. Finally, lowering the baseline quantities from 55 percent  
22 to 50 percent would lower the CARE percentage discount by another  
23 0.4 percent.

24 Regardless of the changes in discount percentages, Decision 12-08-044  
25 already has produced a large reduction in total CARE discounts. Without  
26 the migration already reflected in the 2014 billing determinants, the CARE  
27 discount would be \$830 million in 2014. Including the migration forecasted  
28 for this year drops the CARE discount to \$640 million, a difference of  
29 \$190 million. Upon full implementation of Decision 12-08-044, all else

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<sup>47</sup> The forecast of CARE sales migrated to non-CARE rates in 2014 are based on projected progress of implementation of Decision 12-08-044. Full implementation is not expected until July 2014, and the billing determinant forecast reflects this assumption on a weighted average basis.

1 equal, the CARE discount will drop to \$590 million, a total reduction of about  
2 \$240 million.

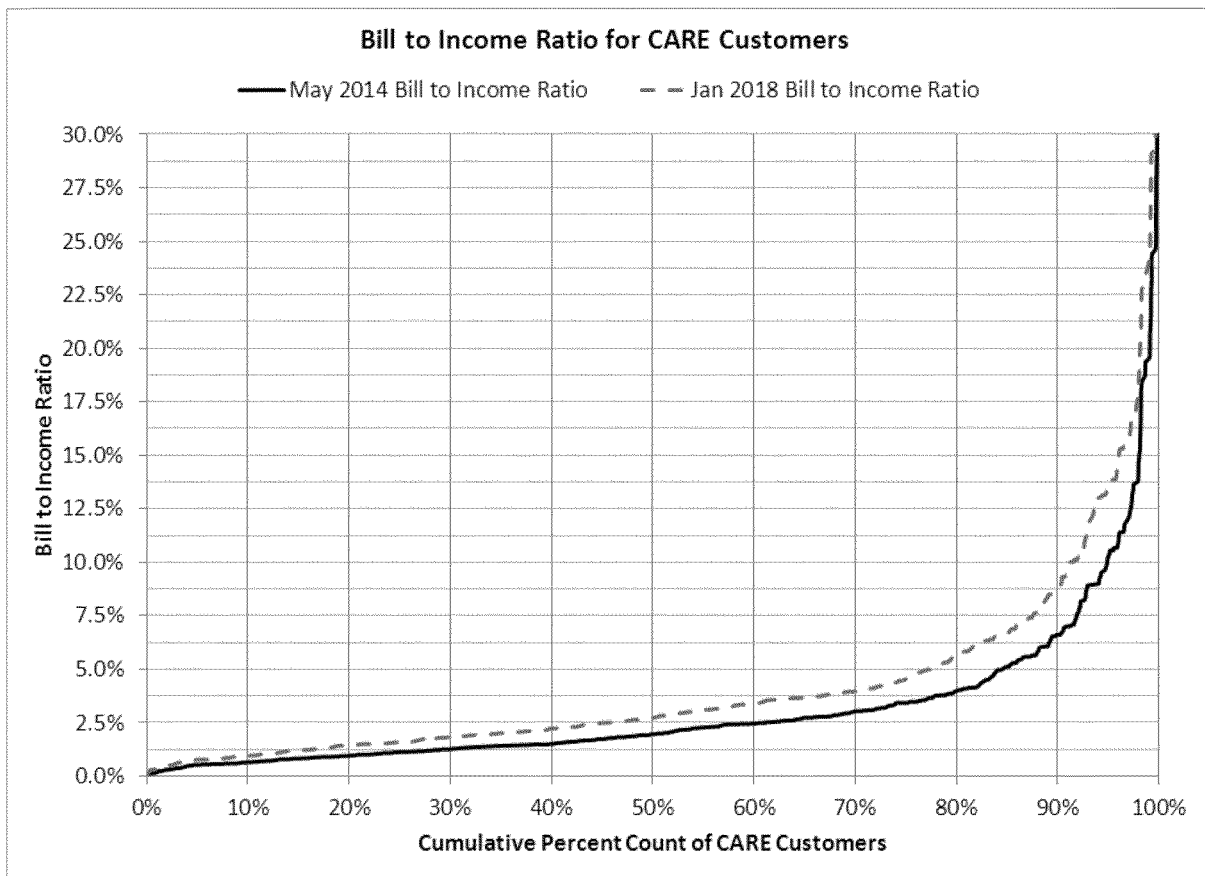
### 3 **5. Energy Burden and Affordability**

4 PG&E calculated bill-to-income ratios for CARE customers, both for  
5 rates proposed for Summer 2014 in Phase 2, as well as for rates in 2018 if  
6 PG&E's Phase 1 proposals are adopted. Figure 2-5 shows that under  
7 PG&E's proposed Summer 2014 CARE rates, 90 percent of CARE  
8 customers will spend less than 6.6 percent of their 2009 income on  
9 electricity. This would increase to about 8.8 percent of their 2009 income in  
10 2018 under PG&E's proposal in this proceeding. However, this analysis  
11 held income constant at 2009 levels while increasing rates each year. In  
12 addition, it did not include the impact of two scheduled increases in the  
13 California minimum wage currently received by 3 million Californians. The  
14 first is a 12.5 percent increase—to \$9.00 per hour—scheduled for July 2014.  
15 The second is an 11.1 percent increase—to \$10.00 per hour—scheduled for  
16 January 2016.<sup>48</sup> As a result, the bill to income ratio calculated for 2018 is  
17 overstated.

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<sup>48</sup> "California Minimum Wage Increase Signed Into Law, Set to Be Nation's Highest,"  
Huffingtonpost.com, September 25, 2013.

**FIGURE 2-5  
PACIFIC GAS AND ELECTRIC COMPANY  
BILL TO INCOME RATIO FOR CARE CUSTOMERS(a)  
MAY 2014 VS. 2018**



(a) Income was held constant at 2009 levels.

1 PG&E’s average energy burden for low-income customers has been  
 2 statistically unchanged between 2003 and 2013 when comparing results  
 3 under the Overall Energy Burden<sup>49</sup> methodology reported on the  
 4 Low-Income Needs Assessment reports.<sup>50</sup> Specifically, using the same  
 5 methodology KEMA Inc. used in its 2007 study on the low-income energy  
 6 burden in 2003, Evergreen Economics found that the overall energy burden

<sup>49</sup> The Overall Energy Burden methodology totals all customer bills and divides that number by total customer income.

<sup>50</sup> Needs Assessment for the Energy Savings Assistance and the California Alternate Rates for Energy Programs, Volume 2: Detailed Findings, Final Report, p. 5-93. Evergreen Economics, December 16, 2013.

1 for California’s low-income customers was essentially unchanged at  
2 4.1 percent in 2013 compared to 4.2 percent in 2003.<sup>51</sup>

3 Evergreen Economics also calculated the “customer energy burden”,  
4 which gives equal weights to each customer’s energy burden by separately  
5 dividing each customer’s energy bill by its total income, then taking the  
6 average of each customer’s energy burden and accumulating those  
7 numbers. This showed the energy burden for PG&E’s low-income  
8 customers to be 9.9 percent in 2013 vs. the national average of 13.6 percent  
9 in 2007, as calculated for the Low-Income Home Energy Assistance  
10 Program (LIHEAP).<sup>52</sup> However, the calculations by both Evergreen  
11 Economics and LIHEAP did not specifically take into account any of the  
12 other income assistance already received by low-income customers, such  
13 as the Earned Income Tax Credit, Supplemental Nutrition Assistance  
14 Program (food stamps), Section 8 housing subsidies, school lunch  
15 programs, etc.<sup>53</sup> When these additional sources of income are taken into  
16 account, the effective energy burden for PG&E customers is less than the  
17 9.9 percent shown here. Even so, PG&E’s customer energy burden  
18 remains substantially below the LIHEAP national average taken in the year  
19 prior to the onset of the “Great Recession.”

20 Finally, PG&E proposes to gradually reduce its high CARE discount to  
21 the mandated 30 to 35 percent level over a 4-year period, to make bill  
22 impacts more manageable.

## 23 **6. Bill Impacts**

24 While most CARE customers would see bill increases under PG&E’s  
25 Phase 1 proposals, the average monthly impacts are modest for most CARE  
26 customers.<sup>54</sup> Generally speaking, CARE customers would see bill  
27 increases under PG&E’s proposal, since proposed CARE rates are being

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51 Final Report on Phase 2 Low Income Needs Assessment, p. 5-9. KEMA Inc.,  
September 7, 2007.

52 LIHEAP Home Energy Notebook for FH 2007: Executive Summary, p. i.  
U.S. Department of Health and Human Services, June 2009.

53 Customers were asked to state their total household income, but were not asked  
specifically asked about income or assistance from other programs.

54 Bill impacts exclude the impact of the CCC.

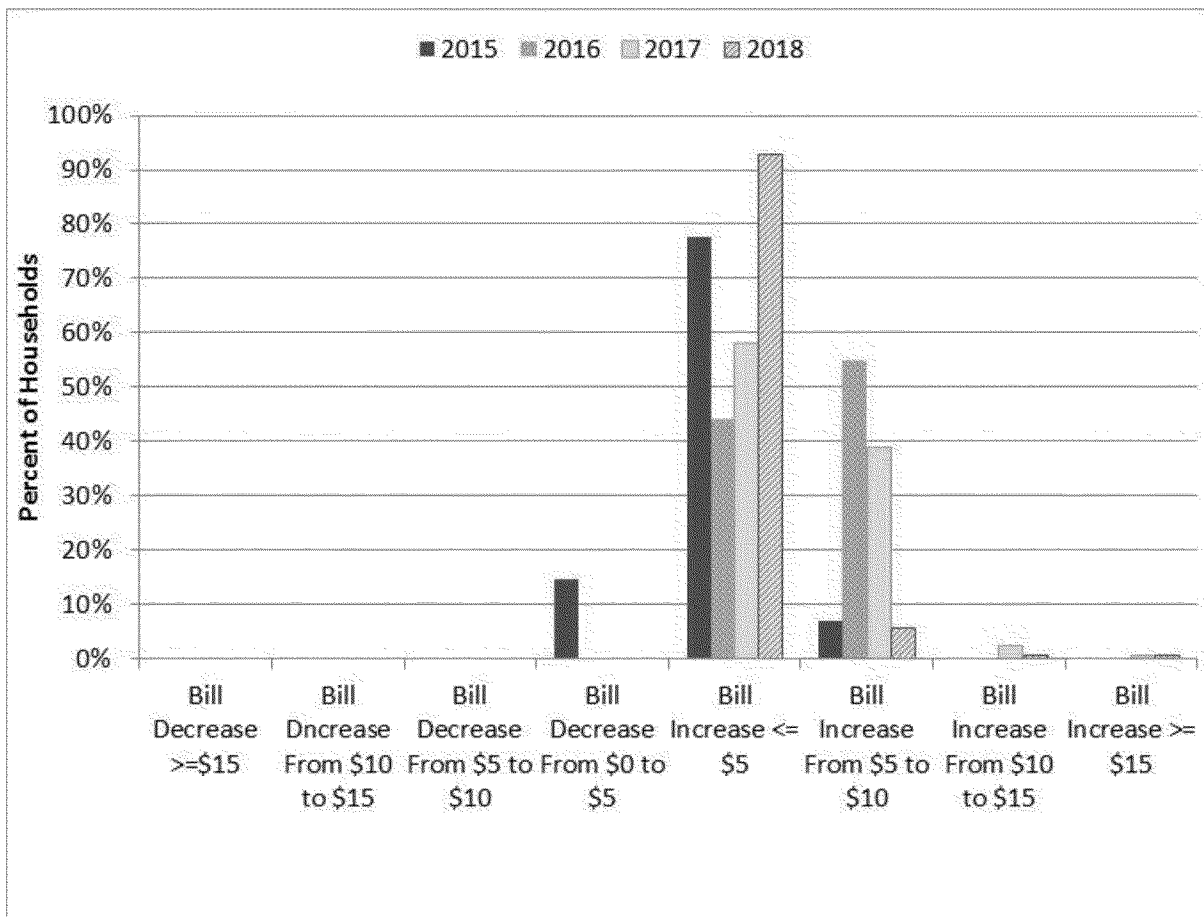
1 gradually increased over the transition period in order to reduce the CARE  
2 discount percentage to the 30 to 35 range mandated by AB 327.  
3 Nevertheless, the bill impacts are modest for the vast majority of CARE  
4 customers. Figure 2-6 summarizes the year-to-year bill impacts. Detailed  
5 bill comparison tables are provided in Appendices A-3 and A-4.

6 In 2015, 14 percent of CARE households would actually pay lower  
7 average monthly bills under PG&E's proposal. This is due to the following:  
8 (1) replacing a \$3.60 minimum bill with a \$2.50 monthly service fee for  
9 nearly 3 percent of customers; and (2) a 3 cent rate reduction for the  
10 12 percent of customers with significant usage between 130 percent and  
11 200 percent of baseline, but little or no usage exceeding 200 percent of  
12 baseline. Of the remaining 85 percent who would see bill increases, though,  
13 a total of slightly more than 78 percent would see average monthly  
14 increases of less than \$5.00, with 7 percent seeing increases between \$5.00  
15 and \$10.00. Only a very small percentage of CARE households (less than  
16 1 percent) would see increases over \$10.00. In 2016, 2017 and 2018, all  
17 CARE customers would see increases in their average monthly bills, but  
18 again not by large amounts. In these three years, 97 percent or more of the  
19 CARE households would see bill increases either less than \$5.00 or  
20 between \$5.00 and \$10.00, with only 1 to 3 percent seeing increases above  
21 \$10.00.<sup>55</sup>

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<sup>55</sup> PG&E will take into account actual bill impacts and will consider adjusting the transition period, as appropriate, during the implementation of these rate design reform proposals.

**FIGURE 2-6  
PACIFIC GAS AND ELECTRIC COMPANY  
SCHEDULE EL-1 – DISTRIBUTION OF YEAR-TO-YEAR AVERAGE  
MONTHLY BILL IMPACTS FROM PG&E'S RATE PROPOSAL**



**F. Optional Tiered Schedules**

**1. Rate Closure and Elimination**

PG&E proposes to close Schedules E-6 and EL-6 to new participants<sup>56</sup> on January 1, 2015, and to eliminate Schedules E-6, EL-6, EL-7, E-8 and EL-8 on January 1, 2016. On that date, customers on the aforementioned schedules who have the necessary SmartMeter™ data will be moved to PG&E's proposed non-tiered TOU rate schedule (described in Section G), or to Schedule E-1 (or EL-1), depending on which tariff produces the lowest annual bill for that specific customer. Otherwise, customers on Schedules E-6, EL-6, E-7 and EL-7 will be migrated to E-TOU whereas

<sup>56</sup> Schedules E-7, EL-7, E-8 and EL-8 are already closed to new participants.



1 customers on Schedules E-8 and EL-8 will be migrated to  
2 Schedules E-1/EL-1. Prior to this date, customers will be notified that they  
3 will be moved to either non-tiered TOU or Schedules E-1/EL-1 and that they  
4 have other rate options. In addition, customers who have the necessary  
5 SmartMeter™ data will be provided with rate analysis tools to help guide  
6 their decision making.

## 7 **2. Rate Design**

8 As described earlier, PG&E is proposing structural changes to all of its  
9 optional tiered rate schedules, TOU Schedules E-6, EL-6, E-7, and EL-7,  
10 as well as the seasonal rate Schedule E-8 and EL-8. This is accomplished  
11 by adjusting the TOU and seasonal rates for each tier by the same cents  
12 per kWh change proposed for E-1 (non-CARE schedules) and EL-1  
13 (CARE schedules). For example, PG&E is proposing to keep the E-1 Tier 1  
14 rate at the same level in 2015 as it proposed for Summer 2014. This same  
15 "no change" for Tier 1 rates is also proposed for every TOU period Tier 1  
16 rate on Schedule E-6. Similarly, PG&E is proposing a 0.6-cent increase to  
17 the EL-1 Tier 1 rate for 2015 relative to Summer 2014. This same  
18 0.6-cent-per-kWh increase is proposed for the Tier 1 rates on  
19 Schedule EL-6 for every TOU period. Similar adjustments are to be made to  
20 the other tier rates consistent with the changes proposed for Schedule E-1  
21 and EL-1.<sup>57</sup> (See Appendix A-1 for summaries of the proposed transitional  
22 rates.) PG&E's monthly service fee proposal also applies to these tiered  
23 optional rate schedules where a monthly service fee does not already exist.  
24 PG&E's proposal to reduce the CARE discount also applies to these  
25 optional rate schedules.

## 26 **3. Revenue Neutrality and Marginal Costs in Rate Design**

27 PG&E proposes to remove the current subsidies built into optional  
28 Schedules E-7, E-8 and EL-8 to make them revenue neutral with the CARE  
29 and non-CARE rate classes, and to set TOU and seasonal price differentials  
30 equal to the actual marginal cost differences between time periods and

---

<sup>57</sup> A similar approach is also used to design the rates for the CARE versions of the optional TOU and seasonal rates (Schedules EL-6, EL-7 and EL-8).

1 between seasons.<sup>58</sup> PG&E proposes to accomplish this by designing its  
2 proposed rates based on billing determinants and load shares for the entire  
3 residential class.

4 The goal of these rate design proposals is two-fold. First, the average  
5 customer within the CARE or non-CARE rate classes should pay  
6 approximately the same average rate regardless of the rate schedule they  
7 have chosen. Schedule E-1 customers should not be required to subsidize  
8 customers on the other non-CARE rate schedules, as they currently do.  
9 Second, TOU or seasonal customers who shift usage to a less expensive  
10 time period should receive a bill reduction in line with the marginal cost  
11 difference, as such a reduction corresponds with the costs PG&E avoids in  
12 serving such a customer when the customer shifts load. Providing a bill  
13 reduction that exceeds the marginal cost difference merely causes other  
14 customers to pay higher bills.

15 **a. Step 1**

16 Create a revenue neutral rate design which assumes that each rate  
17 schedule applies to the entire non-CARE or CARE residential class.  
18 First, tiered rates for Schedules E-1 and EL-1 are designed as if the  
19 entire residential class were taking service on Schedules E-1 and EL-1.  
20 This determines the Tier 1 revenues that each optional schedule must  
21 collect if the entire non-CARE and CARE classes took service on these  
22 schedules. Second, the tier differentials between Tiers 1 and 2 and  
23 Tiers 2 and 3 are set at the same levels. For example, if the differential  
24 between Schedule E-1 Tiers 1 and 2 is 2.0 cents per kWh, that 2.0-cent  
25 differential is added to all Schedule E-6's Tier 1 TOU rates to produce its  
26 Tier 2 TOU rates.

27 **b. Step 2**

28 Determine the individual TOU or seasonal rates so that the price  
29 difference between each TOU period and season equals the actual  
30 marginal cost difference. First, the marginal cost per kWh is calculated  
31 for each TOU period or season. Second, these marginal cost rates are

---

<sup>58</sup> The annual subsidy is currently \$17 million for Schedule E-7 and \$15 million for Schedules E-8 and EL-8.

1 multiplied by the Tier 1 residential class TOU sales or seasonal sales for  
2 each time period as defined by each optional schedule. An equal cents  
3 charge is added to each Tier 1 TOU or seasonal rate so that, when  
4 combined, total Tier 1 revenues for each optional schedule equals the  
5 total Tier 1 revenues produced by Schedule E-1 for the non-CARE class  
6 and Schedule EL-1 for the CARE class. Second, these TOU and  
7 seasonal price differentials are kept the same for each tier such that  
8 they do not vary whether a customer is consuming usage in Tier 1,  
9 Tier 2 or Tier 3.<sup>59</sup>

#### 10 **4. Bill Impacts in 2015**

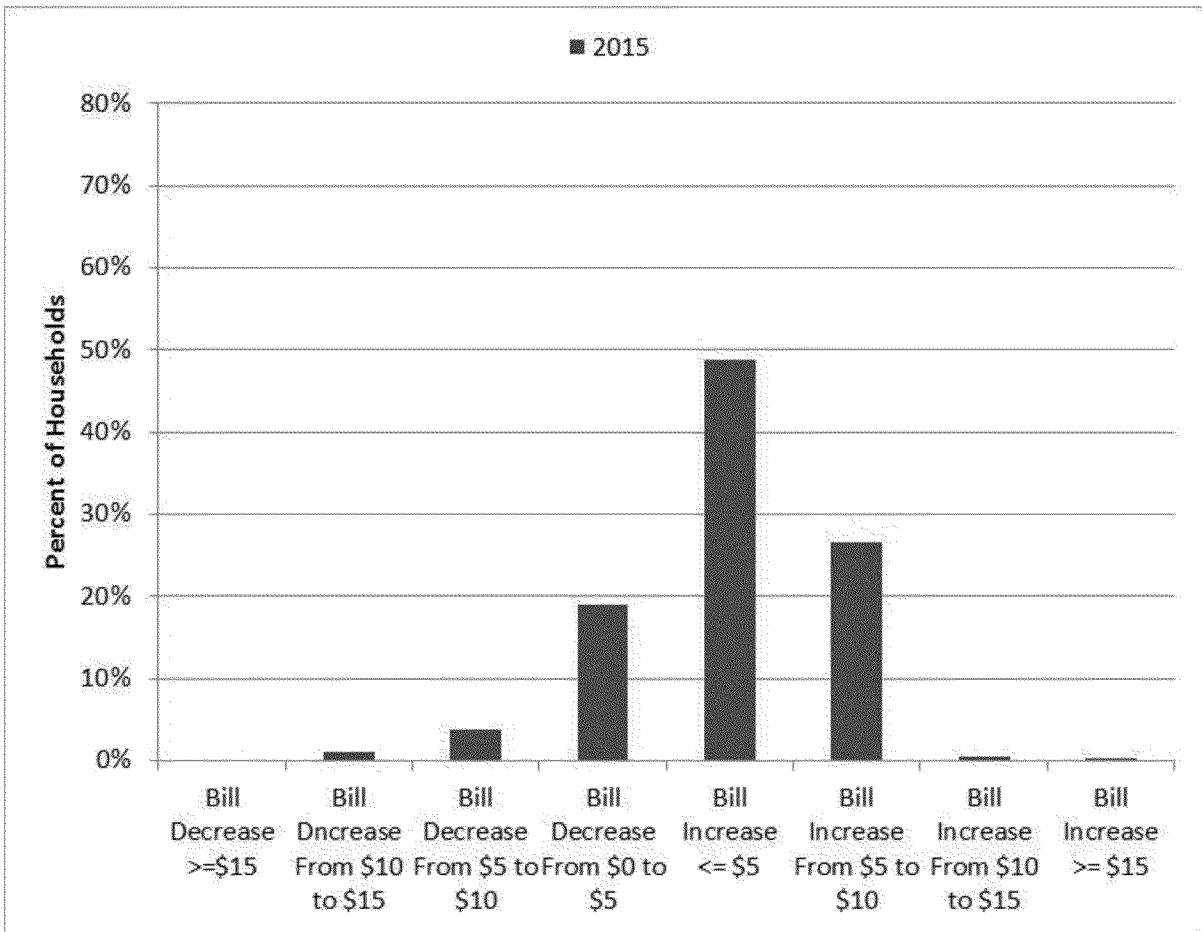
11 The bill impacts shown below are only for the year 2015, after which  
12 these optional schedules are eliminated. Schedules E-6 and EL-6 show  
13 results for 2015 that are very close to Schedules E-1 and EL-1 since both  
14 were designed to be revenue neutral with their respective classes. On the  
15 other hand, Schedules E-7, E-8 and EL-8 show bill increases for all  
16 customers in 2015, compared to E-1 and EL-1, because the subsidies  
17 received by these customers for more than two decades would end under  
18 PG&E's proposal. Finally, half of Schedule EL-7's customers would see bill  
19 decreases in 2015 because EL-7 energy rates were, one, never subsidized  
20 relative to EL-1, and two, set equal to those of E-7 until the Energy Crisis.  
21 As a result, EL-7's proposed average rate for 2015 is slightly below its  
22 current average rate.

23 Figures 2-7 through 2-9 summarize the 2015 bill impacts for the  
24 non-CARE optional schedules. Figures 2-10 through 2-12 summarize the  
25 2015 bill impacts for the CARE optional schedules. Detailed bill comparison  
26 tables are provided in Appendices A-3 and A-4.

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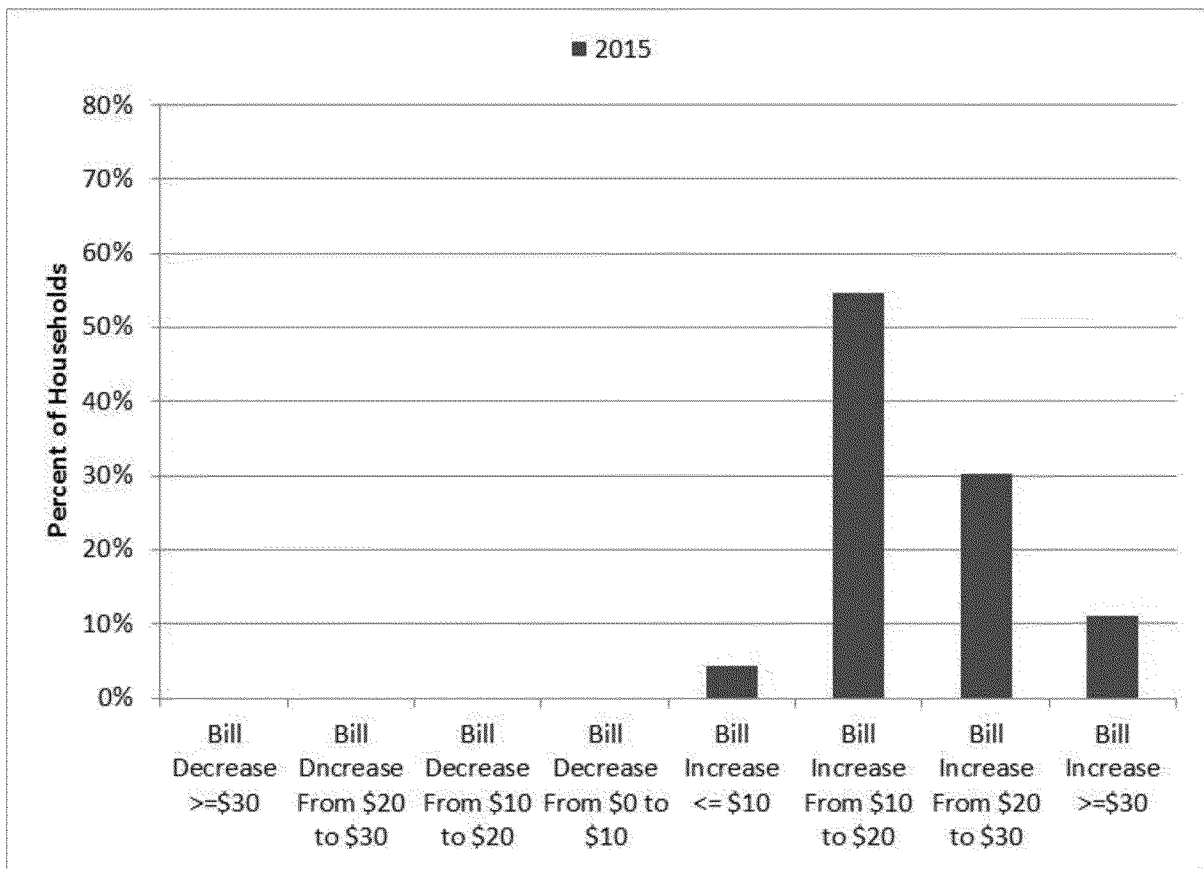
<sup>59</sup> The absolute TOU and seasonal differentials will widen slightly between cases because energy rates are changed on an equal *percent* basis in interim years, not on an equal *cents* basis. As a result, the Schedule E-6 summer peak vs. off-peak differential of 17.2 cents per kWh established in the 2011 GRC has since grown to 18.6 cents per kWh in 2014.

**FIGURE 2-7  
 PACIFIC GAS AND ELECTRIC COMPANY  
 SCHEDULE E-6 – 2015 AVERAGE  
 MONTHLY BILL IMPACTS FROM PG&E'S RATE PROPOSAL(a)**



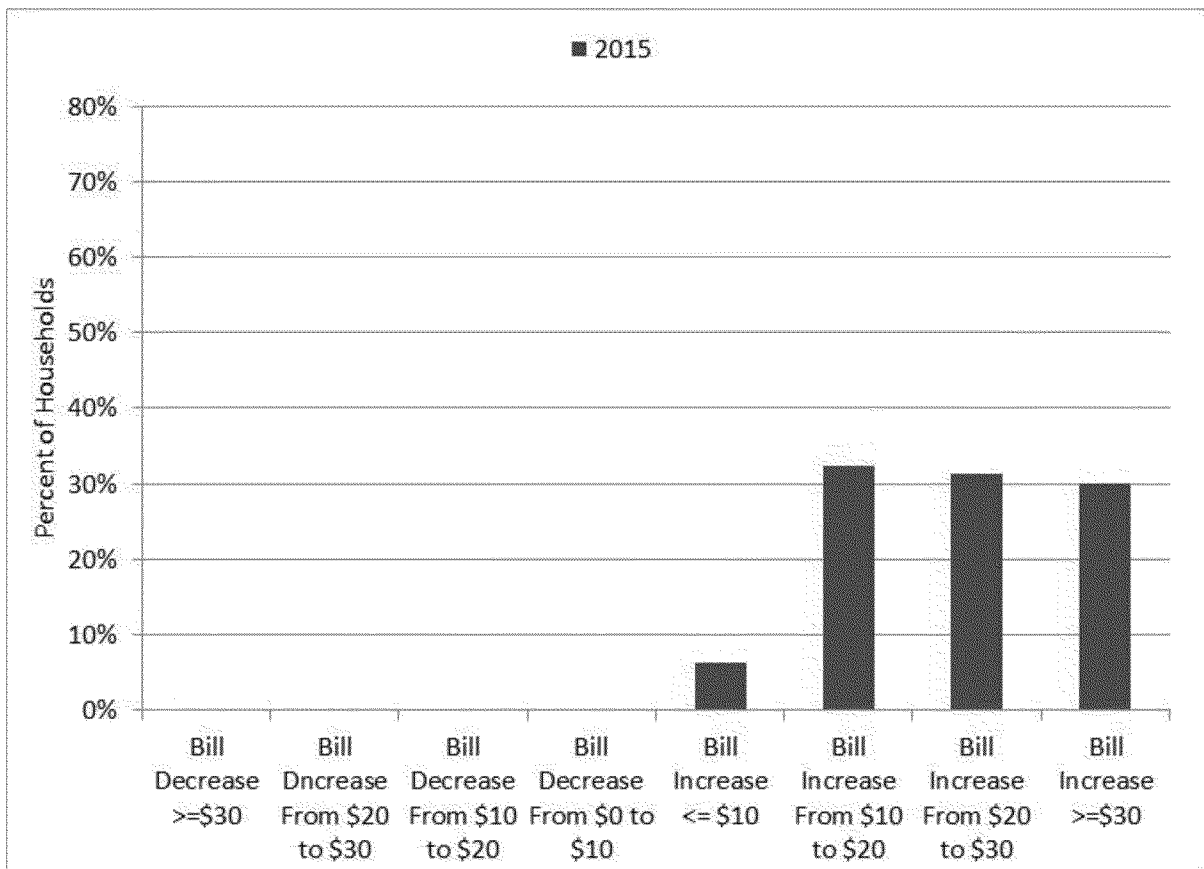
(a) Approximately 5,000 non-net energy metering (NEM) customers.

**FIGURE 2-8  
 PACIFIC GAS AND ELECTRIC COMPANY  
 SCHEDULE E-7 – 2015 AVERAGE  
 MONTHLY BILL IMPACTS FROM PG&E'S RATE PROPOSAL(a)**



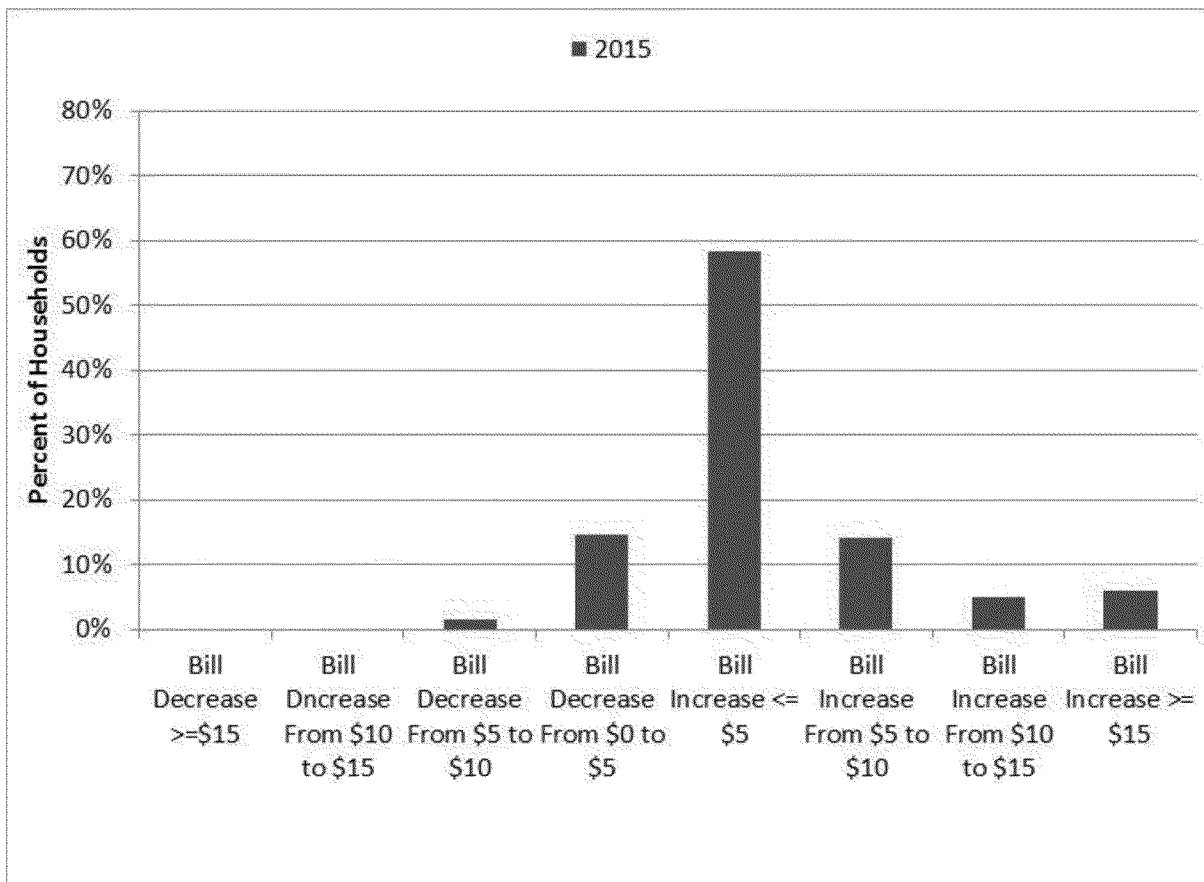
(a) Approximately 54,000 non-NEM customers.

**FIGURE 2-9  
 PACIFIC GAS AND ELECTRIC COMPANY  
 SCHEDULE E-8 – 2015 AVERAGE  
 MONTHLY BILL IMPACTS FROM PG&E'S RATE PROPOSAL(a)**



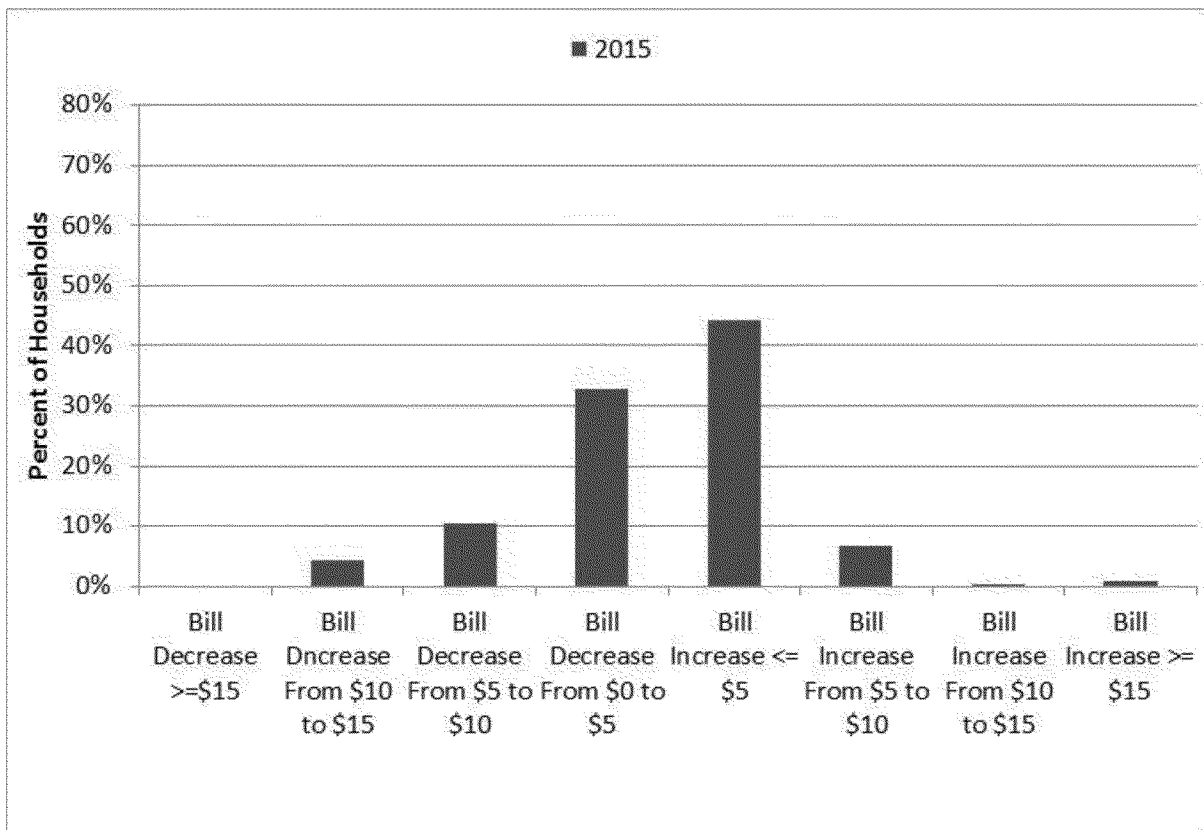
(a) Approximately 45,000 non-NEM customers.

**FIGURE 2-10  
 PACIFIC GAS AND ELECTRIC COMPANY  
 SCHEDULE EL-6 – 2015 AVERAGE  
 MONTHLY BILL IMPACTS FROM PG&E'S RATE PROPOSAL(a)**



(a) Less than 200 non-NEM customers.

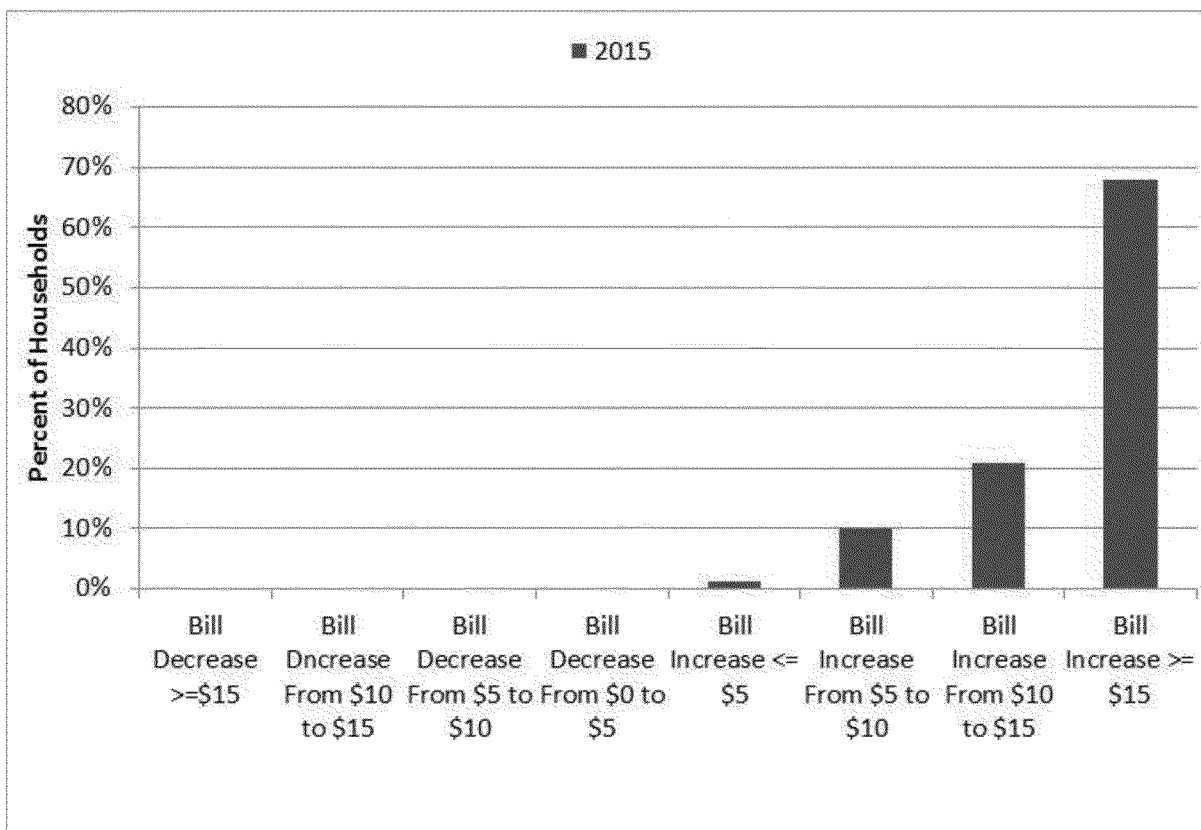
**FIGURE 2-11  
 PACIFIC GAS AND ELECTRIC COMPANY  
 SCHEDULE EL-7 – 2015 AVERAGE  
 MONTHLY BILL IMPACTS FROM PG&E'S RATE PROPOSAL(a)**



(a) Approximately 1,300 non-NEM customers.



**FIGURE 2-12  
PACIFIC GAS AND ELECTRIC COMPANY  
SCHEDULE EL-8 – 2015 AVERAGE  
MONTHLY BILL IMPACTS FROM PG&E'S RATE PROPOSAL(a)**



(a) Approximately 1,300 non-NEM customers.

1        **5. Bill Impacts for 2016**

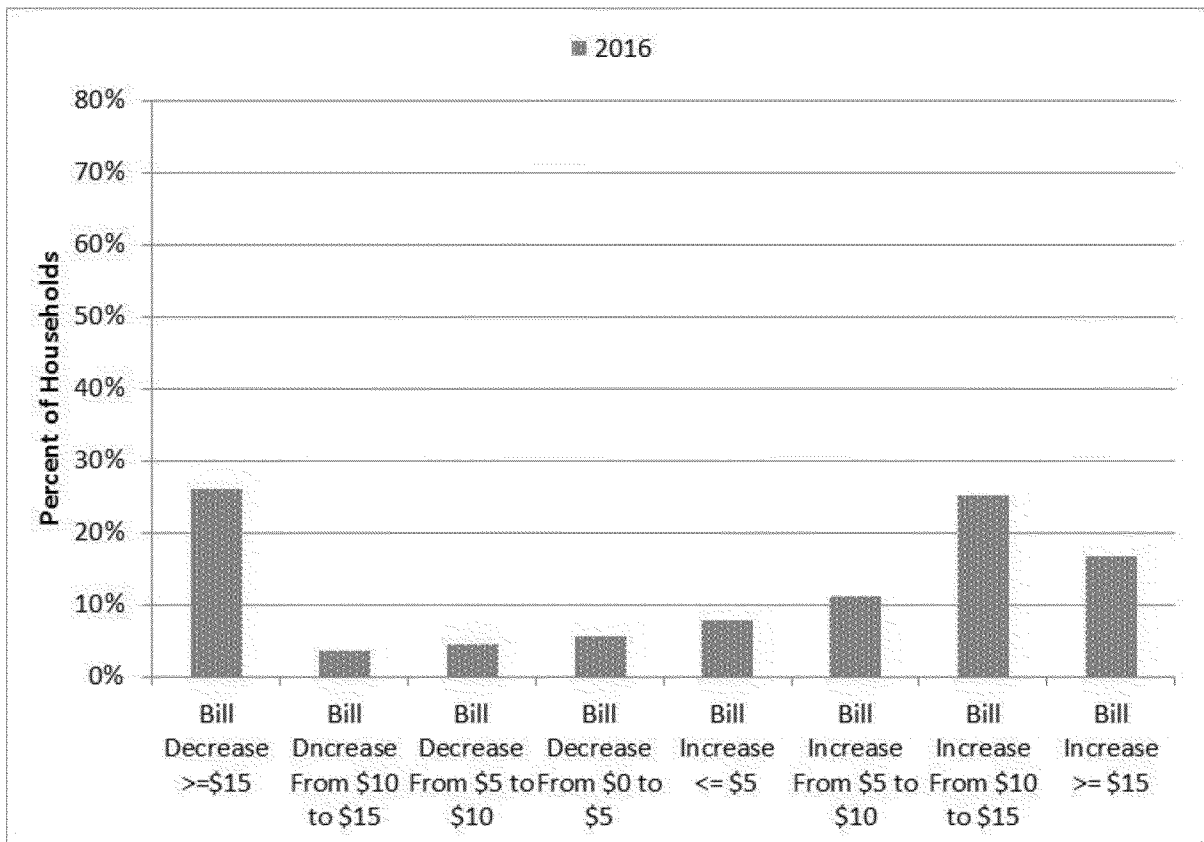
2                Figures 2-13 through 2-16 summarize the bill impacts for 2016 when  
3 optional tiered rate customers are moved to either Schedules E-TOU or  
4 E-1/EL-1. Detailed bill comparison tables are provided in Appendices A-3  
5 and A-4. No bill impacts are shown for 2017 and 2018 since optional tiered  
6 rate schedules will no longer exist under PG&E's proposal.<sup>60</sup>

7                Nearly 40 percent of Schedule E-6 customers and one-quarter of  
8 Schedule EL-6 customers would see lower bills on E-TOU in 2016. The  
9 remainder would see higher bills. However, it is possible that some of these

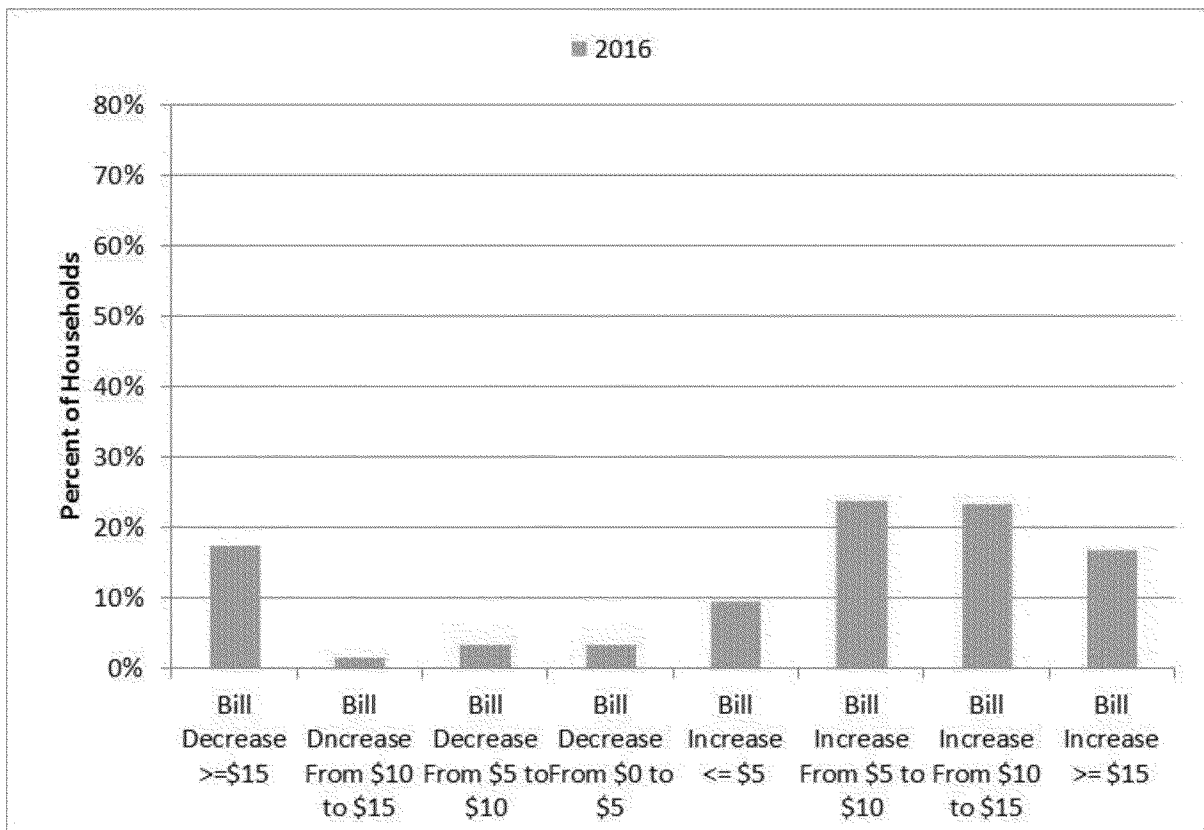
<sup>60</sup> Bill impacts for Schedules E-7 and EL-7 are not included because their TOU periods do not match the proposed TOU periods for E-TOU. PG&E is in the process of developing E-7 to E-TOU bill impacts and will make those bill impacts available shortly.

1 customers would see even lower bills, or bills with smaller increases, on  
 2 Schedules E-1 or EL-1. In contrast, nearly 90 percent of Schedule E-8  
 3 customers and over 40 percent of Schedule EL-8 customers would see  
 4 lower bills on E-1/EL-1. It is possible that some of these customers would  
 5 see even lower bills, or bills with smaller increases, on Schedule E-TOU.

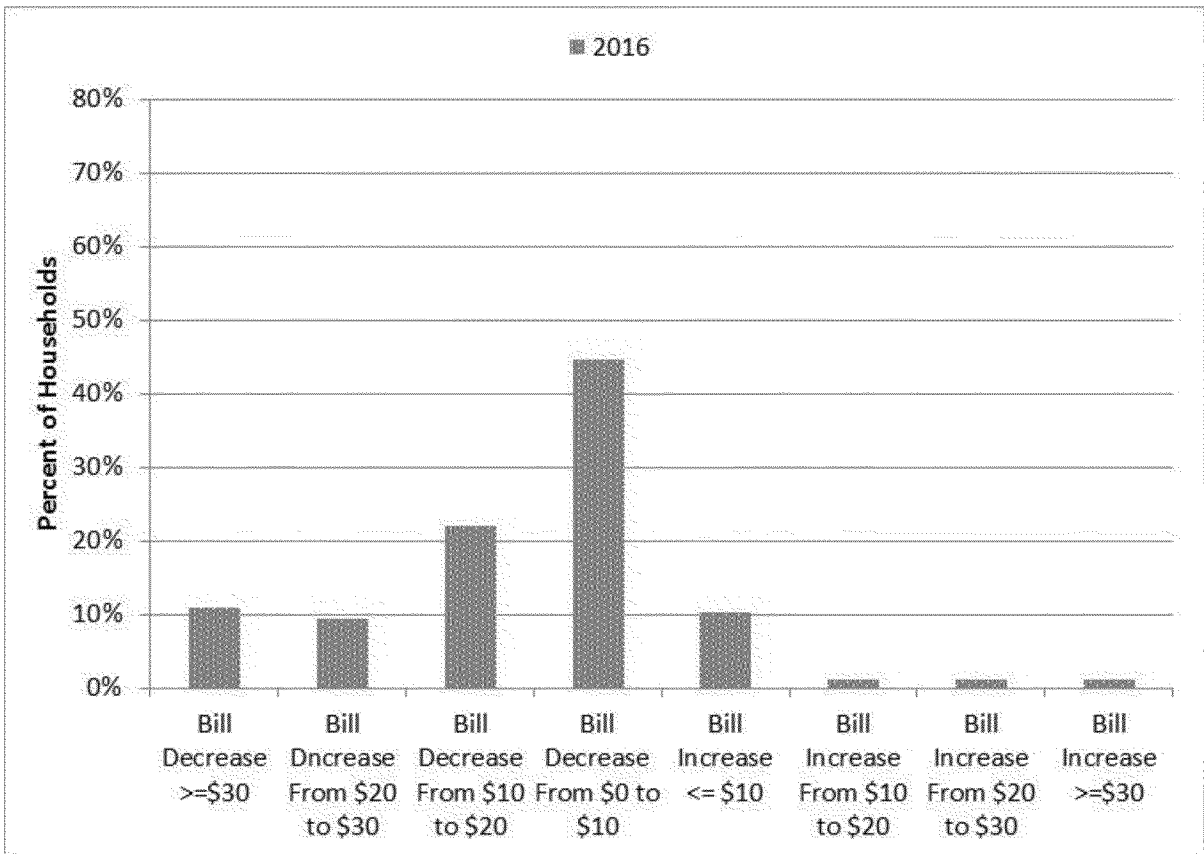
**FIGURE 2-13**  
**PACIFIC GAS AND ELECTRIC COMPANY**  
**SCHEDULE E-6 TO SCHEDULE E-TOU – 2016 AVERAGE**  
**MONTHLY BILL IMPACTS FROM PG&E'S RATE PROPOSAL**



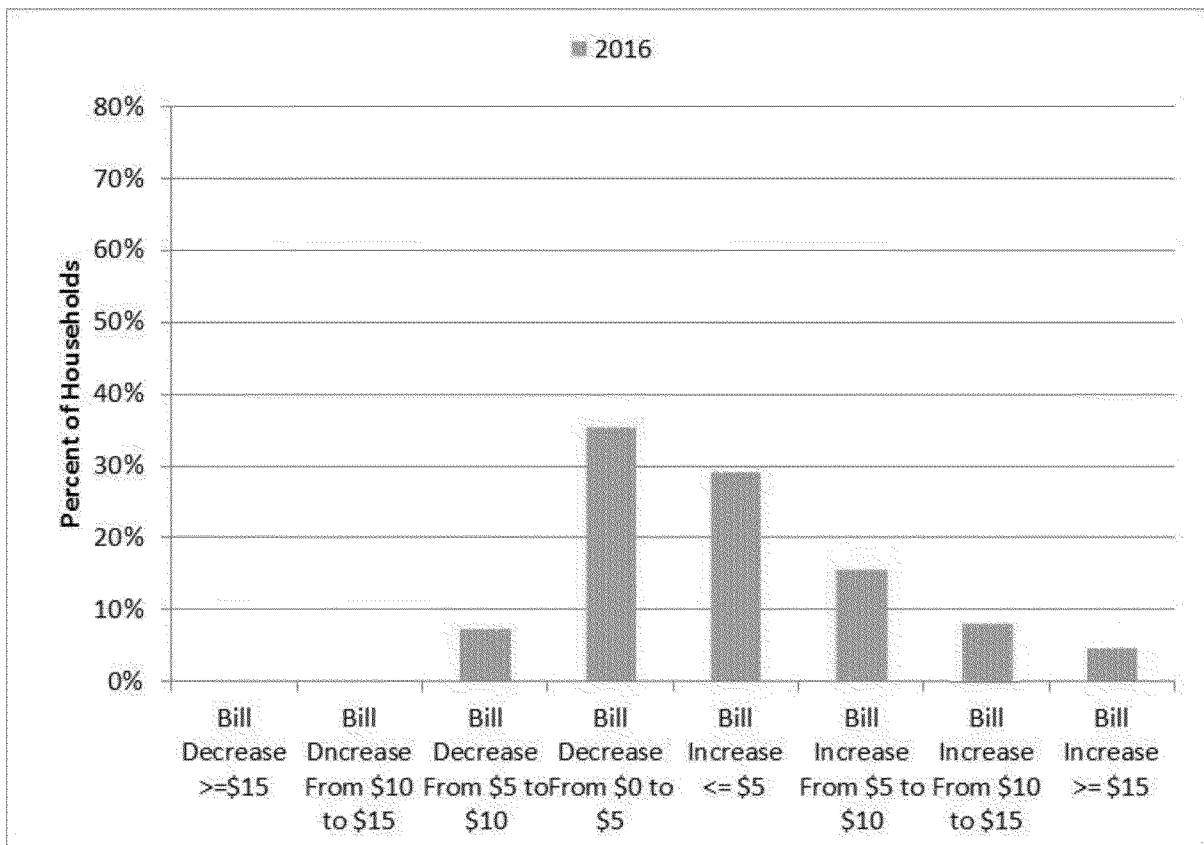
**FIGURE 2-14  
 PACIFIC GAS AND ELECTRIC COMPANY  
 SCHEDULE EL-6 TO SCHEDULE E-TOU CARE – 2016 AVERAGE  
 MONTHLY BILL IMPACTS FROM PG&E'S RATE PROPOSAL**



**FIGURE 2-15  
 PACIFIC GAS AND ELECTRIC COMPANY  
 SCHEDULE E-8 TO SCHEDULE E-1 – 2016 AVERAGE  
 MONTHLY BILL IMPACTS FROM PG&E'S RATE PROPOSAL**



**FIGURE 2-16  
PACIFIC GAS AND ELECTRIC COMPANY  
SCHEDULE EL-8 TO SCHEDULE EL-1 – 2016 AVERAGE  
MONTHLY BILL IMPACTS FROM PG&E'S RATE PROPOSAL**



**1 G. Non-Tiered TOU Rate Design**

**2 1. Rate Proposal**

3 PG&E proposes to introduce a new voluntary, opt-in TOU rate with no  
 4 tiers and a \$5.00 monthly service fee, beginning in 2015. This new  
 5 non-tiered TOU rate—Schedule E-TOU<sup>61</sup>—will also be available to CARE  
 6 customers at a 35 percent discount on the energy rates and a \$2.50 monthly  
 7 service fee. In addition, PG&E proposes to phase out, and by  
 8 2016 eliminate, its existing tiered TOU and seasonal rate options<sup>62</sup> in favor  
 9 of the new, more cost-based, non-tiered Schedule TOU. PG&E is proposing  
 10 a non-tiered TOU rate schedule, as opposed to a tiered TOU rate schedule,

<sup>61</sup> “E-TOU” is the interim name for this non-tiered TOU rate. PG&E intends to rename this schedule upon completion of customer research around meaningful rate plan names.

<sup>62</sup> The tiered TOU rate options include Schedules E-6, E-7, EL-6 and EL-7.

such as E-6, because a non-tiered TOU option provides more accurate price signals, better incents load shifting and is easier for customers to understand.

PG&E's proposed non-tiered TOU rates for Schedule E-TOU, shown below in Table 2-10, use the same marginal cost relationships as currently exists for Schedule E-6. In both cases, the price differential between each TOU period is equal to the difference in the marginal costs per kWh for each respective time period, and therefore is cost based. To further simplify this new rate option, PG&E is proposing only two TOU periods: peak and off-peak. E-6 currently has an additional summer part-peak period. The price differential between the E-TOU summer peak and summer off-peak rates would be the difference between the E-6 summer peak marginal cost per kWh and the weighted average of the E-6 summer part-peak and summer off-peak marginal costs per kWh.

**TABLE 2-10  
PACIFIC GAS AND ELECTRIC COMPANY  
PROPOSED 2015 NON-TIERED TOU RATES BY TOU PERIOD (\$/KWH)**

Line No.		Peak	Off-Peak	Monthly Service Fee
1	<u>Non-CARE</u>			
2	Summer	\$0.319	\$0.182	\$5.00
3	Winter	\$0.183	\$0.169	\$5.00
4	<u>CARE</u>			
5	Summer	\$0.207	\$0.118	\$2.50
6	Winter	\$0.119	\$0.110	\$2.50
7	<u>Time Periods</u>			
8	Summer	1 p.m.-7 p.m., Monday-Friday, Except Holidays	All Other Hours	
9	Winter	5 p.m.-8 p.m., Monday-Friday, Except Holidays	All Other Hours	

Currently, residential customers are given multiple sets of prices (in the form of tiers) for the same TOU period. All customers are charged the lowest price level at the beginning of each month, but this price can increase throughout the course of the month for many customers based on their total usage, and without regard to when during the day or night they use electricity, only to reset to the lowest level on the first day of the following month. As a result, some customers can pay a significantly lower rate for

1 summer peak usage than other customers pay for summer off-peak usage.  
 2 This is economically illogical and inefficient.

3 For example, a customer could desire, on the 26th of the month, to use  
 4 outdoor lighting to enhance night time security between the hours of  
 5 2:00 a.m. and 4:00 a.m. However, because it is near the end of the month,  
 6 this customer is required to pay a high tiered rate that bears absolutely no  
 7 relation to the actual cost. Table 2-11 demonstrates the current problem  
 8 embedded in the E-6 rate design. This problem also exists for  
 9 Schedules EL-6, E-7 and EL-7.

**TABLE 2-11  
 PACIFIC GAS AND ELECTRIC COMPANY  
 SCHEDULE E-6 SUMMER TOU RATES (\$/KWH) AS OF JANUARY 1, 2014**

Line No.	Energy Rates	Peak	Part-Peak	Off-Peak
1	<u>Summer Rates</u>			
2	Baseline Usage	0.287	0.175	0.101
2	101% – 130% of Baseline	0.305	0.193	0.119
3	131% – 200% of Baseline	0.478	0.366	0.291
4	Over 200% of Baseline	0.518	0.406	0.331
5	<u>Winter Rates</u>			
6	Baseline Usage	NA	0.121	0.105
7	101% – 130% of Baseline	NA	0.139	0.123
8	131% – 200% of Baseline	NA	0.312	0.296
9	Over 200% of Baseline	NA	0.352	0.336

10 As shown in Table 2-11, Schedule E-6 Tier 3 and Tier 4 customers pay  
 11 more for electricity at 3:00 a.m. than Tier 1 customers pay at 3:00 p.m.  
 12 during the summer. They even pay more in the winter, when loads are  
 13 significantly below those in both the summer peak and summer part-peak  
 14 periods, than a Tier 1 customer pays for peak power in the summer. In  
 15 addition, Schedule E-6 customers are confronted with a confusing array of  
 16 prices depending on which tier they are in, something that can only be  
 17 ascertained by either checking their usage online in My Energy, or by  
 18 receiving an email or text from PG&E informing them that they have entered,  
 19 or will soon enter, a higher tier.

20 In contrast, customers would be very clear about the price they would  
 21 pay under a non-tiered TOU rate design. They know whether today is a

1 weekday or weekend. They know whether today is the summer or winter.  
2 As for the time of day, they only need to look at their watch or cell phone.  
3 Only one price applies at a time, instead of the current four tiered prices.  
4 It is also very clear to customers from the simplified rates that the summer  
5 peak price is not only the most expensive price, it is nearly double that of the  
6 winter off-peak price. The message of a non-tiered TOU rate is simple:  
7 reduce summer peak usage.

## 8 **2. TOU Periods**

9 To more easily communicate the need to reduce summer peak usage,  
10 PG&E has proposed that there be just two TOU periods in each season, a  
11 peak period and an off-peak period. Consequently, PG&E proposes  
12 combining the summer part-peak and off-peak periods into a single summer  
13 off-peak period that would reflect the weighted average of the underlying  
14 marginal costs for these TOU periods. Because PG&E has yet to study the  
15 most appropriate future TOU periods for its new E-TOU rate, PG&E  
16 proposes, as an interim measure, to use the same TOU periods as  
17 Schedule E-6, except for the summer part-peak and off-peak periods which  
18 would be combined into a single period. The proposed TOU periods are  
19 shown above in Table 2-10.

20 By eliminating tiers and their inclining block structure, PG&E's proposed  
21 new Schedule E-TOU rate is more cost-based than PG&E's existing tiered  
22 TOU rates. However, because Schedule E-1 will still have high top-tier  
23 rates in 2015, there is a potential for revenue loss due to migration of  
24 upper-tier consuming customers to the non-tiered Schedule E-TOU. To the  
25 extent such shortfalls occur, they will be recovered within the residential  
26 class over an appropriate period of time and enrollment in Schedule E-TOU  
27 will be temporarily capped as appropriate.

### 28 **a. Future TOU Period Design**

29 In the future, PG&E would like to consider setting shorter peak  
30 periods in both the summer and winter, which could result in higher load  
31 impacts and better customer engagement. PG&E plans to study TOU  
32 periods for its entire service territory across all customer classes during  
33 2014 and will submit a proposal in an upcoming Rate Design Window



1 Proceeding to request CPUC approval for new TOU periods that will be  
2 appropriate for at least five years. PG&E believes that care should be  
3 taken before recommending different TOU periods, given the direction in  
4 AB 327 to adopt periods that would be relevant for at least a five-year  
5 period.<sup>63</sup> PG&E agrees that any new TOU periods that are adopted by  
6 the Commission should be valid for a long period due to the amount of  
7 education that would be needed to ensure customers are aware of the  
8 new TOU periods.

### 9 **3. Building TOU Participation Through Customer Choice**

10 PG&E agrees with the CPUC's rate design principle number six,<sup>64</sup> that  
11 rates should provide customers with a choice. PG&E believes that  
12 awareness of rate options is required for customers to truly make a choice.  
13 By offering two simple options, such as a two-tiered non-TOU and  
14 non-tiered TOU rate plans, PG&E customers who are aware of their options  
15 can make an affirmative choice to enroll in the rate plan that works best for  
16 them in terms of their desire to save money on their bill and their  
17 preferences for load shifting and load reduction.

18 Offering residential electric customers a simple, optional, two-period  
19 TOU rate plan starting in 2015 will continue to build a population of engaged  
20 customers, and PG&E views customer engagement as a key driver in  
21 achieving the important policy objective of peak load shifting.<sup>65</sup> To engage  
22 customers, residential rate design must balance simplicity, efficiency, and  
23 stability. Ease of understanding is crucial to the success of moving more  
24 customers to TOU rates. Currently, over 100,000 residential customers are  
25 on tiered three-period TOU rates and the only open residential TOU rate,

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<sup>63</sup> As the ED Report notes on p. 62, were the CPUC to adopt default TOU, it shall strive for TOU rate schedules that utilize time periods that are appropriate for at least the following five years. (Pub. Util. Code §745(c)(3). PG&E believes this stability is equally important for opt-in or default programs.

<sup>64</sup> Attachment A, Principle 6 of the ALJ Ruling dated March 19, 2013, in this proceeding states: "Rates should be stable and understandable and provide customer choice."

<sup>65</sup> PG&E has completed a benchmarking study that suggests that customers who are able to choose their rate plan, as opposed to being defaulted onto a rate plan, tend to be more engaged and satisfied and, therefore, are more likely to provide peak load reduction and other more efficient uses of energy. More details on this study are found later in this section.

1 E-6, is adding about 800 to 900 participants per month.<sup>66</sup> PG&E's intent is  
2 that significantly more residential customers opt-in to TOU rate plans over  
3 the next several years.<sup>67</sup>

4 PG&E's proposed optional non-tiered TOU rate plan is designed with  
5 the objectives of achieving meaningful load impacts and increasing  
6 customer engagement beginning in 2015.<sup>68</sup>

7 **4. An Initial Evaluation of Large-Scale Residential TOU Programs**  
8 **Indicates That a Pilot Program for PG&E's Customers Is Warranted**

9 AB 327 opens the possibility for default of all residential customers to  
10 TOU rates as early as 2018. However, PG&E's "customer choice" approach  
11 is better supported by experiences around the world with default and opt-in  
12 residential TOU programs. From November 2013 through February 2014,  
13 PG&E engaged eMeter Strategic Consulting to conduct a benchmarking  
14 effort with the majority of jurisdictions around the world that have or have  
15 had substantial numbers of residential customers on TOU rates.

16 The experiences of the large-scale roll-outs of opt-in and default  
17 residential TOU programs reviewed in that benchmarking study provide  
18 important insights on the best approaches to transitioning residential

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<sup>66</sup> Customers are discovering the availability of TOU primarily through solar providers and online rate analysis tools.

<sup>67</sup> Per the February 13, 2014 ACR, on March 21, 2014, PG&E will describe its plan to attract customers to opt-in TOU prior to 2018, including customer communication, outreach and education.

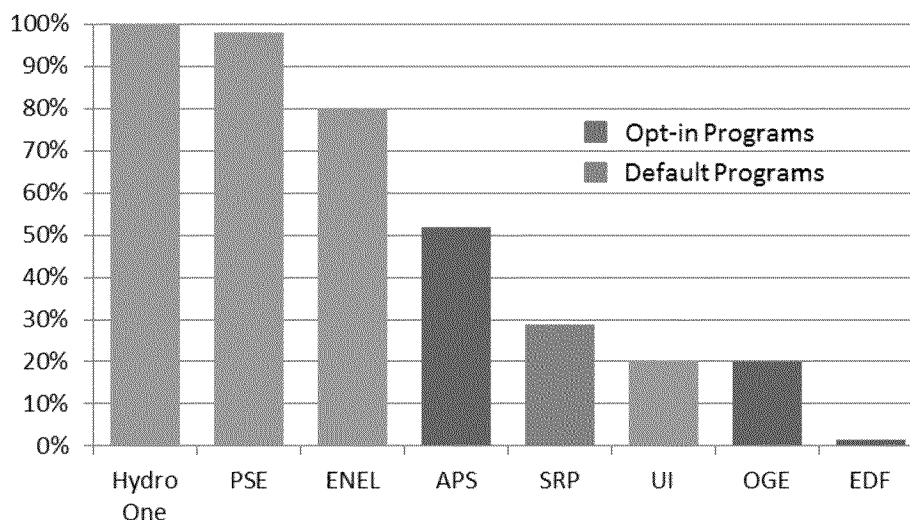
<sup>68</sup> Hiner & Partners was retained by PG&E, Southern California Edison Company and SDG&E to conduct a survey to improve understanding of customer perceptions of current and possible future rate structures and potential bill impacts. An online survey of approximately 5,300 electric customers was fielded in February and March 2013, through a market research panel company employing quotas to ensure the sample was representative of the IOU customer population. The survey concluded that customers prefer simpler rate plan structures: flat, two-tier and two-period TOU rate plans were preferred relative to three-tier and three-period plans. ("RROIR Customer Survey Findings," Hiner & Partners, April 16, 2013, p. 18.)

1 customers to TOU rates.<sup>69</sup> Examination of the results of those programs  
2 shows that maximizing participation through default may not necessarily  
3 achieve load-shifting objectives better than an opt-in approach over time.  
4 Figure 2-17 below shows participation rates for the majority of the large  
5 scale residential TOU programs around the world. As would be expected,  
6 default programs have the highest participation (as customers are moved  
7 onto these rates automatically), while opt-in programs have significantly less  
8 because customers must make a conscious choice to participate by  
9 enrolling in the TOU plan.

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<sup>69</sup> **Arizona Public Service (APS):** Meissner, Chuck, Arizona Public Service. “Residential Time-of-Use Pricing,” presentation from APSC Webinar, January 2014. **Enel:** Maggiore, Simone, Ricera Sistema Energenico. “Impact of a mandatory time-of-use tariff on residential customers in Italy,” presentation from Espoo, November 2012; **Enel:** The Regulatory Authority for Electricity and Gas (Italy). “2013 Annual Report,” July 31, 2013 [http://www.ceer.eu/portal/page/portal/EER\\_HOME/EER\\_PUBLICATIONS/NATIONAL\\_REPORTS/National%20Reporting%202013/NR\\_En/C13\\_NR\\_Italy-EN.pdf](http://www.ceer.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/NATIONAL_REPORTS/National%20Reporting%202013/NR_En/C13_NR_Italy-EN.pdf); **Hydro One:** Navigant Consulting. “Time of Use Rates in Ontario, Prepared for the Ontario Energy Board,” December 20, 2013 [http://www.ontarioenergyboard.ca/OEB/Documents/EB-2004-0205/Navigant\\_report\\_TOU\\_Rates\\_in\\_Ontario\\_Part\\_1\\_201312.pdf](http://www.ontarioenergyboard.ca/OEB/Documents/EB-2004-0205/Navigant_report_TOU_Rates_in_Ontario_Part_1_201312.pdf); **Oklahoma Gas & Electric (OGE):** Enernoc. “OG&E SmartHours Residential Pricing Results,” presentation from AEIC Load Research Conference, July 9, 2013; **Puget Sound Energy (PSE):** DuBois, Dennis. “Time-of-Use Electricity Billing: How Puget Sound Energy Reduced Peak Power Demands (Case Study),” Energy Priorities, February 14, 2006 [http://www.energypriorities.com/entries/2006/02/pse\\_tou\\_amr\\_case.php](http://www.energypriorities.com/entries/2006/02/pse_tou_amr_case.php); **Salt River Project (SRP):** Schwartz, Judith. “The Persistence of Consumer Choice: SRP,” Case Study for the Association of Demand Response and Smart Grid, June 2012 [http://www.demandresponsesmartgrid.org/Resources/Documents/Case%20Studies/SRP\\_CaseStudy\\_FINAL\\_061812.pdf](http://www.demandresponsesmartgrid.org/Resources/Documents/Case%20Studies/SRP_CaseStudy_FINAL_061812.pdf).

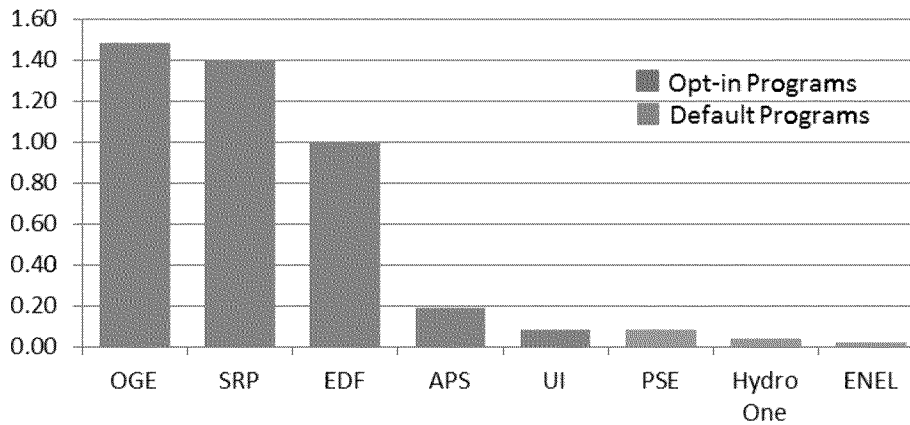
**FIGURE 2-17  
PACIFIC GAS AND ELECTRIC COMPANY  
PROGRAM PARTICIPATION(a)**



- (a) Key to the 8 utility programs studied [Note: All participation figures are approximate]: **(1) Hydro One**, located in Ontario, Canada, adopted mandatory TOU in 2010 and has 1.1 million of its customers on the rate (90 percent), after, under retail choice, 15 percent of its customers opted to take service from another provider; **(2) “PSE” is Puget Sound Energy**, in Washington State, which adopted a mandatory TOU pilot in 2001 that was terminated in 2002 due to customer backlash; **(3) Enel in Italy** adopted a mandatory TOU rate with less than a 1.03:1 on to off peak price ratio—although there are 25 million customers on the rate, which went into effect in 2011, there is very low customer awareness that they are on the program and thus very low load shifting; **(4) “APS” is Arizona Power Service** – serves a small part of Phoenix and other areas of Arizona—which introduced its first opt-in TOU program in 1980 known as “Time Advantage Program,” and has since added two more options: “Combined Advantage,” and “Time Advantage Super Peak (3 hours)” with a total of 522,000 participants, meaning 52.5 percent of APS’ residential customers are on TOU; **(5) “SRP” is Salt River Project**, in Phoenix, Arizona which in 2005 introduced an opt-in TOU rate called “EZ-3” and has 200,000 customers on a legacy E23 opt-in program established in 1980 for 266,000 total participants or 30 percent of all residential customers on TOU; **(6) “UI” is the United Illuminating Company**, in Connecticut which, starting in 2007-2008 began to roll out mandatory TOU first defaulting customers over 4,000 kWh/month, then over 3,000, and then over 2,000, with 50 percent of customers switching under retail choice. Due to customer backlash, the commission froze the mandatory TOU program rollout, limiting it to customers over 2,000 kWh/month such that 59,000 (or about 10 percent) of UI’s residential customers participate in TOU; **(7) “OGE” is Oklahoma Gas and Electric** in Oklahoma, which introduced a “SmartHours” opt-in TOU plus Variable Peak Pricing program in 2010, an opt-in program targeted at high use customers, and which includes automated in home technology, and has so far attracted 84,000 participants, or 15 percent participation, above and beyond OGE’s legacy TOU rate which has ~36,000 participants; and **(8) “EDF” is Electricité de France**, which introduced its opt-in TOU rate called “Tarif Bleu – Option Tempo” in 1993 and has 400,000 participants or 1 percent of their customers (in addition, they have another opt-in TOU plan with 2 periods from 6 a.m. – 10 p.m.). Also SMUD began a default TOU pilot in 2011-2012 which included default TOU involving 12,000 customers, with free IHD offered to customers, however the pilot is still underway and default TOU for 2018 has yet to be approved by the SMUD Board.

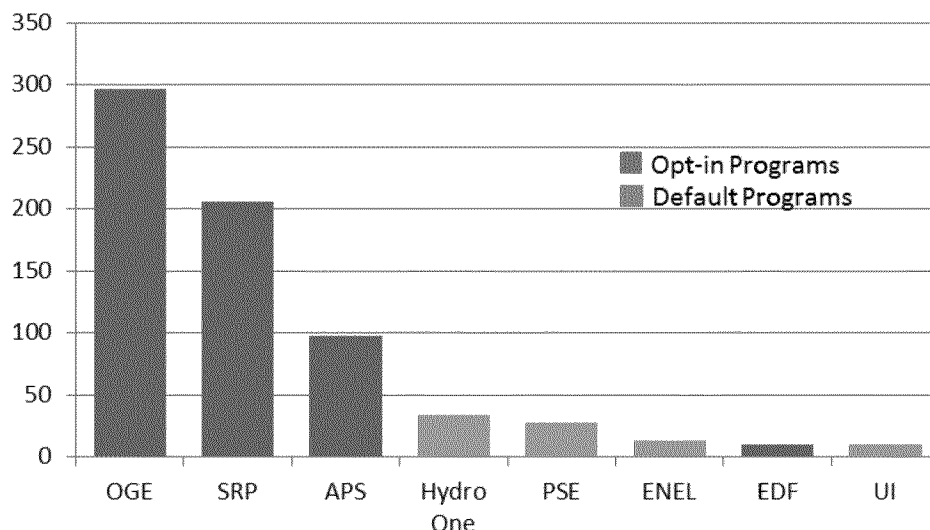
1           Figure 2-18 below shows kW peak reduction per participant for each  
2 program. It is notable that per participant peak reductions are quite  
3 significant for opt-in customers relative to results from the default programs.

**FIGURE 2-18**  
**PACIFIC GAS AND ELECTRIC COMPANY**  
**KW PEAK REDUCTION PER PARTICIPANT**



4           Although opt-in programs achieve much greater per participant load  
5 impacts, only a portion of all customers are participating and therefore an  
6 adjustment is necessary to arrive at the program’s “aggregate” impact on the  
7 system peak loads. Figure 2-19 below adjusts the per participant load  
8 impacts of each program to reflect the impact on the overall system peak for  
9 each program. The three most relevant opt-in programs (at Oklahoma Gas  
10 and Electric, Salt River Project and Arizona Public Service) still show  
11 significantly more overall system impacts than the three most relevant  
12 default programs (at Enel, Hydro One and Puget Sound Energy.) The  
13 aggregate system impacts for the other two programs (United Illuminating’s  
14 default program and *Electricite de France*’s opt-in program) are not as  
15 significant because both programs have far lower enrollment. Neither  
16 company has actively marketed its program for several years, and both  
17 programs were only ever marketed to small subsets of their entire residential  
18 populations.

**FIGURE 2-19  
PACIFIC GAS AND ELECTRIC COMPANY  
MW REDUCED PER MILLION CUSTOMERS**



1 Also notable is that among the few jurisdictions that have attempted  
 2 default/mandatory residential TOU programs, several experienced strong  
 3 consumer backlash which led to withdrawal of the program entirely or  
 4 significant scope reductions.<sup>70</sup>

5 The ED Report referenced preliminary results from SMUD’s ongoing  
 6 pilot that is evaluating various approaches to transitioning customers to  
 7 time-varying rates. The SMUD pilot and other residential time-varying  
 8 pricing pilots can provide valuable insights to the best approach for  
 9 transitioning customers to time-varying rates. However, serious caution  
 10 must be taken when attempting to apply insights from these pilots to areas  
 11 and residential populations with characteristics that differ significantly from  
 12 that of those pilots—such as differences in service territories including  
 13 climate zones, demographics, load profiles and regulatory constructs.

14 Compared to PG&E, SMUD serves a relatively homogenous group of  
 15 residential customers. For instance, PG&E’s 4.5 million residential  
 16 customers are spread out over a service territory spanning 70,000 square

<sup>70</sup> **SP AusNet**, an energy utility in Victoria, Australia, switched from mandatory TOU to opt-in TOU after a consumer backlash. The PUC cited consumer backlash as a reason for discontinuing the rollout of mandatory TOU to United Illuminating’s customer below the size threshold previously adopted.

1 mile, whereas SMUD’s residential base of less than 600,000 are contained  
2 to one encompassing 900 square miles.<sup>71</sup> The dramatic discrepancies  
3 between the two service territories and residential groups means that  
4 PG&E’s residential customers experience significantly different  
5 temperatures and climates, have greater variation in their seasonal  
6 electricity usage and their overall load shapes and have more demographic  
7 and socioeconomic diversity. The critical differences between PG&E and  
8 SMUD’s service territory and residential customers clearly suggest that it  
9 would not be prudent to apply the results from SMUD’s pilot to PG&E.

10 There are other aspects of SMUD’s pilot that require careful  
11 consideration before being applied to other jurisdictions. First, SMUD’s pilot  
12 is not yet complete, so any conclusions about its finding to date remain  
13 preliminary. Additionally, the relative cost of defaulting customer as  
14 compared to an opt-in approach is not clear, especially when extensive  
15 outreach and an in-home device (IHD) is provided to default customers, as  
16 was the case with SMUD’s pilot. Finally, a longer-term view is necessary to  
17 be able to include a reasonable group of opt-in customers and review their  
18 experience. A one year of pilot results may not be sufficient, and other  
19 experience, such as that completed by Oklahoma Gas & Electric, indicates  
20 that successful opt-in approaches may require two to three years to build a  
21 steady-state level of participation.

22 In summary, PG&E recommends a robust pilot program specific to  
23 PG&E’s service territory and its customers, to evaluate the merits of various  
24 approaches and provide the quantitative evidence to support a plan to move  
25 forward on transitioning residential customers to time-varying rates in a way  
26 that will achieve the CPUC’s objectives around load shifting and reduction.  
27 While this pilot is being conducted, the introduction of a simple, non-tiered  
28 opt-in TOU rate will facilitate enrolling those customers who would be most  
29 likely to engage with a TOU rate option and deliver the resulting load  
30 reduction/shifting impacts. PG&E plans to utilize the information gained

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71 SMUD’s service territory size and population count are referenced from the utility’s website, <https://www.smud.org/en/about-smud/company-information/company-profile.htm>.

1 from its pilot to support a proper evaluation of the relative effectiveness of an  
2 opt-in vs. default TOU approach.

### 3 **5. TOU Pilot Proposal**

4 As described in the previous section, current, recent, large-scale default  
5 programs have not demonstrated the load benefits superior to those that  
6 can be achieved through an opt-in TOU approach. Therefore, PG&E urges  
7 the CPUC to delay a decision on default residential TOU until more  
8 information can be gathered about the effectiveness of opt-in and default  
9 approaches. The pilot's objective would be to provide information necessary  
10 to evaluate whether sustainable load shifting/reductions can only be  
11 achieved through a default approach, or whether optional TOU could  
12 provide the same results at a reasonable cost and be acceptable to  
13 customers.

14 Insights from PG&E's qualitative benchmarking effort of large scale  
15 residential TOU programs, preliminary results from the ongoing SMUD pilot  
16 and results from other residential time-varying rate pilots have helped to  
17 define the key outstanding questions that need to be addressed before  
18 adoption of a default rather than opt-in approach to transitioning residential  
19 customers to a TOU rate plan for California IOUs, including:

- 20 • What are the relative costs of marketing outreach of each approach  
21 relative to the benefits in peak reduction, customer satisfaction, etc.?
- 22 • What is the potential for load impacts over time of each approach?
- 23 • What is the best TOU rate design for engaging customers (number of  
24 periods, length of peak period, price ratio)?
- 25 • What is the range and cost of enabling technologies that would improve  
26 customer engagement when included in each approach?
- 27 • What is the impact on customer engagement of each approach?
- 28 • How applicable are the successful SMUD default TOU and other pilot  
29 results to PG&E's very large, unique and heterogeneous service  
30 territory?

31 PG&E proposes launching a pilot in 2015, in order to gather quantitative  
32 data to address these outstanding issues. A well-designed and executed  
33 pilot would reduce the uncertainty associated with how PG&E's customers  
34 would respond to being defaulted to TOU rates and provide insights



1 regarding how to best optimize customer engagement, participation and  
2 load reduction. The pilot would test whether a simple, un-tiered optional  
3 TOU rate with a sufficiently steep peak/off-peak price ratio can achieve the  
4 same or better load impacts as a default approach at the same or less cost  
5 while better meeting other rate reform principles. In order for a default  
6 approach to be preferable to an opt-in approach, it will be important to  
7 quantify and compare all of the benefits and costs of each approach in a  
8 consistent manner that takes into consideration the unique aspects of  
9 PG&E's customers and service territory.

10 PG&E proposes that the pilot should include approximately three rate  
11 design structures, be conducted in multiple climate zones, estimate load  
12 impacts over two years, evaluate the impact of enabling technology, and  
13 include enough customers to provide statistically significant results by  
14 treatment type. PG&E will include a cost estimate for the pilot program in its  
15 March 21, 2014 filing as part of this Proceeding.

16 **a. Outline of the Pilot Design**

- 17 • Timeframe: 24 months
- 18 • Variables could include:
  - 19 – Opt-in vs. default approach
  - 20 – Rate Structure Simplicity
  - 21 – Number of peak hours
  - 22 – Number of peak periods
  - 23 – Summer vs. Winter pricing differentials
  - 24 – Presenting baseline as two tiers versus a “baseline credit”
  - 25 – Pricing steepness
  - 26 – Ratio of peak to off-peak prices
- 27 • Enabling Technology
  - 28 – Relative effectiveness of offerings such as IHD, Smart Phone
  - 29 App, Simple High/Low Price Magnet
  - 30 – Notification approaches such as texting, email, phone
- 31 • Outreach Strategy (scalable to service territory)
  - 32 – Minimal (single mailer with reference to website), Low-Cost,
  - 33 High-Touch
  - 34 – Media such as radio, direct mail, email campaigns

- 1                   – Tactics such as number of touches, personalized usage/bill
- 2                   updates
- 3                   • Sample appropriately sized to address:
- 4                   – CARE/Non-CARE
- 5                   – Climate Zones
- 6                   – Small/Medium/Large energy users

7                   PG&E expects to design and launch the pilot in 2015 with final results  
8                   available no later than 2017.

## 9   **H. Impacts of Proposals on Conservation**

10                  The rate design objectives enumerated by the Commission in its March 19,  
11                  2013 Ruling include providing incentives for customers to conserve.<sup>72</sup> PG&E  
12                  agrees that having rate structures that provide signals for conservation are both  
13                  appropriate and important rate design objectives. However, given how “broken”  
14                  residential rates are today—with very steep tiers that are completely divorced  
15                  from cost of service—the Commission should give much greater weight to the  
16                  core rate design objectives that supports providing more equitable and simpler  
17                  rates, and more accurate, cost-based price signals. Nevertheless, PG&E’s  
18                  analysis shows that the effects of its proposed changes to rate structures and  
19                  levels will have minimal effects on overall conservation in the residential class.

20                  Proponents of steeply inclining tiered rates often tout their ability, compared  
21                  to flatter structures (or even to completely flat rates with a single volumetric  
22                  charge) to encourage conservation by providing very high price signals in the  
23                  upper tiers. In other words, proponents focus on the ability of the high upper-tier  
24                  rates to incent households consuming in those tiers to consume. But this  
25                  ignores the fact that setting higher than average cost upper-tier rates means  
26                  that, correspondingly, the lower tier rates are then set lower than average cost  
27                  (since otherwise revenue over-collection would occur). Thus, while upper-tier  
28                  consuming households have a greater incentive to conserve, lower-tier  
29                  consuming ones have a *lesser* incentive to do so—and it is in the lower tiers  
30                  where the vast majority of the consumption occurs (slightly more than two-thirds  
31                  for PG&E).

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<sup>72</sup> See Rate Design Principle 4 in ALJ Ruling Requesting Residential Rate Design Proposals, March 19, 2013, Appendix A.

1 It is an empirical question which of these two effects dominates the other,  
2 and thus as to whether inclining block rates actually reduce overall usage.  
3 Overall energy usage in the residential class can either increase or decrease  
4 depending upon the distribution of usage across different tiers, the degree to  
5 which the prices change, and the price elasticities of demand. PG&E has  
6 conducted a study to evaluate whether its end-state rates result in more or less  
7 overall energy consumption by residential customers than occurs under today's  
8 (January 1, 2014) rates. Using an Excel-based model that uses as inputs  
9 assumptions about the price elasticities of demand, PG&E has estimated how  
10 sales would change by tier given PG&E's proposal. Specifically, for both  
11 non-CARE and CARE, PG&E compared its illustrative 2018 rates by tier to  
12 January 1, 2014, rate levels, calculated the percentage changes in prices, and  
13 then applied price elasticities to estimate changes in sales by tier. By summing  
14 these changes over tiers, PG&E estimated the overall effect on usage from its  
15 proposals.

16 Initially, PG&E assumed the price elasticity of demand is -0.20 in all tiers.<sup>73</sup>  
17 Based on this assumption, PG&E estimated that moving to its proposed  
18 end-state rates in 2018 would reduce overall usage by about 3.5 percent. Since  
19 there is a degree of uncertainty about the price elasticity estimates, PG&E also  
20 looked at four alternatives to its initial assumption that the price elasticity is  
21 constant at -0.20 for all tiers. Table 2-12 shows the scenarios studied.  
22 Scenario 1 represents the base case of a constant price elasticity of -0.20 in  
23 every tier. Scenario 2 assumes this same -0.20 elasticity applies in Tier 1 and 2,  
24 but that the elasticity is twice as high, -0.40, in Tiers 3 and 4. Scenarios 3  
25 through 5 represent other combinations of price elasticities in each tier, all of  
26 which show higher elasticities in the higher tiers. The expected effect of  
27 modifying the constant elasticity assumption in Scenario 1 and, instead,  
28 assuming higher elasticities apply in the upper tiers is as follows. In the upper  
29 tiers where the flatter, two-tier design results in decreased prices, the higher  
30 assumed elasticities will result in larger estimated increases in upper-tier sales

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**73** The price elasticity of demand is defined as the percentage change in quantity (i.e., kWh sales) caused by a percentage change in price. Since a price increase will cause a decrease in sales (and a price decrease will cause an increase in sales), the price elasticity is a negative number.

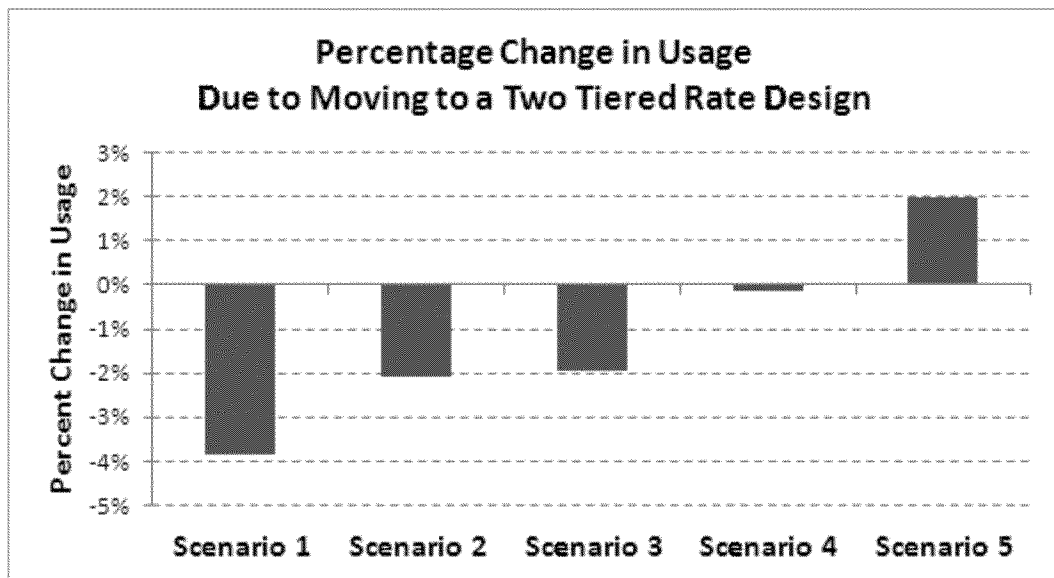
1 relative to the constant elasticity case. This will have the effect of increasing  
2 overall residential sales relative to Scenario 1.

**TABLE 2-12**  
**PACIFIC GAS AND ELECTRIC COMPANY**  
**PRICE ELASTICITY ASSUMPTIONS FOR ESTIMATING EFFECT OF**  
**PG&E'S RATE PROPOSAL ON OVERALL RESIDENTIAL USAGE**

<b>Elasticity Assumptions</b>				
<b>Scenario</b>	<b>Tier 1</b>	<b>Tier 2</b>	<b>Tier 3</b>	<b>Tier 4</b>
1	-0.2	-0.2	-0.2	-0.2
2	-0.2	-0.2	-0.4	-0.4
3	-0.13	-0.26	-0.26	-0.26
4	-0.1	-0.2	-0.3	-0.4
5	-0.01	-0.2	-0.3	-0.4

3 Figure 2-20 presents the results of the scenario analysis. As expected the  
4 changed elasticity assumptions act to increase overall usage relative to the  
5 constant elasticity assumption. However, even with these modified elasticity  
6 assumptions, the effect of a flatter, two-tiered rate structure is to reduce overall  
7 residential usage in three of the other scenarios (although for one of these  
8 scenarios the change is effectively zero). It is only when one assumes  
9 unrealistic, extremely steeply increasing price elasticities—where the Tier 2, 3  
10 and 4 elasticities are, respectively, 20, 30 and 40 times as large as the Tier 1  
11 elasticity—that the effect of PG&E's rate proposal would actually be  
12 “anti-conservation” and increase overall residential usage.

**FIGURE 2-20**  
**PACIFIC GAS AND ELECTRIC COMPANY**  
**ESTIMATED EFFECTS OF PG&E'S RATE PROPOSAL ON OVERALL RESIDENTIAL**  
**USAGE UNDER DIFFERENT PRICE ELASTICITY ASSUMPTIONS**



**I. Rate Changes Between Cases**

In this proceeding, PG&E anticipates the Commission will adopt a set of rules for setting rates during each of the next few years through the transition period ending December 31, 2018 as required by the February 13, 2014, ACR. These rate changes would be applied to January 1 rate changes in each of 2015, 2016, 2017 and 2018 (GRC Phase II decisions are not usually available until about May of the test year, at the earliest). However, in between those January 1 rate changes which would implement the rate design rules, there may be a few changes to rates that occur during the year for various reasons (e.g., implementing a FERC decision on transmission rates).

To handle such changes, the Commission typically adopts a set of guidelines in PG&E's GRC Phase II cases for how to perform rate changes between cases. One simple guideline that is currently being used for non-residential rate schedules is to increase or decrease all energy and demand rates by the same identical percentage required in order to collect an increased or decreased revenue requirement. However, here PG&E proposes slightly different rules to ensure continued progress towards narrowing tier differentials and reducing the CARE discount percentage toward the legislatively mandated range over time.

1 Specifically, PG&E proposes the following two guidelines, one applicable to  
2 increases in the revenue requirement and the other applicable to decreases:<sup>74</sup>

- 3 • In the case of revenue requirement increases, all rates (non-CARE and  
4 CARE, in every tier) would increase on an equal cents per kWh basis in  
5 order to collect the incremental revenue amount.
- 6 • In the case of revenue requirement decreases, the non-CARE Tier 1 and 2  
7 rates, as well as all CARE rates, would remain at their then-current levels  
8 and non-CARE Tier 3 rates would be decreased so as to collect the lower  
9 revenue amount.

10 These rate design rules—which are designed to help make further progress  
11 in reducing the wide differentials between non-CARE upper- and lower-tier rates,  
12 while reducing the CARE discount percentage toward the mandated 30 to  
13 35 percent range—would be used as an interim measure for rate changes  
14 between the annual structural changes that the Commission adopts here in this  
15 proceeding.

#### 16 **J. Customer Education and Outreach**

17 PG&E understands that these reforms will have widespread impacts on its  
18 residential customer class. PG&E’s education and outreach strategy is to drive  
19 awareness of the proposed structural changes to rates, once they are approved,  
20 with a simple explanation of the need for these rate changes. The outreach will  
21 include general awareness to all residential customers with additional outreach  
22 efforts to the most impacted CARE and non-CARE customers. PG&E plans to  
23 educate the most impacted customers utilizing multiple direct touches that drive  
24 awareness of the rate change and includes ways to help them manage their bills  
25 through Energy Efficiency Audits and “My Energy Home Checkup,” as well as  
26 customized tips based on seasons, opt-in programs such as SmartRate or  
27 SmartAC™, energy savings assistance, and balanced payment plan programs.  
28 Outreach to the most impacted customers will include specific tactics that target  
29 hard to reach communities. PG&E’s March 21, 2014 responses to ACR  
30 questions 26-38, and any related testimony, in this proceeding will include the  
31 related cost estimates necessary to fund incremental efforts to educate

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74 Both guidelines are subject to the proviso that the resulting CARE discount percentage cannot be lower than 30 percent.

- 1 customers on residential rate reform-related changes to PG&E's rate plans and
- 2 customers' options for managing their bills, as well as more information on the
- 3 types of outreach proposed.