

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Application of San Diego Gas & Electric  
Company (U 902 E) for Authority to Update Electric  
Rate Design Regarding Residential Default Time-  
Of-Use Rates and Fixed Charges

Application 17-12-\_\_\_\_\_

**PREPARED DIRECT TESTIMONY OF  
CYNTHIA FANG  
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY**

**CHAPTER 1**

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

**December 20, 2017**



## TABLE OF CONTENTS

I.	INTRODUCTION .....	1
II.	SDG&E’s Rate Design Objectives Align with THE Commission’s Rate Design Principles .....	2
III.	OVERVIEW OF SDG&E’S 2018 RESIDENTIAL RDW.....	5
	A.    Procedural History and Background.....	6
	B.    SDG&E’s 2018 Residential RDW .....	10
IV.	SDG&E’S RESIDENTIAL RATE DESIGN PROPOSALS LAY A BETTER FOUNDATION FOR THE FUTURE .....	11
	A.    2019 Residential Default and Optional TOU Rates.....	14
	1.    TOU Rates .....	14
	2.    Existing Rate Options .....	17
	B.    2020 Residential Fixed Charge and Minimum Bill Proposal .....	18
	1.    Fixed Charges in Residential Rates .....	21
	2.    Increased Minimum Bill to Cover Minimum Threshold of Service.....	26
	3.    Composite Tier Methodology.....	29
	4.    Summary of the Bill Impacts of SDG&E’s 2020 Fixed Charge Proposals .....	32
	5.    Higher Fixed Charge Option.....	38
	C.    CARE Restructuring .....	42
V.	CONCLUSION.....	44
VI.	STATEMENT OF QUALIFICATIONS .....	45
	ATTACHMENT	

**PREPARED DIRECT TESTIMONY OF  
CYNTHIA FANG**

**I. INTRODUCTION**

This testimony provides the policy guidance for San Diego Gas & Electric Company’s (“SDG&E’s”) 2018 Residential Rate Design Window Application (“RDW Application”). As directed by Ordering Paragraph (“OP”) 10 of Decision (“D.”) 15-07-001, this RDW Application proposes default time-of-use (“TOU”) rates for residential customers to be effective January 1, 2019. In addition, in this RDW Application, SDG&E includes residential rate design proposals for the menu of optional TOU rates<sup>1</sup> to support residential Mass TOU Default in 2019 and the implementation of a residential fixed charge to occur in 2020, 12 months after the start of Mass TOU Default. SDG&E’s proposals in this proceeding are intended to promote customer choice and provide options that give customers better ability to control their electric bills and provide more predictability, while ensuring fair and equitable rates. In summary, SDG&E requests approval of the following proposals:

- Residential Mass TOU Default rate and a menu of options to provide choices that will allow customers to have to better control their electric bill, including a simpler opt-out TOU rate, to be effective January 1, 2019;
- Implementation of a residential fixed charge to provide customers with some relief from artificially high tiered rates and greater control over their bills and a higher minimum bill to better provide rates that are fair and equitable and ensure that all customers pay a reasonable share of the utility infrastructure costs needed to serve all customers, to be effective January 1, 2020; and
- Default TOU migration plan, including its operational and marketing, education and outreach (“ME&O”) approach.

---

<sup>1</sup> Resolution E-4769, OP 8 and Resolution E-4848, OP 2.

1 In addition, my testimony addresses SDG&E’s policy position regarding its current California  
2 Alternate Rates for Energy (“CARE”) discount in the context of further restructuring considered  
3 in D.15-07-001.

4 My testimony is organized as follows:

- 5 • Section II – SDG&E’s Rate Design Objectives Align with the Commission’s Rate  
6 Design Principles
- 7 • Section III – Overview of SDG&E’s 2018 Residential RDW
- 8 • Section IV – SDG&E’s Residential Rate Design Proposals Lay a Better  
9 Foundation for the Future
  - 10 ○ 2019 Residential Default and Optional TOU Rates
  - 11 ○ 2020 Residential Fixed Charge and Minimum Bill Proposal
  - 12 ○ CARE Restructuring
- 13 • Section V – Conclusion
- 14 • Section VI – Statement of Qualifications

15 **II. SDG&E’S RATE DESIGN OBJECTIVES ALIGN WITH THE COMMISSION’S**  
16 **RATE DESIGN PRINCIPLES**

17 SDG&E continues to be a leader in clean energy, advancing electric vehicles and  
18 developing and operating a low-carbon energy infrastructure while providing safe and reliable  
19 service. It has demonstrated its commitment to furthering the State’s vision of increased  
20 distributed energy resources (“DER”) integration with accomplishments such as:

- 21 • Forty-three percent of SDG&E’s delivered electricity comes from renewable  
22 resources;
- 23 • As of the end of November 2017, SDG&E had approximately 820 megawatts  
24 (“MW”) of customer-sited solar and wind generation from over 120,000  
25 customers;
- 26 • As of the end of November 2017, SDG&E has over 26,500 electric vehicles  
27 within its service territory and is making clean driving more accessible with the

Power-Your-Drive program, expanding access to electric vehicle charging at businesses, multi-family communities and disadvantaged neighborhoods; and

- Receiving the “Best in the West” award for electric reliability for 12 straight years.

To ensure the continued pursuit of the State’s clean energy goals in a sustainable manner, it is critical to continue striving to move toward rates that reflect accurate prices, and incentives or subsidies that are direct and transparent.

Recognizing a need for change, the California State Legislature enacted Senate Bill (“SB”) 695 in 2009, which created a path for the California Public Utilities Commission (“CPUC” or “Commission”) to explore residential electric rate design, including transitioning residential customers from tiered rates to TOU rates. The Commission opened Order Instituting Rulemaking (“R.”) 12-06-013 in 2012 to examine ways to move toward more cost-based rates. Within R.12-06-013, the Commission adopted the following ten Rate Design Principles (“RDPs”).<sup>2</sup> Table 1 below presents the RDPs in four categories (consistent with D.15-07-001): (1) cost of service; (2) affordable electricity; (3) conservation; and (4) customer acceptance.

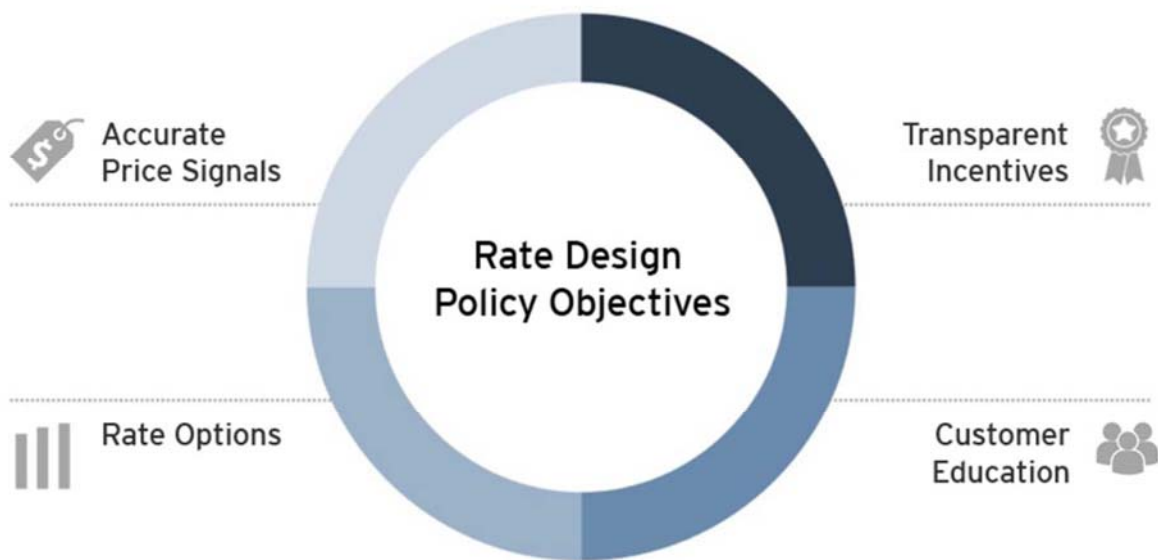
**Table 1: Rate Design Principles**

Cost Of Service RDP	Affordable Electricity RDP	Conservation RDP	Customer Acceptance RDP
(2) Rates should be based on marginal cost; (3) Rates should be based on cost-causation principles; (7) Rates should generally avoid cross-subsidies, unless the cross-subsidies appropriately support explicit state policy goals; (8) Incentives should be explicit and transparent; (9) Rates should encourage economically efficient decision-making.	(1) Low-income and medical baseline customers should have access to enough electricity to ensure basic needs (such as health and comfort) are met at an affordable cost.	(4) Rates should encourage conservation and energy efficiency; (5) Rates should encourage reduction of both coincident and non-coincident peak demand.	(6) Rates should be stable and understandable and provide customer choice; (10) Transitions to new rate structures should emphasize customer education and outreach that enhances customer understanding and acceptance of new rates, and minimizes and appropriately considers the bill impacts associated with such transitions.

<sup>2</sup> R.12-06-013 at 27-28.

1 SDG&E’s rate design proposals are focused on providing residential electric customers  
2 with choice, control, and more predictability as well as promoting the principles below. These  
3 rate design objectives, presented in Diagram 1, are intended to support SDG&E’s continued  
4 leadership in support of the State’s clean energy policies and align with the Commission’s RDP.

5 **Diagram 1: SDG&E’s Rate Design Policy Objectives**



- 6
- 7 1. **Accurate price signals:** Providing customers with accurate price signals means
- 8 that utilities charge for the services they provide and rates are designed to cover
- 9 utility costs from customers in the same way in which they are incurred. By
- 10 sending customers clear price signals regarding the cost of electricity and the cost
- 11 of using the electric grid for the services they receive, SDG&E aims to give
- 12 customers the greatest possible opportunity to make economically efficient
- 13 decisions about their energy use and to mitigate cost shifts between customers.

1 Accurate price signals also limit any potential cross-subsidies that would result  
2 from incentives that are buried in rates and not transparently identified.

3 2. **Transparent incentives:** Incentives or subsidies that are deemed necessary by  
4 the Commission to further public policy objectives should be separately and  
5 transparently identified. Building upon the foundation of accurate price signals,  
6 subsidies that advance state policy goals should be identified separately on utility  
7 bills from the charges for services provided to or from the customer.

8 3. **Customer options:** SDG&E's policy framework is based on attention to and an  
9 understanding of its customers' needs – SDG&E seeks to provide the optionality  
10 its customers require while still providing a cost-based rate structure. SDG&E  
11 recognizes the importance of offering new cost-based rate options that best meet  
12 its customers' needs.

13 4. **Customer Education:** SDG&E recognizes that effective ME&O across all  
14 impacted customers will help them understand the change to TOU rates, motivate  
15 them to embrace TOU rates, and support them with relevant tools and solutions.  
16 SDG&E is committed to proactively provide customers with clear and timely  
17 information to help customers prepare for any rate change including those  
18 presented in this RDW Application. ME&O is discussed further in the Direct  
19 Testimony of Horace Tantum.

### 20 **III. OVERVIEW OF SDG&E'S 2018 RESIDENTIAL RDW**

21 SDG&E's proposals in this RDW Application are provided in response to requirements  
22 identified within the various Commission decisions and directives described above, including but  
23 not limited to D.15-07-001 ("Rate Reform Decision"), Resolution E-4769 ("SDG&E Opt-In  
24 Pilot Resolution"), Resolution E-4848 ("SDG&E Default Pilot Resolution"), D.17-09-036

1 (“Section 745 Decision”), and D.17-09-035 (“Fixed Charge Decision”) and to lay a better  
2 foundation for residential rate design for the future.

3 **A. Procedural History and Background**

4 On June 21, 2012, R.12-06-013<sup>3</sup> was opened to examine and reform the investor-owned-  
5 utilities<sup>4</sup> (“IOUs”) residential electric rates and transition to TOU rates. R.12-06-013 was split  
6 into three phases:

- 7 • Phase 1 was reserved for longer-term rate design proposals for 2015 through  
8 2018, known as the glidepath;
- 9 • Phase 2 for Summer Relief for 2014 from high volumetric rates; and
- 10 • Phase 3 for issues related to CARE Restructuring and TOU pilots and exclusions.

11 The IOUs and other parties submitted Residential Rate Reform proposals on May 29,  
12 2013, in response to R.12-06-013. On July 3, 2015, the Commission issued D.15-07-001,  
13 outlining Residential Rate Reform for the IOUs. The decision adopted Phase 1 rate changes that  
14 reflect long-term residential electric rate reform, directed the IOUs to plan and implement TOU  
15 pilots, and set forth a glidepath for residential rate changes from 2015 through 2019.

16 D.15-07-001 also addressed IOU proposals for a new or increased “fixed charge”  
17 designed to collect certain fixed costs of providing service from all residential customers. The  
18 Commission concluded that in order to establish a fixed charge, certain requirements must be  
19 met, including “ensuring that the charge reflects appropriate costs, establishing a consistent  
20 methodology across utilities, and waiting until each utility has shifted to default [time-of-use  
21 (“TOU”)] rates.” As one of the conditions that must be met in order to permit further

---

<sup>3</sup> Order Instituting Rulemaking on the Commission’s Own Motion to Conduct a Comprehensive Examination of Investor Owned Electric Utilities’ Residential Rate Structures, the Transition to Time Varying and Dynamic Rates, and Other Statutory Obligations.

<sup>4</sup> SDG&E, Pacific Gas and Electric (“PG&E”), and Southern California Edison (“SCE”).



1 consideration of fixed charge proposals, D.15-07-001 required that a decision approving  
2 categories of fixed costs for consideration of a future fixed charge be issued in an IOU's GRC  
3 Phase 2 proceeding. It further held that the appropriateness and approval of any proposed fixed  
4 charges would then be considered in the IOUs' consolidated 2018 Residential RDW proceeding,  
5 along with the implementation of default residential TOU.

6 In accordance with the direction provided in D.15-07-001, Pacific Gas and Electric  
7 Company's ("PG&E's") 2017 General Rate Case GRC Phase 2 proceeding (A.16-06-013)  
8 included within its scope a workshop process to support a Commission decision adopting  
9 categories of fixed charges across the three IOUs. The Commission considered in a separate  
10 track of A.16-06-013 the fixed cost categories eligible for inclusion in a proposed fixed charge,  
11 and ultimately issued D.17-09-035,<sup>5</sup> which determined "that a fixed charge should include  
12 revenue cycle services costs with certain exclusions, all meter capital costs, and minimum  
13 service drop and final line transformer costs calculated by using the minimum observed cost for  
14 the residential class."<sup>6</sup> The cost basis for SDG&E's proposed fixed charge is presented in the  
15 Direct Testimony of William Saxe, and consistent with D.17-09-035, SDG&E includes the  
16 calculations of these costs under four different marginal distribution customer cost  
17 methodologies.<sup>7</sup> The costs presented in the Direct Testimony of William Saxe support the

---

<sup>5</sup> Decision Identifying Fixed Cost Categories to be Included in a Fixed Charge.

<sup>6</sup> D.17-09-035 at 2.

<sup>7</sup> The four methodologies are the Real Economic Carrying Charge ("RECC" or "Rental") Method, the New Customer Only ("NCO") Method, the Adjusted Rental Method 1 ("ARM1"), and Adjusted Rental Method 2 ("ARM2").

1 adoption of a \$10 residential fixed charge<sup>8</sup>in 2020, the statutory limit as prescribed in the  
2 California Public Utilities Code (“PU Code”) Section 739.9. The rates and the bill impacts of  
3 SDG&E’s proposals and alternative methodologies are presented in the Direct Testimony of  
4 Jeffrey Shaughnessy.

5 To support the default of residential customers to TOU and future customer acceptance,  
6 the IOUs were directed to design default and opt-in TOU pilots to study the effects of TOU on  
7 various segments of residential customers. Pursuant to D.15-07-001 and Resolution E-4769,  
8 SDG&E began its Opt-In TOU Pilot on June 1, 2016. The results of this pilot, presented in both  
9 the California Statewide Opt-In Time-of-Use Pricing Pilot – Interim Evaluation and the  
10 California Statewide Opt-In Time-of-Use Pricing Pilot – Second Interim Evaluation, prepared by  
11 Nexant, Inc., which address load and bill impacts, and Research Into Action, which address the  
12 customer survey (“Nexant/RIA Report”). The load impacts results included in the Nexant/RIA  
13 Report are discussed further in the Direct Testimony of Leslie Willoughby. Additionally,  
14 SDG&E began a study of its Pilot Rate 3, a more complex hourly dynamic rate offering, on  
15 November 1, 2016.

16 SDG&E’s Default TOU Pilot Plan was filed on December 16, 2016, and approved, with  
17 modifications, by Resolution E-4848 on May 25, 2017. The Default Pilot is intended to inform

---

<sup>8</sup> Section 739.9 (f) For the purposes of this section and Section 739.1, 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 January 1, 2016, the maximum allowable fixed charge may be adjusted by no more than the annual percentage increase in the Consumer Price Index for the prior calendar year. This subdivision applies to any default rate schedule, at least one optional tiered rate schedule, and at least one optional time variant rate schedule.

1 the resolution of this RDW Application, and the subsequent default of all eligible residential  
2 customers onto TOU rates beginning in 2019.<sup>9</sup>

3 D.15-07-001 further identified next steps for Residential Rate Reform, which included  
4 the interpretation of the P.U. Code Section 745 conditions that must be met for the residential  
5 customer class mass default to TOU.<sup>10</sup> P.U. Code Section 745 excludes certain classes of  
6 customers from Mass TOU Default,<sup>11</sup> and requires the IOUs to determine whether other classes  
7 would experience “unreasonable hardship”<sup>12</sup> as a result of being transitioned to default TOU. On  
8 September 28, 2017, the Commission adopted D.17-09-036, which set forth steps to transition  
9 most Californians to default TOU rates in 2019. This Decision determined, among other things,  
10 that “economically vulnerable customers in hot climate zones should be excluded from the  
11 default time-of-use pilots scheduled to begin in March 2018”<sup>13</sup> but that as a part of the 2018  
12 Residential RDW applications, “the Commission will further consider whether economically  
13 vulnerable customers in hot climate zones should be excluded from the full rollout of default  
14 time-of-use rates.”<sup>14</sup> Accordingly, SDG&E’s Default TOU Pilot will comply with the  
15 requirements outlined in D.17-09-036, including but not limited to the exclusion of CARE and  
16 Family Electric Rate Assistance (“FERA”) customers within SDG&E’s Hot Climate Zones.<sup>15</sup>

---

<sup>9</sup> Resolution E-4848 at 2.

<sup>10</sup> D.15-07-001 at 298.

<sup>11</sup> P.U. Code §745(c)(1) identifies the following customers as those who must be excluded from default TOU: customers receiving a Medical Baseline allowance, customers requesting third-party notification, and customers who the Commission has ordered cannot be disconnected from service without an in-person visit for a utility representative.

<sup>12</sup> P.U. Code §745(c)(1), §745(c)(2), §745(d).

<sup>13</sup> D.17-09-036 at 2.

<sup>14</sup> *Id.*

<sup>15</sup> SDG&E’s Hot Climate Zone includes its Desert and Mountain zones.

1           **B.       SDG&E’s 2018 Residential RDW**

2           As noted above, this RDW Application seeks approval for SDG&E’s proposals intended  
3 to promote customer choice and provide options for customers that provide them with more  
4 ability to control their electric bills and greater predictability, while ensuring fair and equitable  
5 rates.

6           In addition, D.15-07-001 includes the requirement to examine greenhouse gas (“GHG”)  
7 reduction and cost savings that may result from the load reduction from residential Mass TOU  
8 default.<sup>16</sup> The impact to GHG reduction and potential energy cost savings from load reduction  
9 are presented in the Direct Testimony of Ben Montoya. SDG&E contends, however, that the  
10 peak load reduction achieved from TOU rates would have to be long-term for there to be a  
11 reduction in the costs related to the generation capacity and infrastructure investment. As such,  
12 SDG&E believes it is premature to provide estimates of cost savings associated with generation  
13 capacity and infrastructure costs at this time. In order to provide meaningful estimates, further  
14 study is needed to determine the persistence of residential customer class load impacts from  
15 TOU rates.

16           Each of SDG&E’s proposals is described in more detail below and further supported by  
17 the direct testimony of the following SDG&E witnesses:

- 18           •       Chapter 2 - Direct Testimony of Jeffrey Shaughnessy: presents the details of  
19           SDG&E’s electric rate design proposals and the customer bill impacts of these  
20           proposals, as well as various P.U. Code Section 745 requirements;
- 21           •       Chapter 3 - Direct Testimony of Ben Montoya: presents GHG reduction analysis  
22           and potential energy savings;
- 23           •       Chapter 4 - Direct Testimony of Leslie Willoughby: presents the load impact  
24           results of SDG&E’s Opt-In TOU Pilot;

---

<sup>16</sup> D.15-07-001 at 301.

- 1 • Chapter 5 - Direct Testimony of William Saxe: presents distribution customer  
2 cost study analysis to support SDG&E’s proposal to introduce a residential fixed  
3 charge;
- 4 • Chapter 6 - Direct Testimony of Chris Bender: presents SDG&E’s Mass TOU  
5 Default migration plan; and
- 6 • Chapter 7 - Direct Testimony of Horace Tantum: presents SDG&E’s intentions  
7 for ME&O related to SDG&E’s Mass TOU Default and other residential rate  
8 proposals in this filing.

9 **IV. SDG&E’S RESIDENTIAL RATE DESIGN PROPOSALS LAY A BETTER**  
10 **FOUNDATION FOR THE FUTURE**

11 This RDW Application represents a critical juncture in Residential Rate Reform and is  
12 the next step to reform residential tiered rates in an effort that began over five years ago. This  
13 work started when the California Legislature made reform possible with the adoption of  
14 Assembly Bill (“AB”) 327, which restored the Commission’s authority to set residential rates.  
15 The Legislature wisely recognized that reform of the tiered rate structure was crucial to achieve  
16 state and Commission goals, and AB 327 lifted the legislative caps that were responsible for the  
17 broken tiered rate structure for California’s residential electric rates.

18 Prior to the implementation of SDG&E’s 2017 Glidepath, which occurred on September  
19 1, 2017, SDG&E’s Tier 2 rate continued to be more than double the Tier 1 rate.<sup>17</sup> With the  
20 implementation of SDG&E’s 2017 Glidepath, the differential between Tier 1 and Tier 2 is now  
21 smaller (1:1.75), but continues to depart significantly from the Glidepath Guidance of 1:1.405. In  
22 fact, SDG&E’s tier differential is over 85% higher than the Glidepath Guidance.<sup>18</sup> These high  
23 differentials mean that SDG&E residential customers continue to see upper tier summer rates  
24 over 40 cents/kWh over three years after the initial implementation of Residential Rate Reform.

---

<sup>17</sup> SDG&E’s Advice Letter (“AL”) 3055-E-A.

<sup>18</sup> *Ibid.*

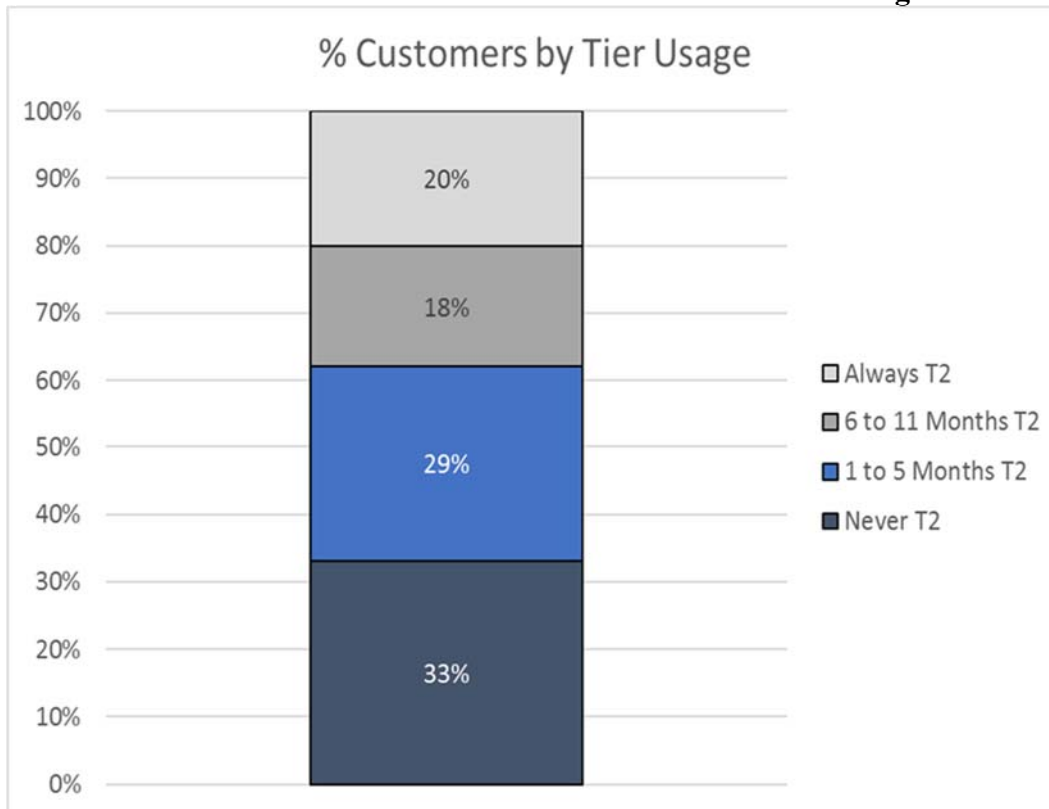
1           In addition, such high differentials create significant challenges for customers to be able  
2 to control their bills. Despite the significant structural changes that have occurred with the move  
3 from four tiers to two tiers since 2015, SDG&E's residential customers continue to be challenged  
4 by large tier differentials that Residential Rate Reform was supposed to address, with Tier 2 still  
5 more than double Tier 1 rates prior to September 1 this year. For the additional 1 kWh above  
6 130% of baseline, SDG&E's residential customers today see a per kWh price increase for  
7 electricity of 75%. This significant price difference between the Tier 1 and Tier 2 rates creates  
8 the potential for significant bill volatility as customers move from Tier 1 usage to Tier 2 (above  
9 130% of baseline). SDG&E's average customer consumes 500 kWh per month, and in that  
10 average case, a 50% increase in energy usage from 500 to 750 kWh per month would result in a  
11 bill increase of over 76%, on average, under the current tiered structure.<sup>19</sup> Of SDG&E's  
12 residential customers on tiered rates, one-third (33%) are exclusively in Tier 1 (12 out of 12  
13 months), meaning the volume of energy consumed per month is always less than 130% of  
14 baseline. Alternatively, 20% of residential customers are consistently in Tier 2 or above,  
15 meaning the volume of electricity consumed per month is always (12 out of 12 month) above  
16 130% of baseline. Almost half (47%) of SDG&E's residential customers, however, move in and  
17 out of Tier 1 and Tier 2 over a 12-month period. In a given year, 29% of customers have Tier 2  
18 charges 1-5 months, and 18% have Tier 2 charges for 6 to 11 months.

---

<sup>19</sup> Assuming Coastal/Inland customer usage and calculated using rates effective 12/1/2017, per AL 3130-E/E-A.

1

**Chart 1: SDG&E’s Residential Customers And Tier Usage<sup>20</sup>**



2

3

4

5

6

7

8

9

10

11

Currently, the only opportunity for customers to save on a tiered rate schedule is to reduce their energy usage. TOU rates will therefore provide residential customers with an important tool to give them greater control over their electric bill. SDG&E’s proposed Mass TOU Default rate will be a tiered TOU rate, which is intended to limit the bill impact of defaulting to TOU. Under TOU rates, customers will have the ability to save if they (1) reduce energy usage, and/or (2) shift energy usage to a lower-cost time period, away from the on-peak period of 4-9 p.m. In addition, SDG&E proposes that residential customers defaulting to TOU will receive bill protection to ensure that they have a risk-free experience as they transition. This is discussed in more detail in the Direct Testimony of Chris Bender.

---

<sup>20</sup> Based on historical usage from November 2016 – October 2017. Excludes customers without 12 months of usage data.

1           **A.     2019 Residential Default and Optional TOU Rates**

2           SDG&E proposes the following rate options for residential customers beginning in  
3 2019:<sup>21</sup>

- 4           •       A 3-Period tiered Default TOU rate as the Mass TOU Default rate;
- 5           •       A 2-Period tiered Opt-Out TOU rate as a simpler opt-out rate option with milder  
6           TOU differentials;
- 7           •       Customers will continue to have today’s tiered rate as a Tiered Opt-Out rate  
8           option; and
- 9           •       The consolidation of similar existing un-tiered TOU rates to simplify available  
10          options for customers.

11                   **1.     TOU Rates**

12           In 2019, SDG&E plans to default its eligible residential customers to a 3-Period Default  
13 TOU rate. This rate structure provides more granular and therefore more accurate price signals,  
14 making it a more cost-based option than SDG&E’s simpler 2-Period Opt-Out rate. SDG&E  
15 proposes a Mass TOU Default rate with three time periods: on-peak, off-peak and super off-  
16 peak. While a 3-period TOU is more complex, a more cost-based 3-period TOU rate provides  
17 the added value to customers of providing them with a greater ability to save if they are able to  
18 shift usage into the lowest-cost hours that occur during the super off-peak period. Customers  
19 will be able to opt out of Mass TOU Default, and a menu of rate options will be available to  
20 them should they wish to do so. As part of the menu of options to support customer choice,  
21 SDG&E plans to offer a simpler 2-Period Opt-Out TOU rate and will continue to offer the  
22 current tiered rate schedule available as a Tiered Opt-Out rate.

---

<sup>21</sup> SDG&E’s existing tiered TOU rate, Schedule TOU-DR will remain available as an option for residential customers.



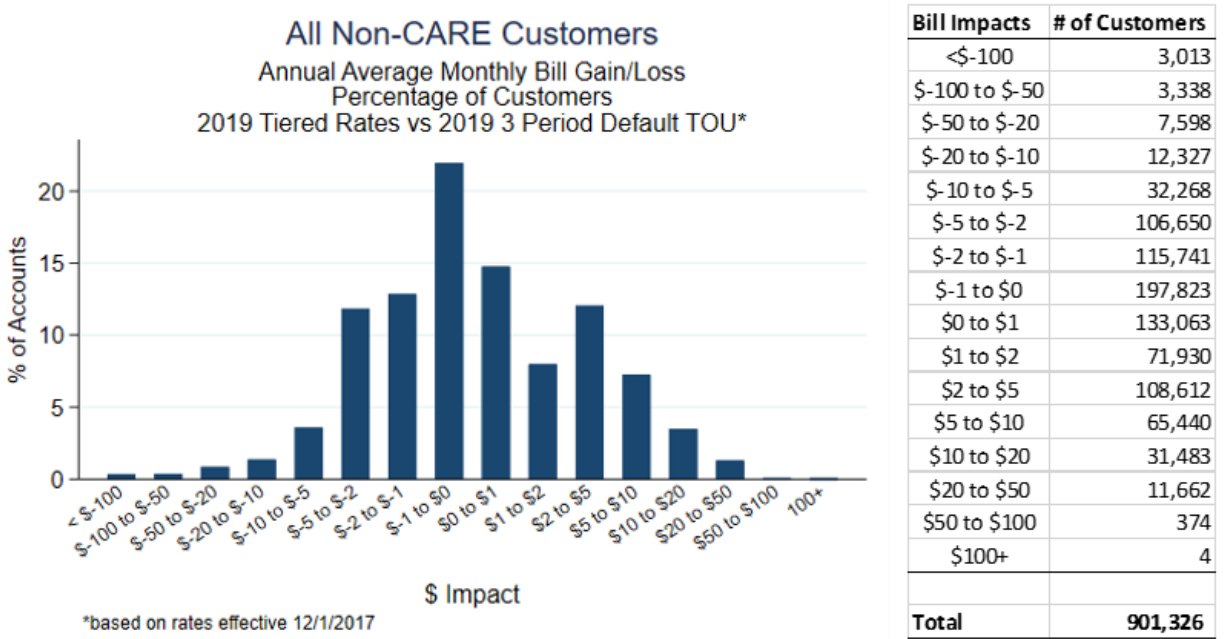
1 A summary of the bill impacts to Non-CARE and CARE customers is presented below in  
2 Charts 2 and 3. More detailed information regarding the customer bill impacts is presented in  
3 the Direct Testimony of Jeffrey Shaughnessy. As a result of transitioning to TOU, without any  
4 changes in usage behavior, 53% of Non-CARE customers would experience a bill decrease while  
5 47% would experience a bill increase, and 58% of CARE/FERA customers would experience a  
6 bill decrease while 42% would experience a bill increase. Similar to the design of SDG&E's  
7 Opt-In Pilot rate, (discussed in more detail in the Direct Testimony of Jeffrey Shaughnessy,) the  
8 design of SDG&E's Mass Default rate is intended to minimize and isolate the cause of any bill  
9 impacts solely to the transition to TOU.

10 For Non-CARE customers, presented in Chart 2:

- 11 • 37% of Non-CARE customers would see a change in monthly bill (increase or  
12 decrease) of less than \$1
- 13 • 81% of customers would see a change in monthly bill (increase or decrease) of  
14 less than \$5
- 15 • 92% of customers would see a change in monthly bill (increase or decrease) of  
16 less than \$10

1

**Chart 2: Summary of Non-CARE Bill Impacts from Mass TOU Default Rate<sup>22</sup>**



2

3

For CARE/FERA customers, presented in Chart 3:

4

5

- 60% of CARE customers would see a change in monthly bill (increase or decrease) of less than \$1

6

7

- 97% of CARE customers would see a change in monthly bill (increase or decrease) of less than \$5

8

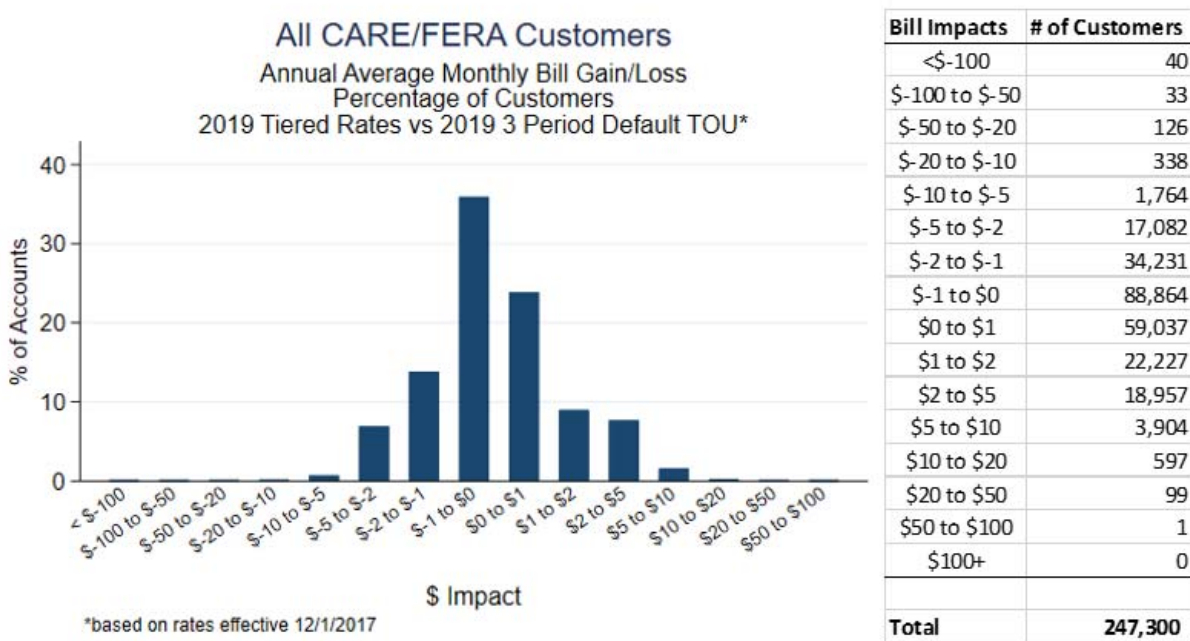
9

- Greater than 99% of CARE customers would see a change in monthly bill (increase or decrease) of less than \$10

10

<sup>22</sup> Bill impacts assume no change to historic customer usage from October 2016 – September 2017 and only include customers with 12 months of data on the standard residential rate. Medical Baseline and Direct Access customers have been excluded for these analyses.

1 **Chart 3: Summary of CARE Bill Impacts from Mass TOU Default Rate<sup>23</sup>**



2  
3 **2. Existing Rate Options**

4 With Mass TOU Default, SDG&E will continue to offer the current two-tiered residential  
5 rate schedule, which includes the high-usage charge (“HUC”),<sup>24</sup> as a Tiered Opt-Out rate for  
6 customers who do not wish to be on a TOU rate.

7 In addition, SDG&E proposes the following modifications to its current TOU optional  
8 rates for residential customers:

- 9
- 10 • Schedule TOU-DR, Residential Service: optional tiered TOU rate for individually metered residential customers;
  - 11 • Schedule DR-SES, Domestic Time-Of-Use for Households With A Solar Energy System: optional un-tiered TOU rate for individually metered residential
  - 12 customers with Solar Energy Systems;
  - 13

<sup>23</sup> Bill impacts assume no change to historic customer usage from October 2016 – September 2017 and only include customers with 12 months of data on the standard residential rate. Medical Baseline and Direct Access customers have been excluded for these analyses.

<sup>24</sup> HUC is also commonly referred to as the Super User Electric Surcharge (“SUE”).

- 1 • Schedule EV-TOU, Electric Time-Of-Use for Electric Vehicle Charging: optional  
2 residential un-tiered TOU rate for separately metered electric vehicle charging;  
3 and
- 4 • Schedule EV-TOU-2, Electric Time-Of-Use for Electric Vehicle Charging:  
5 optional un-tiered TOU rate for residential customers who require service for both  
6 electric vehicle charging and domestic service.

7 Prior to December 1, 2017, the TOU periods of Schedules TOU-DR, DR-SES, EV-TOU,  
8 and EV-TOU-2 differed. On December 1, 2017, SDG&E implemented D.17-08-030<sup>25</sup> which  
9 included the update and alignment of TOU periods, and resulted in Schedules TOU-DR, DR-  
10 SES, EV-TOU, and EV-TOU-2 now having the same TOU periods.<sup>26</sup> This also resulted in a  
11 minimal difference between SDG&E's current un-tiered TOU rate options. As such, SDG&E  
12 proposes to consolidate Schedules DR-SES and EV-TOU-2 to a single un-tiered TOU rate  
13 schedule that would be available to all residential customers, to be renamed Schedule TOU-D.  
14 This would provide all residential customers with a single un-tiered TOU rate option and avoid  
15 customer confusion. The consolidation of these rate schedules would be through the closure of  
16 one schedule (i.e., Schedule EV-TOU-2) and the expansion of the applicability of the other (i.e.,  
17 Schedule DR-SES). Grandfathered versions of all of SDG&E's existing rate schedules will  
18 remain available for eligible customers, in accordance with D.17-08-030.

19 **B. 2020 Residential Fixed Charge and Minimum Bill Proposal**

20 SDG&E proposes the following changes to residential rates beginning in 2020:

- 21 1. The implementation of a residential fixed charge on January 1, 2020, to be  
22 applied to all residential rate schedules with the exclusion of SDG&E's simpler 2-  
23 period TOU rates and its master-metered rate schedules. SDG&E requests the

---

<sup>25</sup> Decision Adopting Revenue Allocation and Rate Design for San Diego Gas & Electric Company, Issued August 25, 2017.

<sup>26</sup> With the exclusion of grandfathering.

1 legislative limit of \$10 for non-CARE and \$5 for CARE, FERA, and Medical  
2 Baseline customers<sup>27</sup> for its residential fixed charge in 2020 and annual increases  
3 going forward based on the Consumer Price Index;

4 2. The implementation of a higher minimum bill amount to be applied to all  
5 residential rate schedules that reflects a minimum threshold amount to ensure that  
6 all residential customers pay their fair share of the utility's costs to provide  
7 service. Consistent with D.15-07-001, CARE, FERA, and Medical Baseline  
8 customers will receive a 50% discount on the minimum bill<sup>28</sup>;

9 3. SDG&E requests that the Commission reconsider the current requirement that tier  
10 differential be calculated using the composite tier methodology to allow the fixed  
11 charge to provide relief to Tier 1 *and* Tier 2 rates; and

12 4. SDG&E proposes a higher fixed charge option that recovers that average costs of  
13 utility services that do not vary by energy usage through a fixed charge, which  
14 will have a compensating decrease to the volumetric rate, in order to provide  
15 customers with an option that will provide them with greater predictability.

16 The utility system needed to ensure safe and reliable service requires a diverse set of  
17 resources which include commodity, distribution, and transmission resources as well as public  
18 purpose programs ("PPP").

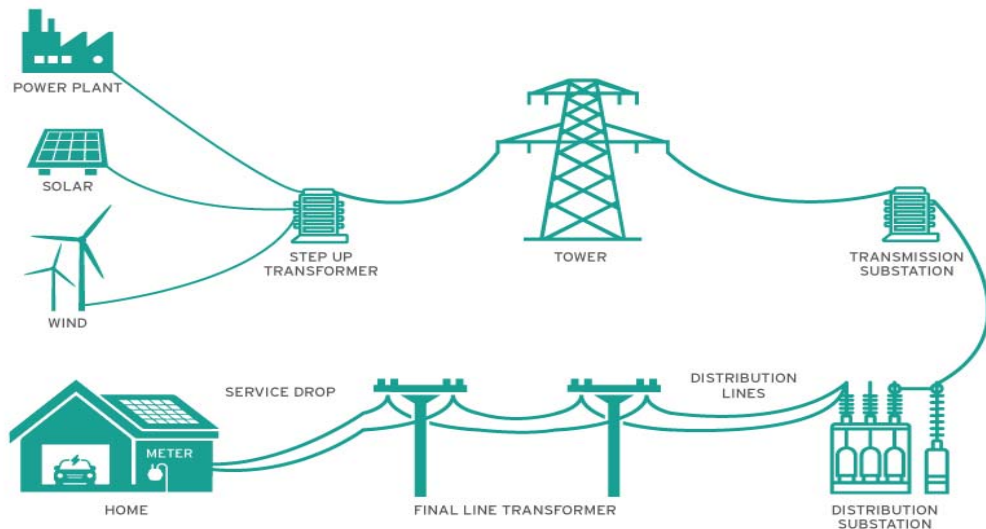
---

<sup>27</sup> Consistent with D.15-07-011, FOF 21, the lower fixed charge amount would also apply to FERA and Medical Baseline customers.

<sup>28</sup> D.15-07-001, FOF 21.

1

**Diagram 2: SDG&E Utility Cost of Service**



2

3 Under current effective rates, commodity services represent approximately 50% of total

4 recovered costs, while distribution and transmission services represent 30% and 10%,

5 respectively. State- and Commission-mandated programs comprise the remaining 10% of

6 recovered costs.<sup>29</sup> When examining the cost drivers behind these different resources,

7 approximately 33% of the total costs recovered in rates are driven by customer energy usage.

8 The remainder of costs are driven by the need to ensure a customer is set-up and ready to receive

9 services (i.e., meter and billing services), infrastructure costs to ensure safe and reliable delivery

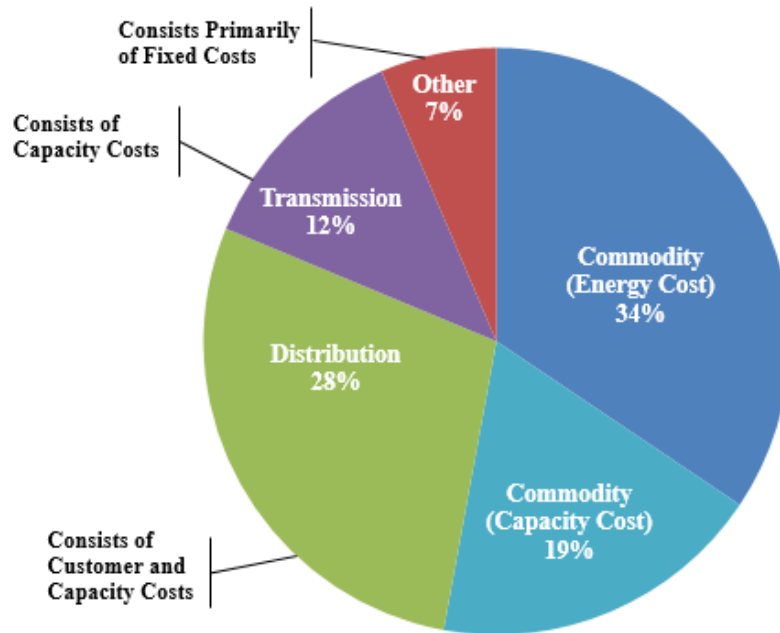
10 of energy services, and the costs of public policy programs – which do not vary by energy usage.

---

<sup>29</sup> PPP includes all non-commodity, distribution, and transmission costs.

1  
2

**Chart 4: SDG&E Utility Cost of Service\***



3  
4

\*Based on rates effective December 1, 2017.

5 When these non-variable costs are recovered on a volumetric basis, the result is a  
6 volumetric rate that is artificially inflated, as the recovery of all costs in this manner will always  
7 exceed the cost of that energy. This creates a volumetric rate that will be greater than would  
8 otherwise be required to incentivize conservation and energy efficiency (Rate Design Principle  
9 4-rates should encourage conservation and energy efficiency) and fails to meet all of the Cost of  
10 Service Rate Design Principles.

11 **1. Fixed Charges in Residential Rates**

12 SDG&E's proposal for a \$10 fixed charge is intended to shift the recovery of some costs  
13 from artificially inflated volumetric rates to a fixed charge. This shift makes a progressive move  
14 toward more fair and equitable rates for all customers. Furthermore, the recovery of costs  
15 through a fixed charge will result in a compensating reduction to all volumetric rates. The cost  
16 basis for SDG&E's proposal for the legislative limit of its residential fixed charge proposal is

1 presented in the Direct Testimony of William Saxe, and the rates and bill impacts of SDG&E's  
2 residential fixed charge and minimum bill proposal is presented in the Direct Testimony of  
3 Jeffrey Shaughnessy.

4 In addition, a residential fixed charge would not be incremental, rather it would result in a  
5 corresponding reduction of energy (cents/kWh) rates. The introduction of a residential fixed  
6 charge should help to provide some relief from these energy rates, where the current Tier 2 rate  
7 is 47 cents per kWh.<sup>30</sup>

8 As recognized in D.15-07-001, “[a] fixed charge is not intended to incent specific  
9 customer behavior, but is intended to assist the customer in making economically efficient  
10 decisions regarding energy usage and investments.”<sup>31</sup> A residential fixed charge allows for the  
11 recovery of the costs of utility services to occur through a rate mechanism other than the energy  
12 rates. D.15-07-001 concluded that a fixed charge or minimum bill that recovers customer-related  
13 costs would result in a more equitable rate for low usage customers such as vacation  
14 homeowners and some NEM customers,<sup>32</sup> and that a fixed charge to reflect fixed costs would  
15 send a more accurate price signal to customers.<sup>33</sup> Moving toward a more equitable system is  
16 imperative; SDG&E's customers who do not pay their fair cost of service have shifted costs to  
17 other nonparticipating ratepayers, increasing their rates and bills. If more balance is not  
18 introduced into SDG&E's rate structure, this inequity will persist and grow within Mass TOU  
19 Default rates as customers continue to adopt new technologies and energy production sources.

---

<sup>30</sup> Summer Tier 2 rate for Schedule DR effective 12/1/17 per AL 3130-E/E-A.

<sup>31</sup> D.15-07-001, FOF 176.

<sup>32</sup> D.15-07-001, FOF 163.

<sup>33</sup> *Id.*, FOF 175.



1 The Commission recognized in D.15-07-001 that there should be a balance between state  
2 policies for conservation and cost-based rates, and stated "...we must balance the competing rate  
3 design principles" and "we give significant weight to the need to better align rates with cost  
4 causation, and provide customers with clear cost signals."<sup>34</sup> While SDG&E recognizes that a  
5 fixed charge that leads to lower energy rates may have the potential to impact conservation,  
6 D.15-07-001 determined that impact is likely to be small:

7 We recognize that a fixed charge, as a rate design element, would not encourage  
8 additional conservation. However, we determine that the impact is likely to be  
9 small. We acknowledge that a fixed charge would represent a larger percentage  
10 of the monthly bill for those customers whose usage is lower but note that, along  
11 with a fixed charge, these customers would see lower volumetric rates than  
12 would be necessary with a minimum bill.<sup>35</sup>

13 Additionally, the parties in D.15-07-001 conducted individual analyses on the impacts of  
14 TOU and fixed charges on conservation. The Commission found that "...while we cannot find  
15 with certainty that the rate design proposals will decrease (or increase) conservation, we can find  
16 that any impacts to conservation from the proposed rate design changes would be relatively small  
17 and would not *unreasonably* impact conservation."<sup>36</sup> The Commission believes, and SDG&E  
18 agrees, that the optimum conservation levels will be achieved when customers better understand  
19 the cost of the energy they consume.<sup>37</sup>

20 **a. National Comparison**

21 Fixed charges in electric rates for residential customers are part of the rate structure of the  
22 majority of electric IOUs across the nation. In Table 2, in a survey of national electric IOUs that  
23 provide bundled service to residential customers, 97% of 176 electric IOUs (excluding the

---

<sup>34</sup> D.15-07-001 at 213-214.

<sup>35</sup> *Id.* at 214.

<sup>36</sup> *Id.* at 58, emphasis added.

<sup>37</sup> *Id.* at 61.

1 California IOUs) were identified as having a basic residential service rate schedule that includes  
2 a residential fixed charge. SDG&E conducted the same survey in 2014: 97% of the 180 electric  
3 IOUs identified had a residential fixed charge.<sup>38</sup> The average fixed charge was \$10.30 as of  
4 October 2017, an increase of 11% from \$9.30 in October 2014. In California, 77% of the  
5 electric utilities have a basic residential service rate schedule that includes a fixed charge rate  
6 component as of October 2017, and the average residential fixed charge was \$10.22. SDG&E's  
7 request for a \$10 residential fixed charge is below the average of these 176 national IOUs and 44  
8 CA electric utilities. A detailed list of utilities and residential fixed charges that comprise Table  
9 2 can be found in Attachment A.

---

<sup>38</sup> R.12-06-013 SDG&E Exhibit SDGE-109: Rebuttal Testimony of Cynthia Fang, CF-15.

1 **Table 2 – Summary of National Survey Of Residential Fixed Charges<sup>39</sup>**

	<b>Minimum Fixed Charge</b>	<b>Maximum Fixed Charge</b>	<b>Average Fixed Charge</b>	<b>% with Fixed Charge</b>	<b>Total Utilities</b>
<b>National Electric IOUs</b> <i>(excluding CA IOUs)</i> October 2014	\$2.20	\$25.00	\$9.30	97%	180
<b>National Electric IOUs</b> <i>(excluding CA IOUs)</i> October 2017	\$2.27	\$24.66	\$10.35	97%	176
<b>National Electric IOUs</b> <i>(including CA IOUs)</i> October 2017	\$0.93	\$24.66	\$10.30	96%	179
<b>California Electric Utilities</b> October 2014	\$0.87	\$20.67	\$7.74	78%	40
<b>California Electric Utilities</b> October 2017	\$0.87	\$26.00	\$10.22	77%	44
<b>California Water Utilities</b> October 2014*	\$0.34	\$182.72	\$60.10	100%	10
<b>California Water Utilities</b> October 2017*	\$4.05	\$314.61	\$86.87	100%	10

2 \*Monthly charge associated with minimum meter size – for all water utilities included, the minimum meter  
3 size was 5/8 x 3/4 inch. The average residential meter size in California is estimated to be up to 2 inches.  
4 Maximum here is the Fixed Charge associated with a 2-inch meter.

5 **b. Customer Survey**

6 SDG&E recognizes that customer acceptance and understanding is a fundamental  
7 underpinning to the successful implementation of a residential fixed charge. D.15-07-001 found  
8 that “...it is very clear that customers are unlikely to understand or accept the need for fixed  
9 charges without customer education.”<sup>40</sup> The Commission also stated that “[a]lthough we  
10 agree...it is beyond dispute that the record in this proceeding shows substantial customer  
11 hostility to fixed charges on residential bills, we disagree with [Center for Accessible

<sup>39</sup> List of national IOUs providing Residential Service identified at <http://www.eia.gov/>, California Electric and Water utilities identified at <http://www.cpuc.gov>.

<sup>40</sup> D.15-07-001 at 216.

1 Technology] CforAT’s contention that customer hostility cannot be cured with customer  
2 education.”<sup>41</sup> Per D.17-09-035, “The Commission expects a showing on the plans for marketing,  
3 education, and outreach efforts with respect to the proposed fixed charges in relation to the TOU  
4 rates and in compliance with the directives of D.15-07-001, if and when, a utility files a proposal  
5 for a fixed charge.”<sup>42</sup> SDG&E agrees that without adequate, clear communication, customers are  
6 likely to believe that a fixed charge is an incremental charge on their bills when, in reality, a  
7 residential fixed charge is designed to cause a compensating decrease in volumetric rates. These  
8 issues and the results of SDG&E’s customer survey are discussed in greater detail in the Direct  
9 Testimony of Horace Tantum.

## 10 **2. Increased Minimum Bill to Cover Minimum Threshold of Service**

11 As presented in Chart 4, approximately 33% of the costs recovered in rates are related to  
12 customer energy usage, while the remaining 66% are infrastructure costs required to provide  
13 energy services or public program costs unrelated to a customers volumetric energy usage. For  
14 there to be fair and equitable treatment of all customers, each customer should pay some  
15 minimum threshold of these costs required to provide them with service, regardless of their  
16 electricity usage. Therefore, SDG&E proposes the implementation of a higher minimum bill  
17 amount based on a minimum level of service requirement, presented in the Direct Testimony of  
18 Jeffrey Shaughnessy.

19 As an IOU, SDG&E has the obligation of being the provider of last resort for all  
20 customers. This means that the utility is required to ensure the ability to provide service to every  
21 customer in its service territory (basically, access to SDG&E’s electric grid), even if that  
22 customer is not SDG&E’s customer. Although the recent decision on fixed charges (D.17-09-

---

<sup>41</sup> D.15-07-001 at 226.

<sup>42</sup> D.17-09-035 at 47.

1 035) determined that limited categories of customer costs are eligible for recovery in a fixed  
2 charge, SDG&E’s infrastructure investment is required to provide all customers with the  
3 minimum level of safe and reliable service requires the entire length of the grid, as presented in  
4 Diagram 2. This includes direct customer-based costs, where customers receive electricity from  
5 the wires connected to their houses, through the distribution grid as well as transmission  
6 resources and generation capacity costs, which are built to meet SDG&E’s system needs in a  
7 reliable and safe way. The costs that make up SDG&E’s proposed minimum bill would include  
8 customer costs, the customer cost-related equal percent marginal cost (“EPMC”) scalar,<sup>43</sup> grid-  
9 related reliability costs (excluding generation capacity-related costs), transmission,<sup>44</sup> and State  
10 and Commission-mandated programs.<sup>45</sup> CARE, FERA, and medical baseline customers would  
11 receive a 50% discount on the minimum bill calculation.<sup>46</sup>

12 Per D.15-07-001, “...the minimum bill charge is a mechanism that is designed to recover  
13 a minimum level of revenue, recognizing that some costs are still incurred to maintain service

---

<sup>43</sup> The Commission acknowledged in D.17-09-035 at p. 12 that certain portions of the distribution-demand infrastructure were customer-related as they do not vary with a customer’s demand or usage, but did not have a methodology to quantify the split between the two. It also stated at p. 12 that as the electricity market continues to evolve to accommodate new opportunities for how customers procure and conserve electricity to meet their needs, [the Commission] is cognizant of the importance of having a mechanism for collecting these fixed distribution costs.

<sup>44</sup> SDG&E’s minimum bill calculation reduces its Transmission and Reliability Services (“RS”) volumetric rate components based on the calculated Commission-approved revenue requirement. This is not a Federal Energy Regulatory Commission (“FERC”)-approved methodology with FERC determinants; SDG&E plans to file an application with the FERC for approval of this change.

<sup>45</sup> SDG&E proposes that CARE, FERA and Medical Baseline customers will pay 50% of the minimum bill of non-CARE customers. CARE, FERA, and Medical Baseline customers are exempt from certain rate components. Therefore, 50% of the non-CARE minimum bill was scaled over the cost of recoverable rate components. Additionally, for consistency, CARE, FERA, and Medical Baseline customers will all pay the same minimum bill rate components, although they may or may not be exempt from the volumetric portion of the rate component. Medical Baseline customers will not pay the minimum bill for Vehicle-Grid Integration (“VGI”) and California Solar Initiative (“CSI”) components. Department of Water Resources-Bond Charge (“DWR-BC”), GHG and Nuclear Decommissioning (“ND”) will not be included in the calculation of a minimum bill.

<sup>46</sup> D.15-07-001, Finding of Facts (“FOF”) 21.

1 even in the event that a customer does not use energy.”<sup>47</sup> This cost recovery definition is aligned  
2 with SDG&E’s proposed cost recovery for a minimum threshold of service, and would ensure  
3 more equitable cost recovery.

4 In D.15-07-001, the Commission also stated: “We therefore find that the fixed charge  
5 caps do not apply to minimum bills.”<sup>48</sup> The Commission also stated that:

6 ...it follows that Section 739.9(a) refers exclusively to non-volumetric  
7 charges that apply based on demand or the mere existence of a customer  
8 account. A minimum bill is neither. Rather, a minimum bill is “based on the  
9 applicable volumetric rate,” unless “volumetric usage is so low that the  
10 resulting bill would be less than the minimum bill.”<sup>49</sup>

11 Accordingly, SDG&E proposes to recover the costs of its minimum level of service  
12 through a minimum bill rate component. The minimum bill would ensure that all customers pay  
13 for their minimum threshold of service provided by SDG&E, even if they are departing load or  
14 DER customers. The minimum bill should be received as a fitting cost recovery mechanism for  
15 customers because “...[i]t avoids any potential negative impact on conservation associated with a  
16 fixed charge, and it protects lower-usage customers whose fixed costs might be lower.”<sup>50</sup> Lower  
17 usage customers will already be protected from paying for a higher proportion of fixed costs, as  
18 the method used to calculate eligible fixed costs is required to find the minimum observed cost  
19 for transformers and service lines.<sup>51</sup>

20 More fair and equitable recovery of costs from all customers that would result from the  
21 implementation of a fixed charge and minimum bill based on a minimum service requirement  
22 becomes increasingly critical as California strives to reach a Zero-Net Energy (“ZNE”) future,

---

<sup>47</sup> *Id.* at 217.

<sup>48</sup> *Id.* at 225.

<sup>49</sup> *Id.* at 222.

<sup>50</sup> *Id.* at 225.

<sup>51</sup> D.17-09-035 at 21.

1 where all customers have net zero volumetric consumption. SDG&E’s current all-energy tiered  
2 rate structure provides a perverse price signal that encourages customers to bypass the artificially  
3 inflated tiered energy rates that recover more than the costs of energy through the adoption DER  
4 (more specifically, rooftop solar under net energy metering [“NEM”]). Under SDG&E’s current  
5 rate design, the standard rate structure differs according to customer class. The current  
6 residential all-volumetric rate structure creates a distorted price signal that leads to customer  
7 bypass and higher rates for all customer classes, not just residential customers. Because of this  
8 rate structure, a residential NEM customer bypasses and shifts costs that are over three times  
9 greater than that of a business NEM customer. SDG&E’s NEM cost shift as of June 2015 was  
10 approximately \$139 million annually. This has more than doubled in just over two years,  
11 increasing 124% to \$294 million, with 93% of the increase from residential.<sup>52</sup> SDG&E’s  
12 proposed higher minimum bill will ensure that *all* customers pay a minimum level of the cost of  
13 service required to provide them with service, and reduce the effects of this significant NEM cost  
14 shift. This will also support California’s move toward a ZNE future.

### 15 **3. Composite Tier Methodology**

16 The implementation of a fixed charge for residential customers is an important rate  
17 design tool that can help reduce artificially-inflated volumetric rates. Applying the composite  
18 tier methodology would result in the fixed charge offsetting costs only recovered in the Tier 1  
19 rates. D.15-07-001 determined that the IOUs must utilize the composite tier methodology  
20 (including the fixed charge amount as part of the Tier 1 rate for purposes of calculating the tier  
21 differential) when proposing a fixed charge in order to establish an appropriate gradual  
22 differential between rates for the respective blocks of usage.<sup>53</sup> Under this methodology, all

---

<sup>52</sup> As of November 30, 2017.

<sup>53</sup> D.15-07-001 Conclusion of Law (“COL”) 11.

1 revenues collected from the fixed charge must be used to reduce Tier 1 rates. As a result of this  
2 requirement, the introduction of a fixed charge will provide no real relief for upper tier rates.  
3 Using any fixed charge revenues to reduce *only* the Tier 1 volumetric rate would result in an  
4 *increase* of the effective differentials between the Tier 1 and Tier 2 volumetric rates. The  
5 Commission adopted the composite tier methodology due to concerns that “if the utilities are not  
6 required to use the composite tier differential, the rates will essentially be flat, with no  
7 differential between the tiers”.<sup>54</sup> Without the composite tier methodology, the effective tier  
8 differentials would still comply with each IOUs’ glidepath, and be no less than a 25%  
9 differential. Under the composite tier methodology, the introduction of a fixed charge would  
10 result in an *increase* in the differential – this would be a nonsensical result after years of  
11 reducing tier differentials.  
12

---

<sup>54</sup> D.15-07-001 at 97.



1  
2

**Table 3: Comparison of Fixed Charge Proposals With and Without Composite Tier Methodology**

<b>3-Period Default TOU</b>	
No Composite Tier	Composite Tier
<b>Monthly Service Fee</b>	<b>Monthly Service Fee</b>
\$10.00	\$10.00
<b>Minimum Bill</b>	<b>Minimum Bill</b>
\$1.225/day	\$1.225/day
<b>Summer Energy Rates (cents/kWh)</b>	<b>Summer Energy Rates (cents/kWh)</b>
On-Peak: 44.9	On-Peak: 42.5
Off-Peak: 18.7	Off-Peak: 16.3
Super Off-Peak: 12.6	Super Off-Peak: 10.2
Tier 2 Adjustment: 18.3	Tier 2 Adjustment: 25.1
<b>Winter Energy Rates (cents/kWh)</b>	<b>Winter Energy Rates (cents/kWh)</b>
On-Peak: 21.2	On-Peak: 19.6
Off-Peak: 20.3	Off-Peak: 18.6
Super Off-Peak: 19.2	Super Off-Peak: 17.6
Tier 2 Adjustment: 15.2	Tier 2 Adjustment: 21.3
<b>Effective Tier 2/Tier 1 Differential</b>	<b>Effective Tier 2/Tier 1 Differential</b>
1.75	2.15

3  
4  
5  
6  
7  
8  
9

In addition, while SDG&E is proposing a fixed charge in its 3-Period Default TOU rate, SDG&E proposes an exclusion to the fixed charge for its 2-Period Opt-Out TOU rate, thereby providing customers with a TOU option without a fixed charge, targeted at low usage customers that may be adversely impacted by a fixed charge.<sup>55</sup> Therefore, SDG&E asks that the Commission reconsider this methodology and allow the fixed charge to add relief to all energy rates including upper tier rates.

<sup>55</sup> D.15-07-001, at COL 11, requires that at least one opt-in TOU rate should include the default TOU attributes of 1) a baseline credit, 2) no super user electric surcharge, and a minimum bill rather than a fixed monthly charge.

1                                   **4. Summary of the Bill Impacts of SDG&E's 2020 Fixed Charge**  
2                                   **Proposals**

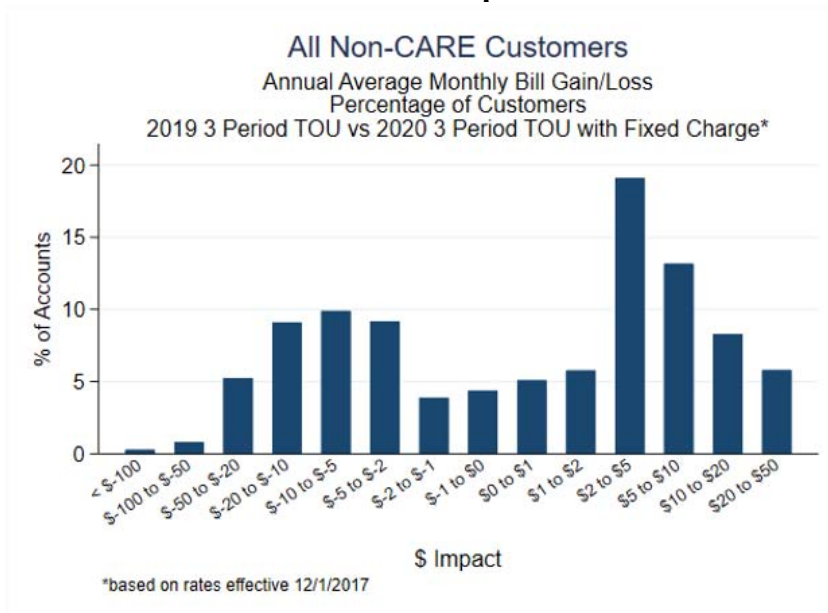
3                   A summary of the bill impacts to Non-CARE and CARE customers of SDG&E's Fixed  
4 Charge proposals: (1) fixed charge at legislative minimum, (2) increased minimum bill, and (3)  
5 reconsideration of composite tier, are presented in Charts 5 and 6. More detailed information  
6 regarding the customer bill impacts from SDG&E's 2020 Fixed Charge proposal is presented in  
7 the Direct Testimony of Jeffrey Shaughnessy. As a result of SDG&E's proposed fixed charge,  
8 43% of Non-CARE customers would experience a bill decrease while 57% would experience a  
9 bill increase, and 32% of CARE/FERA customers would experience a bill decrease while 68%  
10 would experience a bill increase.

11                   For Non-CARE customers, presented in Chart 5 below:

- 12                   •       9% of Non-CARE customers would experience a change in monthly bill (increase  
13                   or decrease) of less than \$1
- 14                   •       47% of customers would experience a change in monthly bill (increase or  
15                   decrease) of less than \$5
- 16                   •       70% of customers would experience a change in monthly bill (increase or  
17                   decrease) of less than \$10

1  
2

**Chart 5: Summary of Non-CARE Bill Impacts from 2020 Fixed Charge Proposals<sup>56,57</sup>**



Bill Impacts	# of Customers
<\$-100	2,492
\$-100 to \$-50	7,231
\$-50 to \$-20	47,353
\$-20 to \$-10	82,060
\$-10 to \$-5	89,187
\$-5 to \$-2	82,736
\$-2 to \$-1	35,037
\$-1 to \$0	39,496
\$0 to \$1	45,902
\$1 to \$2	52,043
\$2 to \$5	172,207
\$5 to \$10	118,683
\$10 to \$20	74,660
\$20 to \$50	52,239
\$50 to \$100	0
\$100+	0
<b>Total</b>	<b>901,326</b>

3  
4  
5  
6  
7  
8  
9  
10  
11

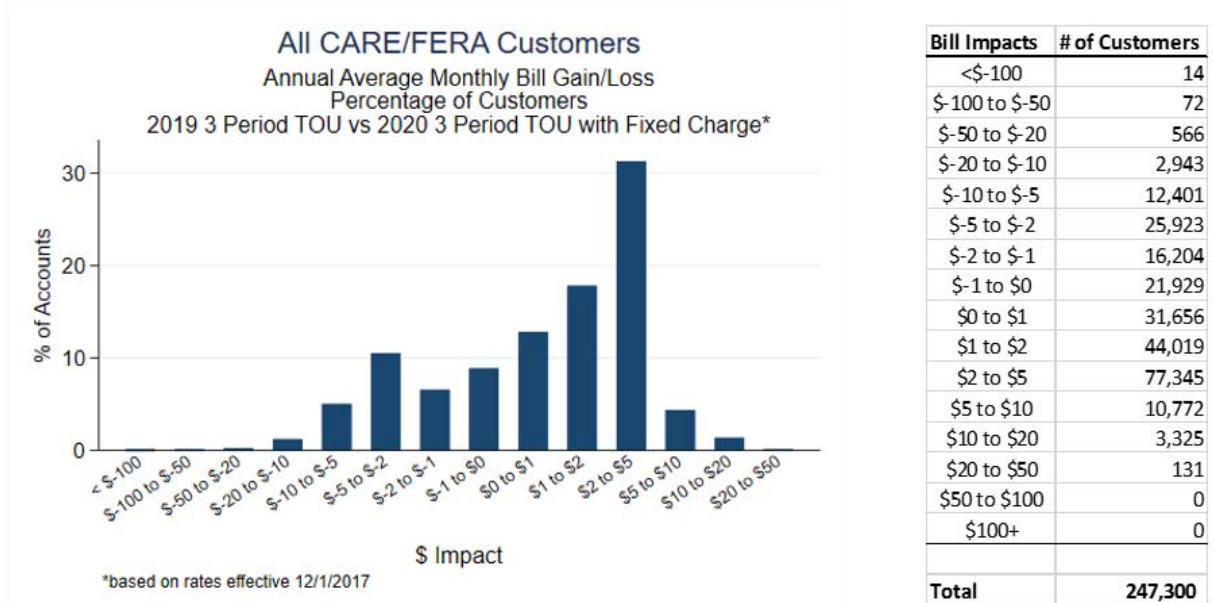
For CARE/FERA customers, presented in Chart 6 below:

- 22% of CARE customers would experience a change in monthly bill (whether it be an increase or a decrease) of less \$1
- 88% of CARE customers would experience a change in monthly bill (whether it be an increase or a decrease) of less \$5
- 97% of CARE customers would experience a change in monthly bill (whether it be an increase or a decrease) of less \$10

<sup>56</sup> SDG&E’s 2020 Fixed Charge proposals include: (1) introduction of residential fixed charge at the legislative minimum, (2) increased minimum bill to recover minimum threshold of cost of service, and (3) reconsideration of composite tier methodology.

<sup>57</sup> Bill impacts assume no change to historic customer usage from October 2016 – September 2017 and only include customers with 12-months of data on the standard residential rate. Medical Baseline and Direct Access customers have been excluded for these analyses.

Chart 6: Summary of CARE Bill Impacts from 2020 Fixed Charge Proposals<sup>58,59</sup>



In addition, Charts 7 and 8 provide the impacts of SDG&E’s fixed charge proposal to illustrative customer examples with different levels of usage. The following considers four Non-CARE and four CARE customers with differing levels of usage in Table 4 below.

Table 4: Illustrative Customer Examples – 2020 Fixed Charge Proposals

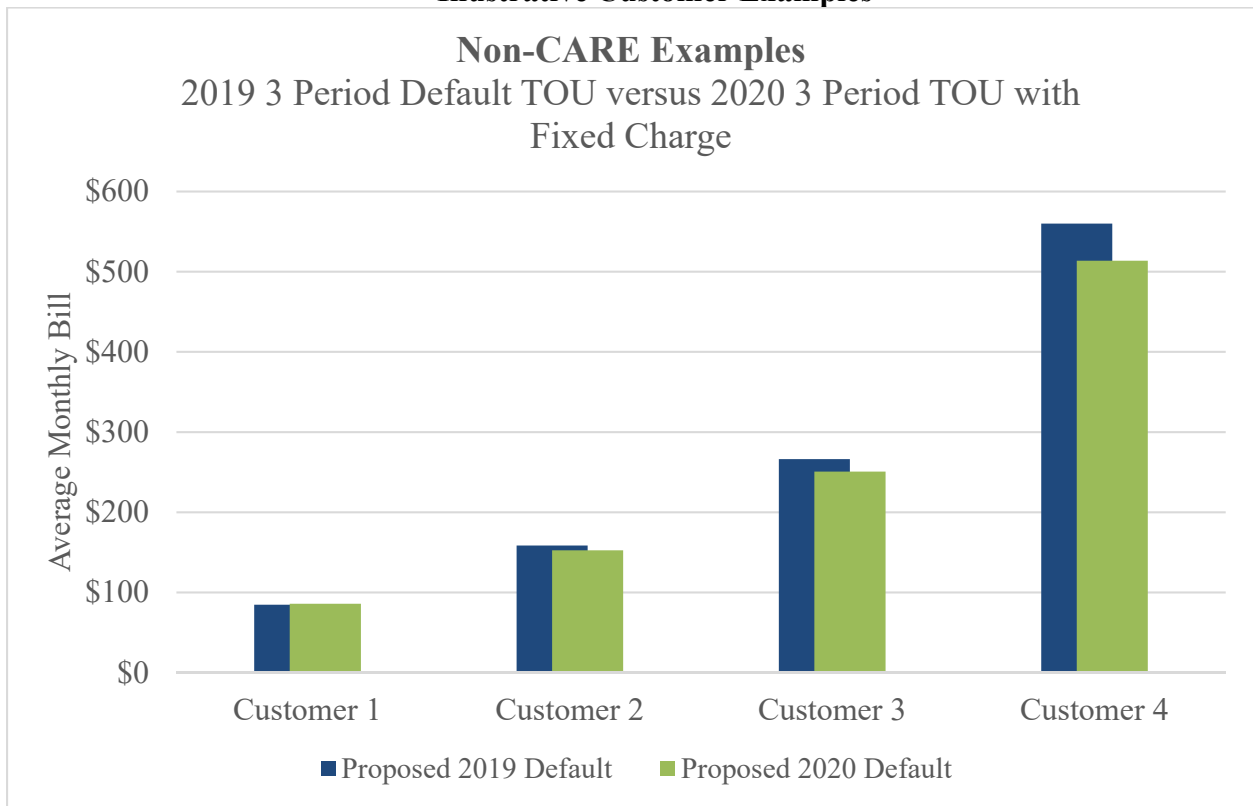
Customer	Average Monthly Usage (kWh)	Average On-Peak Usage %	Customer	Average Monthly Usage (kWh)	Average On-Peak Usage %
<b>Non-CARE:</b>			<b>CARE:</b>		
<b>Customer 1</b>	351	24%	<b>Customer 5</b>	321	34%
<b>Customer 2</b>	531	28%	<b>Customer 6</b>	544	24%
<b>Customer 3</b>	742	36%	<b>Customer 7</b>	746	29%
<b>Customer 4</b>	1,454	27%	<b>Customer 8</b>	1,664	31%

<sup>58</sup> SDG&E’s 2020 Fixed Charge proposals include: (1) introduction of residential fixed charge at legislative minimum, (2) increased minimum bill to recover minimum threshold of cost of service, and (3) reconsideration of composite tier methodology.

<sup>59</sup> Bill impacts assume no change to historic customer usage from October 2016 – September 2017 and only include customers with 12-months of data on the standard residential rate. Medical Baseline and Direct Access customers have been excluded for these analyses.

1 Customers 2-4 and 6-8 (with usage of approximately 500-1500 kWh per month) benefit under  
 2 SDG&E's fixed charge proposals. Customers 1 and 5 (with usage of approximately 300 kWh  
 3 per month) would see a bill impact increase of less than 2%. In addition, for customers that  
 4 would be negatively impacted by the introduction of the residential fixed charge, SDG&E's  
 5 simpler 2-Period TOU Opt-Out rate without a fixed charge would be available.<sup>60</sup>

6 **Chart 7: Impact of SDG&E's 2020 Fixed Charge Proposal on Non-CARE**  
 7 **Illustrative Customer Examples**

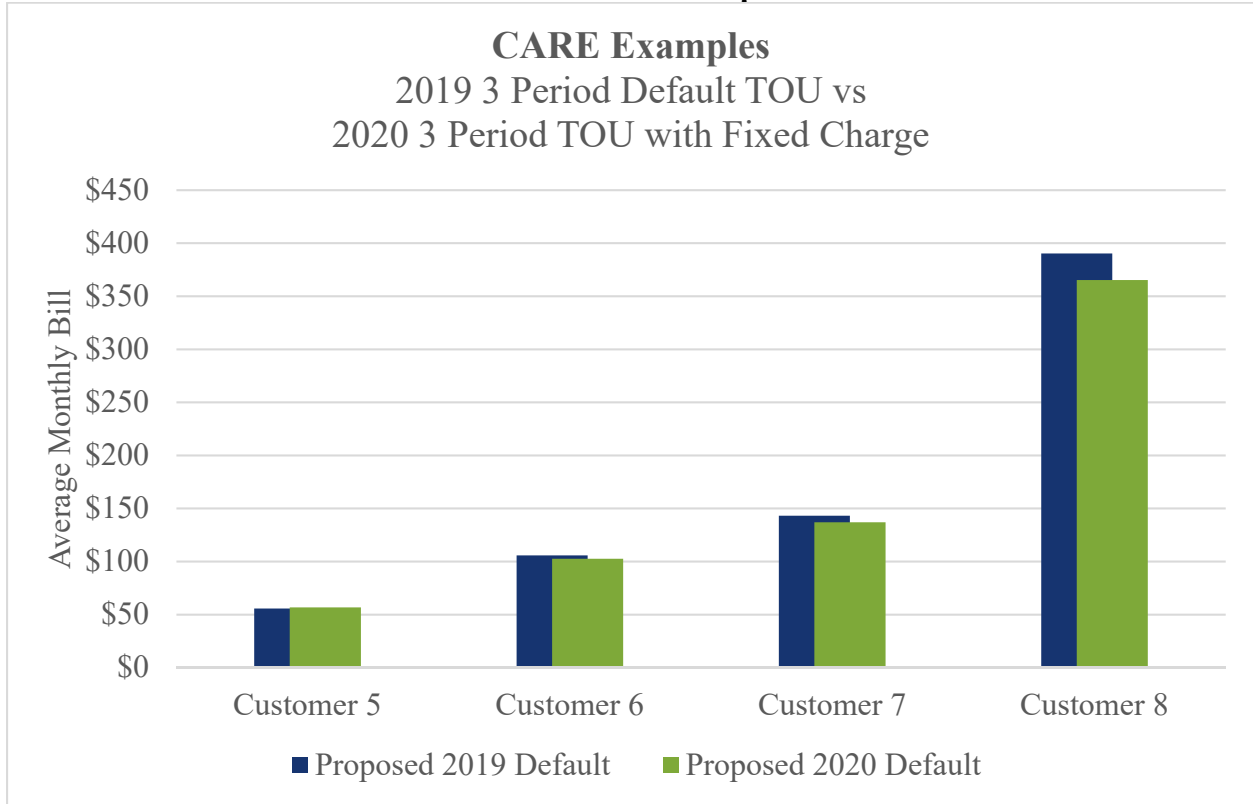


8  
9

<sup>60</sup> D.15-07-001 at 176-177.

1  
2

**Chart 8: Impact of SDG&E's 2020 Fixed Charge Proposals on CARE Illustrative Customer Examples**

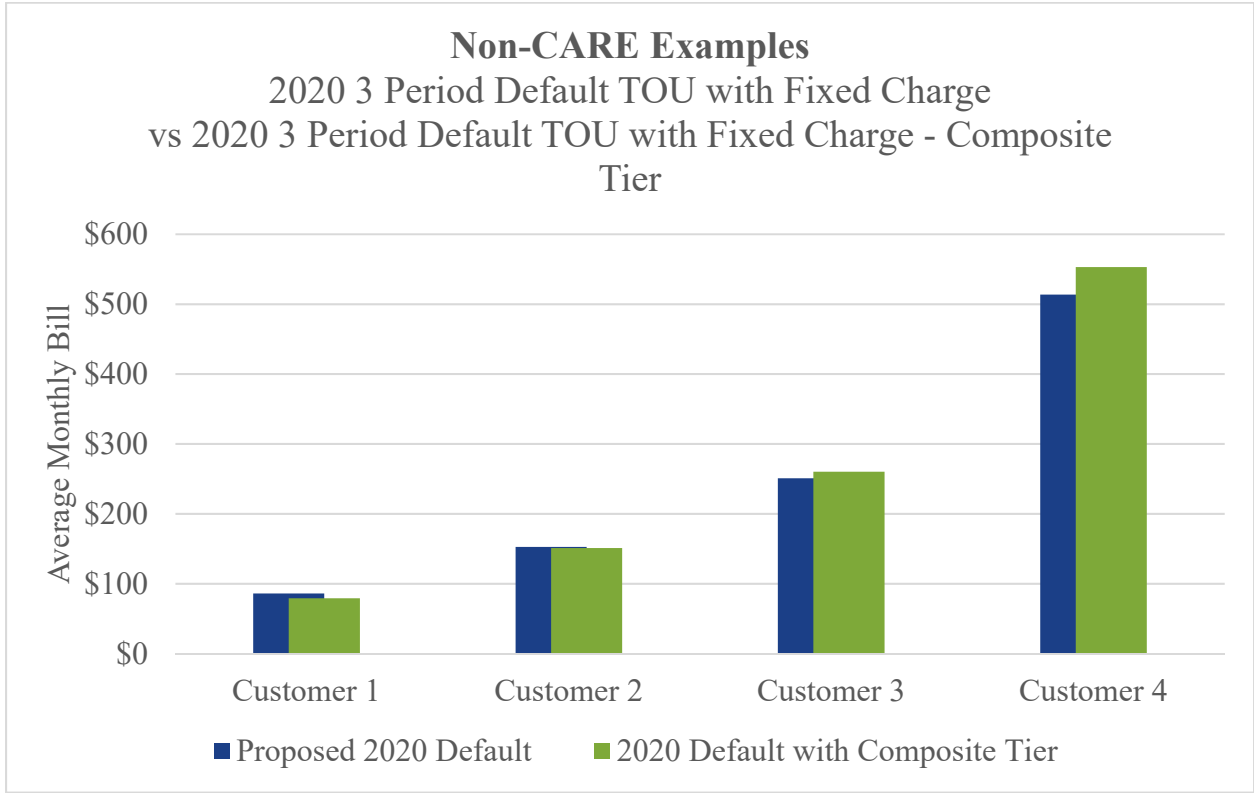


3

4 As displayed in Charts 9 and 10, the impacts of a fixed charge with a composite tier would differ  
5 from SDG&E's proposal without the composite tier methodology. Customers 3-4 and 6-8 would  
6 see bill increases in the composite tier scenario, while only Customers 1, 2, and 5 (low usage)  
7 would see bill decreases.

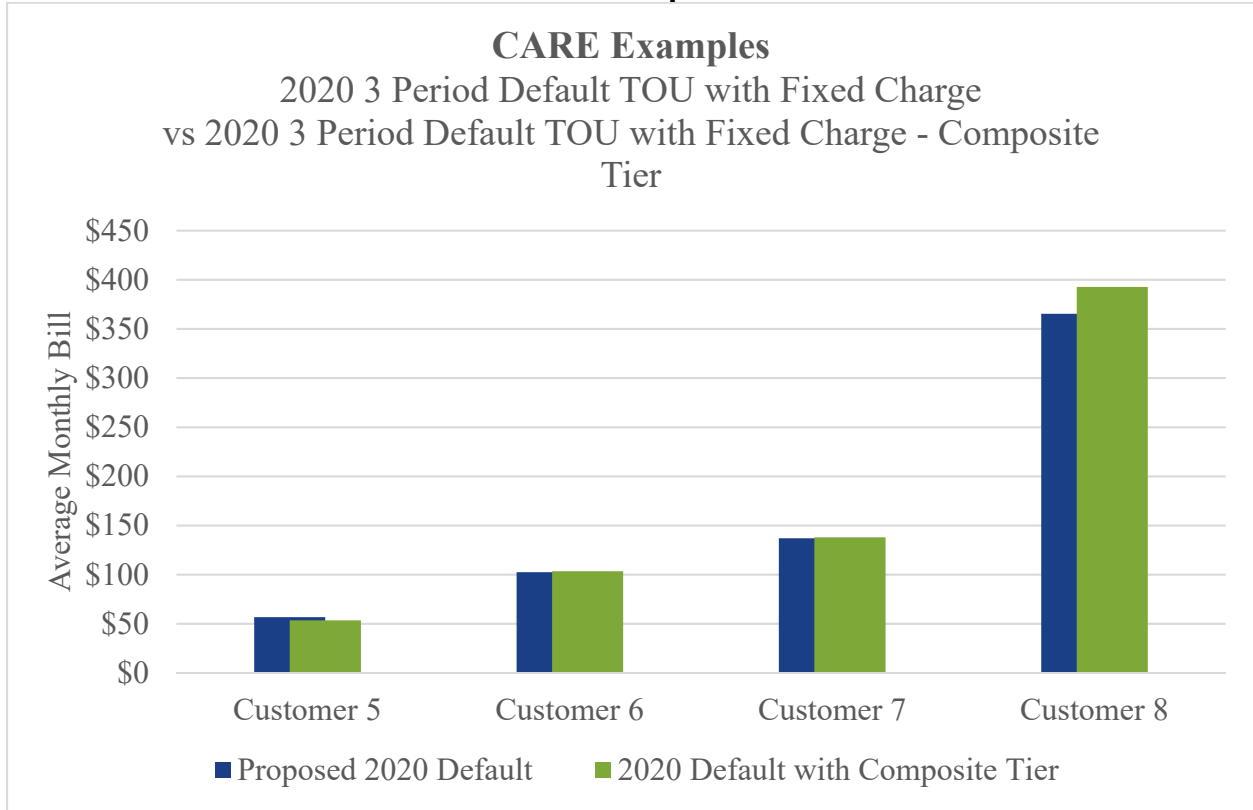
1  
2

**Chart 9: Impact of Composite Tier Methodology to Non-CARE Illustrative Customer Examples**



3  
4

**Chart 10: Impact of Composite Tier Methodology to CARE Illustrative Customer Examples**



**5. Higher Fixed Charge Option**

Currently, SDG&E has approval through D.17-08-030 to implement an un-tiered TOU option for residential customers with electric vehicles with a \$16 fixed charge.<sup>61</sup> To ensure that this rate option will provide customers with a meaningful option in the context of the changes being proposed in this RDW Application, SDG&E proposes the following modifications to this option: (1) open the availability to all residential customers, and (2) increase the fixed charge for this option to recover the average residential costs that are unrelated to energy usage. A fixed charge of \$67.30 per month will result in an average compensating decrease in energy rates of 15 cents/kWh. The development of the fixed charge value is discussed in the Direct Testimony of Jeffrey Shaughnessy.

<sup>61</sup> D.17-08-030 at 34.



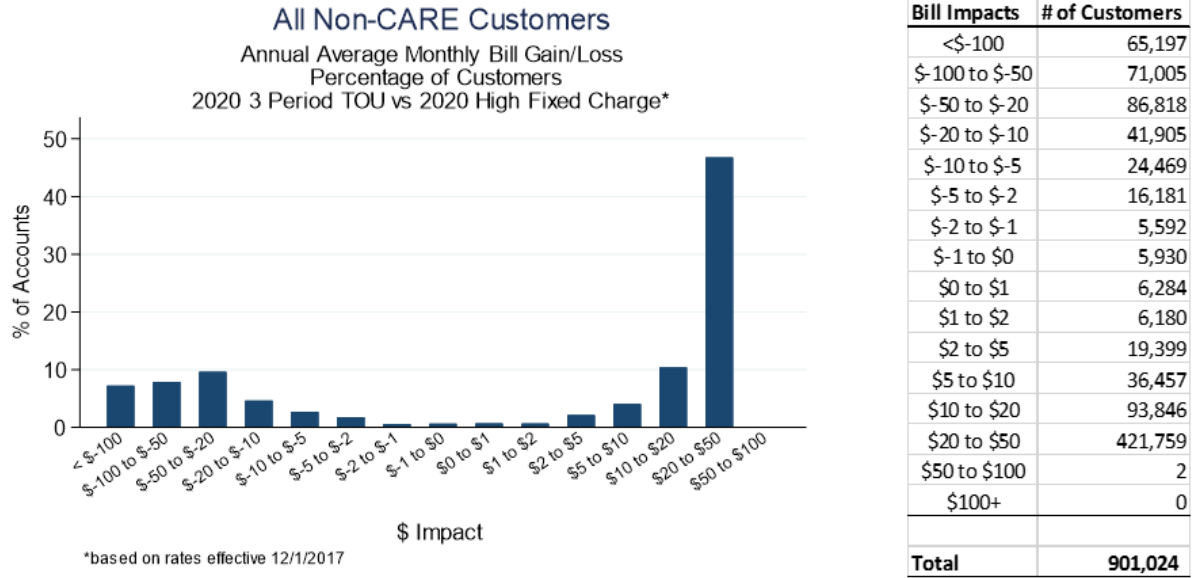
1           While this option may not be the right option for all of SDG&E’s residential customers, it  
2 is an important option for residential customers that may still be challenged with high volumetric  
3 rates after Mass TOU Default, while ensuring that these customers pay for the infrastructure  
4 needed to deliver safe and reliable energy service.

5           A summary of the bill impacts to Non-CARE customers of SDG&E’s Higher Fixed  
6 Charge proposal, assuming all customers were to elect this option, is presented in Chart 11 with  
7 more detailed information presented in the Direct Testimony of Jeffrey Shaughnessy. As  
8 displayed in Chart 11, 35% of Non-CARE customers would experience a bill decrease while  
9 65% would experience a bill increase.

10

1 **Chart 11: Summary Of Non-Care Bill Impacts:**

2 **SDG&E’s Proposed Higher Fixed Charge Option<sup>62</sup>**

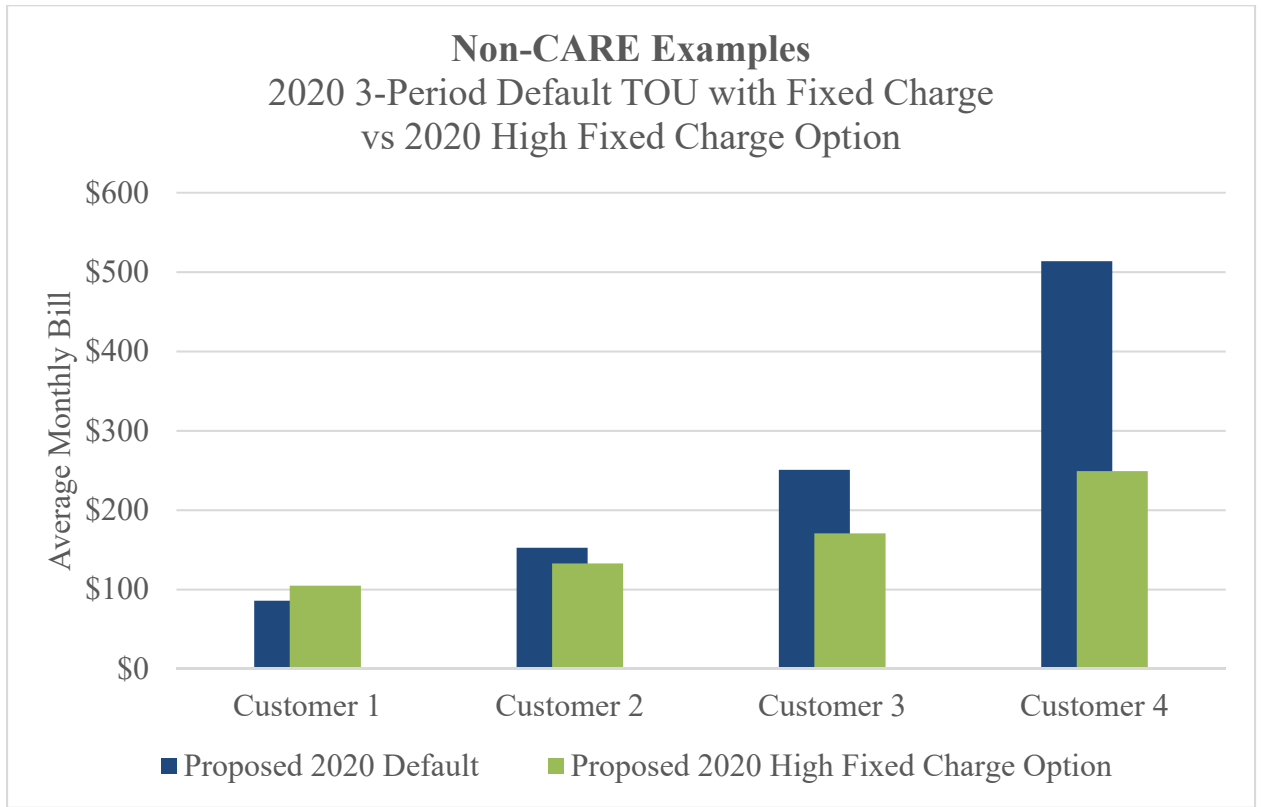


3  
4 In addition, Charts 12 and 13 provide illustrative Non-CARE and CARE customer examples, if  
5 they were to elect service on SDG&E’s proposed higher fixed charge option. Both Non-CARE  
6 and CARE customers have the potential to benefit from this rate option. Customers 2-4 and 6-8  
7 (with usage approximately 500-1500 kWh per month) benefit under SDG&E’s fixed charge  
8 proposals. Customers 1 and 5 (with usage approximately 300 kWh per month) would be  
9 negatively impacted and as such should not elect this option.

<sup>62</sup> Bill impacts assume no change to historic customer usage from October 2016 – September 2017 and only include customers with 12-months of data on the standard residential rate. Medical Baseline and Direct Access customers have been excluded for these analyses.

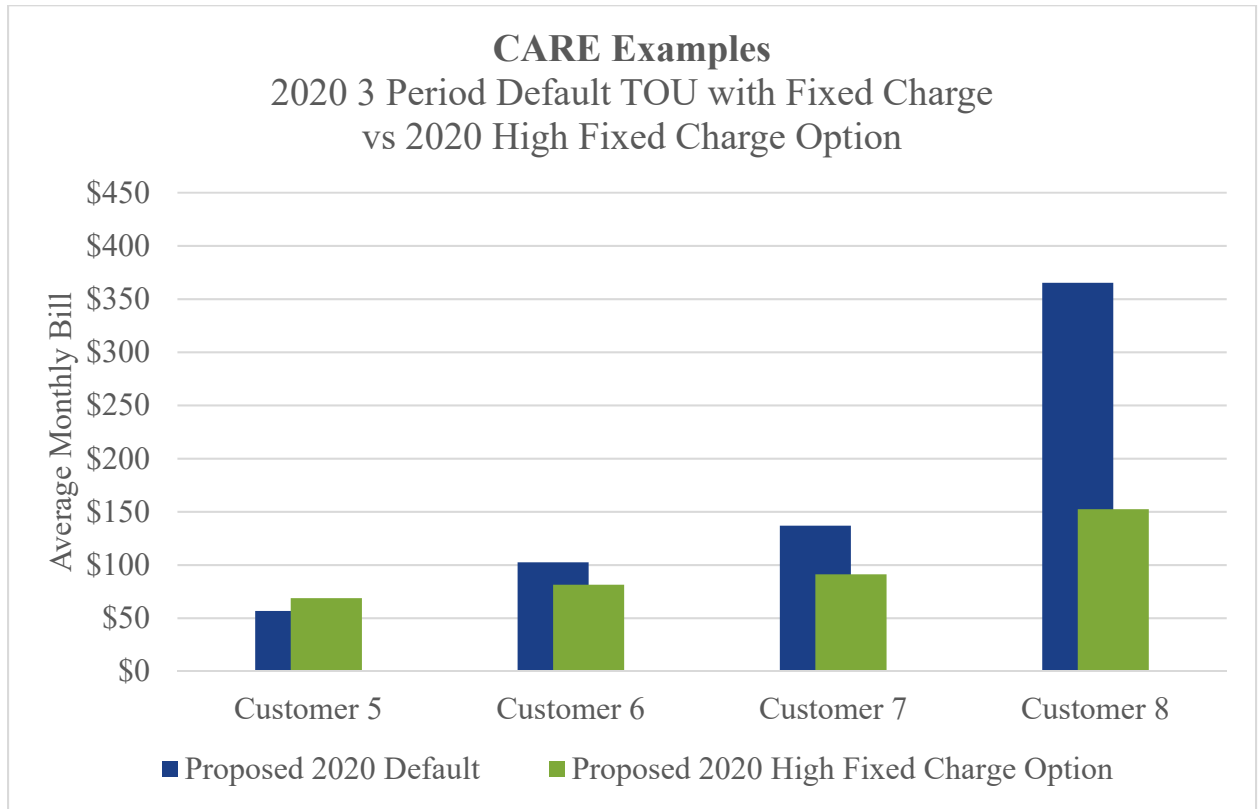
1  
2

**Chart 12: Impact On Non-Care Illustrative Customer Examples:  
SDG&E's Proposed Higher Fixed Charge Option**



3  
4

1 **Chart 13: Impact On Care Illustrative Customer:**  
 2 **SDG&E’s Proposed Higher Fixed Charge Option**



3  
 4 **C. CARE Restructuring**

5 The Commission’s January 23, 3017 Ruling confirmed the scope and laid out a  
 6 procedural schedule for the CARE Restructuring track of Phase 3 of R.12-06-013.<sup>63</sup> This  
 7 schedule was superseded by a June 23, 2017 Email Ruling Modifying Procedural Schedule for  
 8 CARE Restructuring Track (“June 23, 2017 Ruling”). On August 1, 2017, the Energy Division  
 9 distributed CARE Datasets compiled by the IOUs, based on data requirements identified by  
 10 parties within the CARE Working Group (“WG”). Parties utilized these datasets to identify  
 11 possible issues with the current CARE program and discount, and possible solutions to those

---

<sup>63</sup> January 23, 2017 Assigned Commissioner and Administrative Law Judge’s Ruling Amending Scoping Memorandum and Ruling at 14.

1 perceived issues. The CARE WG met on October 5, 2017 and established the need for updated  
2 datasets. The current procedural schedule requires that a Consensus Recommendation be filed  
3 by January 31, 2018 as a supplement to the IOUs' 2018 RDW filings. On November 21, 2017,  
4 the IOUs received direction from the Energy Division asking the IOUs to file a motion on behalf  
5 of the CARE WG, requesting a suspension in the CARE Restructuring schedule.<sup>64</sup> The IOUs  
6 plan to file this motion prior to the end of 2017.

7 D.15-07-001 adopted SDG&E's proposal to move its CARE discount out of volumetric  
8 rates and into a line-item discount, with the exception of the exemption from the DWR-BC, CSI  
9 and CARE Discount charges.<sup>65</sup> In addition, beginning on January 1, 2017, CARE customers are  
10 also exempt from paying VGI program costs.<sup>66</sup> In approving this approach, D.15-07-001 noted  
11 that parties are encouraged to "consider this approach for the other utilities in Phase 2 or in  
12 future proceedings."<sup>67</sup> SDG&E reiterates its belief that a line-item discount is the best approach  
13 for the CARE discount, as it is simple for SDG&E to explain, easy for customers to understand,  
14 and an equitable method for providing a discount to all of SDG&E's CARE-enrolled customers.  
15 As such, SDG&E supports the Commission's prior recommendation that this discount structure  
16 be considered for implementation by PG&E and SCE.

17 Currently, the CARE average effective discount is 38% (to decrease 1% each year until  
18 35% legislative compliance is reached). For bundled CARE customers, the CARE average  
19 effective discount includes: (1) the 50% discount on the minimum bill, (2) exemptions from the  
20 CSI, VGI, DWR-BC, and CARE surcharges, and (3) a line-item bill discount. In addition to  
21 these benefits, current Direct Access("DA")/Community Choice Aggregation ("CCA") CARE

---

<sup>64</sup> Email direction from the Energy Division, received November 21, 2017.

<sup>65</sup> D.15-07-001 at 237.

<sup>66</sup> D.16-01-045, COL 38.

<sup>67</sup> *Id.*

1 customers receive an exemption from the Power Charge Indifference Adjustment (“PCIA”),  
2 which results in DA/CCA CARE customers receiving a larger discount than bundled CARE  
3 customers. This issue is being addressed as part of Track 1 of PCIA reform (R.17-06-026).<sup>68</sup>

4 **V. CONCLUSION**

5 SDG&E respectfully asks the Commission to approve the following proposals:

- 6 • Residential Mass TOU Default rate and a menu of options to provide choices that  
7 will allow customers to have better control of their electric bills, including a  
8 simpler opt-out TOU rate, to be effective January 1, 2019;
- 9 • Implementation of a residential fixed charge to provide customers with some  
10 relief from artificially high tiered rates and greater control over their bills. A  
11 higher minimum bill to better provide rates that are fair and equitable and ensure  
12 that all customers pay a reasonable share of the cost of the utility infrastructure  
13 needed to serve all customers. These proposals should be effective January 1,  
14 2020; and
- 15 • SDG&E’s proposed Mass TOU Default migration plan.

16 This concludes my testimony.

---

<sup>68</sup> Per September 25, 2017 Scoping Memo and Ruling of Assigned Commissioner at 3, Track 1 of R.17-06-026 addresses PCIA Exemptions for CARE and Medical Baseline.

1 **VI. STATEMENT OF QUALIFICATIONS**

2 My name is Cynthia Fang and my business address is 8330 Century Park Court, San  
3 Diego, California 92123. I am the Manager of Customer Pricing at SDG&E. My primary  
4 responsibilities include the development of cost-of-service studies, determination of revenue  
5 allocation and electric rate design methods, analysis of ratemaking theories, preparation of  
6 various regulatory filings, and overseeing the electric load analysis, electric demand forecasting  
7 and electric rate strategy for SDG&E. I began work at SDG&E in May 2006 as a Regulatory  
8 Economic Advisor and have held positions of increasing responsibility in the Electric Rate  
9 Design group. Prior to joining SDG&E, I was employed by the Minnesota Department of  
10 Commerce, Energy Division, as a Public Utilities Rates Analyst from 2003 through May 2006.

11 In 1993, I graduated from the University of California at Berkeley with a Bachelor of  
12 Science in Political Economics of Natural Resources. I also attended the University of  
13 Minnesota where I completed all coursework required for a Ph.D. in Applied Economics.

14 I have previously submitted testimony before the Commission and the FERC regarding  
15 SDG&E's electric rate design and other regulatory proceedings. In addition, I have previously  
16 submitted testimony and testified before the Minnesota Public Utilities Commission on  
17 numerous rate and policy issues applicable to electric and natural gas utilities.

# Attachment A

## National Survey of Residential Fixed Charges



## Attachment A

US IOUs with Residential Electric Service							
Utilities Utilizing a Fixed Charge							
Type	Name	Service State	FC/MIN	Amount	per	per month equivalent <sup>1</sup>	
1	IOU	Alaska Electric Light&Power Co	AK	FC	\$9.22	month	\$9.22
2	IOU	Alaska Power and Telephone Co	AK	FC	\$13.85	meter/month	\$13.85
3	IOU	Entergy Arkansas Inc	AK	FC	\$8.40	month	\$8.40
4	IOU	Alabama Power	AL	FC	\$14.50	month	\$14.50
5	IOU	Empire District Electric Co - AR	AR	FC	\$11.04	month	\$11.04
6	IOU	Oklahoma Gas & Electric Co - AR	AR	FC	\$9.75	month	\$9.75
7	IOU	Southwestern Electric Power Co - AR	AR	FC	\$7.75	meter/month	\$7.75
8	IOU	AJO Improvement Co - Electric Division	AZ	FC	\$5.20	month	\$5.20
9	IOU	Arizona Public Service Co	AZ	FC	\$0.33	day	\$9.90
10	IOU	UNS Electric, Inc	AZ	FC	\$15.00	month	\$15.00
11	IOU	Tucson Electric Power Co	AZ	FC	\$13.00	month	\$13.00
12	IOU	PacifiCorp - CA	CA	FC	\$7.20	month	\$7.20
13	IOU	Southern California Edison	CA	FC	\$0.03	meter/day	\$0.93
14	IOU	Bear Valley Electric Service	CA	FC	\$0.21	meter/day	\$6.30
15	IOU	Public Service Co of Colorado	CO	FC	\$6.54	month	\$6.54
16	IOU	Black Hills/Colorado Elec.Util	CO	FC	\$16.50	month	\$16.50
17	IOU	Eversource	CT	FC	\$19.25	month	\$19.25
18	IOU	United Illuminating Co	CT	FC	\$9.67	month	\$9.67
19	IOU	Potomac Electric Power Co - DC	DC	FC	\$13.00	month	\$13.00
20	IOU	Delmarva Power	DE	FC	\$11.70	month	\$11.70
21	IOU	Florida Power & Light Co	FL	FC	\$7.87	month	\$7.87
22	IOU	Duke Energy Florida, LLC	FL	FC	\$8.76	month	\$8.76
23	IOU	Florida Public Utilities Co	FL	FC	\$14.00	month	\$14.00
24	IOU	Gulf Power Co	FL	FC	\$0.65	day	\$19.50
25	IOU	Tampa Electric Co	FL	FC	\$16.62	month	\$16.62
26	IOU	Georgia Power Co	GA	FC	\$10.00	month	\$10.00
27	IOU	Hawaii Electric Light Co Inc	HI	FC	\$10.50	month	\$10.50
28	IOU	Maui Electric Co Ltd	HI	FC	\$8.50	month	\$8.50
29	IOU	Hawaiian Electric Co Inc	HI	FC	\$9.00	month	\$9.00
30	IOU	Interstate Power and Light Co - IA	IA	FC	\$0.35	meter/day	\$10.36
31	IOU	MidAmerican Energy Co - IA	IA	FC	\$8.50	meter/month	\$8.50
32	IOU	Idaho Power Co - ID	ID	FC	\$5.00	month	\$5.00
33	IOU	PacifiCorp (aka Rocky Mountain Power)	ID	FC	\$5.00	month	\$5.00
34	IOU	Avista Corp - ID	ID	FC	\$5.75	month	\$5.75
35	IOU	Commonwealth Edison Co	IL	FC	\$15.04	month	\$15.04
36	IOU	MidAmerican Energy Co - IL	IL	FC	\$8.97	meter/month	\$8.97
37	IOU	Mt Carmel Public Utility Co	IL	FC	\$12.00	month	\$12.00
38	IOU	Ameren Illinois Company	IL	FC	\$16.40	month	\$16.40
39	IOU	Indianapolis Power & Light Co	IN	FC	\$17.00	month	\$17.00
40	IOU	Indiana Michigan Power Co	IN	FC	\$7.30	month	\$7.30
41	IOU	Northern Indiana Pub Serv Co	IN	FC	\$14.00	month	\$14.00
42	IOU	Duke Energy Indiana Inc	IN	FC	\$9.40	month	\$9.40
43	IOU	Southern Indiana Gas & Elec Co	IN	FC	\$11.00	month	\$11.00
44	IOU	Empire District Electric Co - KS	KS	FC	\$14.00	month	\$14.00
45	IOU	Kansas City Power & Light Co - KS	KS	FC	\$14.00	month	\$14.00
46	IOU	Westar Energy Inc	KS	FC	\$14.50	month	\$14.50
47	IOU	Kentucky Utilities Co - KY	KY	FC	\$12.25	month	\$12.25
48	IOU	Louisville Gas & Electric Co	KY	FC	\$12.25	month	\$12.25
49	IOU	Duke Energy Kentucky	KY	FC	\$4.50	month	\$4.50
50	IOU	Kentucky Power Co	KY	FC	\$11.00	month	\$11.00
51	IOU	Cleco Power LLC	LA	FC	\$9.00	month	\$9.00
52	IOU	Entergy New Orleans Inc	LA	FC	\$8.07	month	\$8.07
53	IOU	Southwestern Electric Power Co - LA	LA	FC	\$8.00	meter/month	\$8.00
54	IOU	Massachusetts Electric Co	MA	FC	\$5.50	month	\$5.50
55	IOU	Nantucket Electric Co	MA	FC	\$5.50	month	\$5.50
56	IOU	Fitchburg Gas & Elec Light Co	MA	FC	\$7.00	meter/month	\$7.00
57	IOU	Western Massachusetts Elec Co	MA	FC	\$6.00	month	\$6.00
58	IOU	NSTAR Electric Company	MA	FC	\$5.68	month	\$5.68
59	IOU	Baltimore Gas & Electric Co	MD	FC	\$7.90	month	\$7.90
60	IOU	Delmarva Power	MD	FC	\$8.17	month	\$8.17
61	IOU	The Potomac Edison Company - MD	MD	FC	\$5.00	month	\$5.00
62	IOU	Potomac Electric Power Co - MD	MD	FC	\$7.60	month	\$7.60
63	IOU	Alpena Power Co	MI	FC	\$5.00	month	\$5.00
64	IOU	Consumers Energy Co	MI	FC	\$7.00	month	\$7.00
65	IOU	DTE Electric Company	MI	FC	\$7.50	month	\$7.50
66	IOU	Indiana Michigan Power Co - MI	MI	FC	\$7.25	month	\$7.25
67	IOU	Northern States Power Co - MI	MI	FC	\$8.75	month	\$8.75
68	IOU	Upper Peninsula Power Company	MI	FC	\$15.00	month	\$15.00
69	IOU	Upper Michigan Energy Resources Corp.	MI	FC	\$12.00	month	\$12.00
70	IOU	ALLETE, Inc. (aka Minnesota Power)	MN	FC	\$8.00	month	\$8.00
71	IOU	Northern States Power Co - MN <sup>2</sup>	MN	FC	\$8.00	month	\$8.00

Attachment A

US IOUs with Residential Electric Service							
Utilities Utilizing a Fixed Charge							
Type	Name	Service State	FC/MIN	Amount	per	per month equivalent <sup>1</sup>	
72	IOU	Northwestern Wisconsin Elec Co - MN	MN	FC	\$11.00	month	\$11.00
73	IOU	Otter Tail Power Co - MN	MN	FC	\$8.50	month	\$8.50
74	IOU	Empire District Electric Co - MO	MO	FC	\$13.00	month	\$13.00
75	IOU	Kansas City Power & Light Co - MO	MO	FC	\$12.62	month	\$12.62
76	IOU	KCP&L Greater Missouri Operations Co.	MO	FC	\$10.43	month	\$10.43
77	IOU	Union Electric Co - (MO)	MO	FC	\$9.00	month	\$9.00
78	IOU	Entergy Mississippi Inc	MS	FC	\$6.75	month	\$6.75
79	IOU	Mississippi Power Co	MS	FC	\$0.78	day	\$23.40
80	IOU	Montana-Dakota Utilities Co - MT	MT	FC	\$0.17	day	\$5.10
81	IOU	NorthWestern Energy LLC - (MT)	MT	FC	\$4.10	month	\$4.10
82	IOU	Duke Energy Progress - NC	NC	FC	\$11.13	month	\$11.13
83	IOU	Duke Energy Carolinas, LLC	NC	FC	\$11.80	month	\$11.80
84	IOU	Virginia Electric & Power Co - NC	NC	FC	\$10.96	month	\$10.96
85	IOU	Montana-Dakota Utilities Co - ND	ND	FC	\$0.46	day	\$13.80
86	IOU	Northern States Power Co - ND	ND	FC	\$14.50	month	\$14.50
87	IOU	Otter Tail Power Co - ND	ND	FC	\$8.00	month	\$8.00
88	IOU	Public Service Co of NH	NH	FC	\$12.64	month	\$12.64
89	IOU	Unitil Energy Systems	NH	FC	\$15.24	meter/month	\$15.24
90	IOU	Liberty Utilities (Granite Hill Electric) Corp	NH	FC	\$14.54	month	\$14.54
91	IOU	Atlantic City Electric	NJ	FC	\$5.00	month	\$5.00
92	IOU	Jersey Central Power & Lt Co	NJ	FC	\$2.98	month	\$2.98
93	IOU	Public Service Elec & Gas Co	NJ	FC	\$2.27	month	\$2.27
94	IOU	Rockland Electric Co	NJ	FC	\$4.44	month	\$4.44
95	IOU	El Paso Electric Co	NM	FC	\$7.00	month	\$7.00
96	IOU	Public Service Co of NM	NM	FC	\$7.00	month	\$7.00
97	IOU	Southwestern Public Service Co - NM	NM	FC	\$8.50	month	\$8.50
98	IOU	Nevada Power Co <sup>3</sup>	NV	FC	\$12.75	month	\$12.75
99	IOU	Sierra Pacific Power Co <sup>3</sup>	NV	FC	\$12.75	month	\$12.75
100	IOU	Central Hudson Gas & Elec Corp	NY	FC	\$24.00	month	\$24.00
101	IOU	Consolidated Edison Co-NY Inc	NY	FC	\$15.76	month	\$15.76
102	IOU	New York State Elec & Gas Corp	NY	FC	\$15.11	month	\$15.11
103	IOU	Niagara Mohawk Power Corp.	NY	FC	\$17.00	month	\$17.00
104	IOU	Orange & Rockland Utils Inc	NY	FC	\$20.00	month	\$20.00
105	IOU	Rochester Gas & Electric Corp	NY	FC	\$21.38	month	\$21.38
106	IOU	Duke Energy - Ohio	OH	FC	\$6.00	month	\$6.00
107	IOU	Cleveland Electric Illum Co	OH	FC	\$4.00	month	\$4.00
108	IOU	Dayton Power & Light Co	OH	FC	\$4.25	month	\$4.25
109	IOU	Ohio Edison Co	OH	FC	\$4.00	month	\$4.00
110	IOU	Ohio Power Co	OH	FC	\$8.40	month	\$8.40
111	IOU	The Toledo Edison Co	OH	FC	\$4.00	month	\$4.00
112	IOU	Public Service Co of Oklahoma	OK	FC	\$20.00	month	\$20.00
113	IOU	Empire District Electric Co - OK	OK	FC	\$12.50	month	\$12.50
114	IOU	Oklahoma Gas & Electric Co - OK	OK	FC	\$13.00	month	\$13.00
115	IOU	Idaho Power Co - OR	OR	FC	\$8.00	month	\$8.00
116	IOU	PacifiCorp - OR	OR	FC	\$9.50	month	\$9.50
117	IOU	Portland General Electric Co	OR	FC	\$10.50	month	\$10.50
118	IOU	Citizens Electric Co	PA	FC	\$11.50	month	\$11.50
119	IOU	Duquesne Light Co	PA	FC	\$10.00	month	\$10.00
120	IOU	Metropolitan Edison Co	PA	FC	\$11.25	month	\$11.25
121	IOU	Pennsylvania Electric Co - PA	PA	FC	\$11.25	month	\$11.25
122	IOU	PPL Electric Utilities Corp	PA	FC	\$16.67	month	\$16.67
123	IOU	Pennsylvania Power Co	PA	FC	\$11.00	month	\$11.00
124	IOU	PECO Energy Co	PA	FC	\$8.45	month	\$8.45
125	IOU	Pike County Light & Power Co	PA	FC	\$8.50	month	\$8.50
126	IOU	UGI Utilities, Inc	PA	FC	\$5.50	month	\$5.50
127	IOU	Wellsborough Electric Co	PA	FC	\$10.95	month	\$10.95
128	IOU	West Penn Power Company	PA	FC	\$7.44	month	\$7.44
129	IOU	Block Island Power Co	RI	FC	\$12.38	month	\$12.38
130	IOU	The Narragansett Electric Co	RI	FC	\$5.00	month	\$5.00
131	IOU	Duke Energy Progress - SC	SC	FC	\$9.06	month	\$9.06
132	IOU	Duke Energy Carolinas, LLC	SC	FC	\$8.29	month	\$8.29
133	IOU	Lockhart Power Co	SC	FC	\$7.50	month	\$7.50
134	IOU	South Carolina Electric&Gas Co	SC	FC	\$10.00	month	\$10.00
135	IOU	Montana-Dakota Utilities Co - SD	SD	FC	\$0.25	day	\$7.41
136	IOU	MidAmerican Energy Co - SD	SD	FC	\$8.00	month	\$8.00
137	IOU	Northern States Power Co - SD <sup>2</sup>	SD	FC	\$8.25	month	\$8.25
138	IOU	NorthWestern Energy - SD	SD	FC	\$6.00	month	\$6.00
139	IOU	Otter Tail Power Co - SD	SD	FC	\$8.00	month	\$8.00
140	IOU	Black Hills Power Inc - SD	SD	FC	\$9.25	month	\$9.25
141	IOU	Kingsport Power Co	TN	FC	\$12.63	month	\$12.63
142	IOU	El Paso Electric Co	TX	FC	\$6.90	month	\$6.90

Attachment A

US IOUs with Residential Electric Service							
Utilities Utilizing a Fixed Charge							
Type	Name	Service State	FC/MIN	Amount	per	per month equivalent <sup>1</sup>	
143	IOU	Southwestern Electric Power Co - TX	TX	FC	\$8.00	month	\$8.00
144	IOU	Southwestern Public Service Co - TX	TX	FC	\$10.00	month	\$10.00
145	IOU	Entergy Texas Inc.	TX	FC	\$7.00	month	\$7.00
146	IOU	PacifiCorp - UT	UT	FC	\$6.00	month	\$6.00
147	IOU	Appalachian Power Co - VA	VA	FC	\$8.35	month	\$8.35
148	IOU	Kentucky Utilities Co - VA	VA	FC	\$12.25	month	\$12.25
149	IOU	Virginia Electric & Power Co - VA	VA	FC	\$7.00	month	\$7.00
150	IOU	Green Mountain Power Corp	VT	FC	\$0.43	day	\$12.99
151	IOU	PacifiCorp - WA	WA	FC	\$7.75	month	\$7.75
152	IOU	Puget Sound Energy Inc	WA	FC	\$9.66	month	\$9.66
153	IOU	Avista Corp - WA	WA	FC	\$8.50	month	\$8.50
154	IOU	Dahlberg Light & Power Co	WI	FC	\$8.50	month	\$8.50
155	IOU	Madison Gas & Electric Co	WI	FC	\$0.62	day	\$18.74
156	IOU	North Central Power Co Inc	WI	FC	\$11.25	month	\$11.25
157	IOU	Northern States Power Co - WI	WI	FC	\$14.00	month	\$14.00
158	IOU	Northwestern Wisconsin Elec Co - WI	WI	FC	\$11.00	month	\$11.00
159	IOU	Pioneer Power and Light Co	WI	FC	\$11.00	month	\$11.00
160	IOU	Superior Water and Light Co	WI	FC	\$9.00	month	\$9.00
161	IOU	Wisconsin Electric Power Co - WI	WI	FC	\$0.53	day	\$15.78
162	IOU	Wisconsin Power & Light Co	WI	FC	\$0.49	day	\$14.80
163	IOU	Wisconsin Public Service Corp - WI	WI	FC	\$0.69	day	\$20.71
164	IOU	Westfield Electric Company	WI	FC	\$6.00	month	\$6.00
165	IOU	Appalachian Power Co - WV	WV	FC	\$8.00	month	\$8.00
166	IOU	Monongahela Power Co	WV	FC	\$5.00	month	\$5.00
167	IOU	The Potomac Edison Company - WV	WV	FC	\$5.00	month	\$5.00
168	IOU	Wheeling Power Co	WV	FC	\$8.00	month	\$8.00
169	IOU	Cheyenne Light Fuel & Power Co	WY	FC	\$15.50	month	\$15.50
170	IOU	Montana-Dakota Utilities Co - WY	WY	FC	\$0.82	day	\$24.66
171	IOU	PacifiCorp - WY	WY	FC	\$20.00	month	\$20.00
172	IOU	Black Hills Power Inc - WY	WY	FC	\$15.50	month	\$15.50
Utilities Utilizing a Minimum Bill							
Type	Name	Service State	FC/MIN	Amount	per	per month equivalent <sup>1</sup>	
1	IOU	Pacific Gas & Electric Co	CA	MIN	\$0.33	meter/day	\$9.90
2	IOU	San Diego Gas & Electric	CA	MIN	\$0.33	day	\$9.90
3	IOU	Entergy Louisiana Inc	LA	MIN	\$7.04	month	\$7.04
4	IOU	Emera Maine	ME	MIN	\$6.59	month	\$6.59
5	IOU	Central Maine Power Co	ME	MIN	\$10.68	month	\$10.68
6	IOU	Fishers Island Utility Co Inc	NY	MIN	\$10.60	month	\$10.60
7	IOU	Pennsylvania Electric Co - NY	NY	MIN	\$6.36	month	\$6.36

<sup>1</sup>Assumes 30 days/month

<sup>2</sup>FC varies for Underground/Overhead service

<sup>3</sup>FC varies for Northern or Southern Nevada

Attachment A

California Utilities with Residential Electric Service						
Utilities Utilizing a Fixed Charge						
Type	Name	FC/MIN	Amount	per	per month equivalent <sup>1</sup>	
1	POU Alameda Municipal Power	FC	\$15.75	month	\$15.75	
2	IOU Bear Valley Electric Service	FC	\$0.21	meter/day	\$6.30	
3	POU Burbank Water and Power	FC	\$11.63	month	\$11.63	
4	POU CCSF (Power Enterprise of the San Francisco Public Utilities Commission)	FC	\$3.60	account/month	\$3.60	
5	POU City of Anaheim Public Utilities District	FC	\$5.00	meter/month	\$5.00	
6	POU City of Banning	FC	\$3.00	meter/month	\$3.00	
7	POU City of Corona	FC	\$0.03	meter/day	\$0.87	
8	POU City of Healdsburg Electric Department	FC	\$4.31	month	\$4.31	
9	POU City of Pittsburg	FC	\$0.32	meter/day	\$9.60	
10	POU City of Riverside	FC	\$8.06	meter/month	\$8.06	
11	POU City of Shasta Lake	FC	\$18.50	meter/month	\$18.50	
12	POU City of Ukiah Electric Utilities Division	FC	\$1.55	meter/month	\$1.55	
13	POU City of Vernon	FC	\$3.22	meter/month	\$3.22	
14	POU Colton Public Utilities	FC	\$3.00	month	\$3.00	
15	POU Glendale Water and Power	FC	\$0.37	meter/day	\$11.10	
16	POU Imperial Irrigation District	FC	\$9.60	month	\$9.60	
17	POU Kirkwood Meadows Public Utility District	FC	\$13.79	month	\$13.79	
18	POU Lassen Municipal Utility District	FC	\$20.00	meter/month	\$20.00	
19	IOU Liberty Utilities (aka CalPeco for California Pacific Electric Co.)	FC	\$8.17	month	\$8.17	
20	POU Lodi Electric Utility	FC	\$10.20	month	\$10.20	
21	POU Modesto Irrigation District	FC	\$20.00	month	\$20.00	
22	POU Moreno Valley Utility	FC	\$0.03	day	\$0.93	
23	IOU PacifiCorp	FC	\$7.20	month	\$7.20	
24	POU Pasadena Water and Power	FC	\$8.96	month	\$8.96	
25	POU Rancho Cucamonga Municipal Utility	FC	\$0.20	meter/day	\$6.00	
26	POU Redding Electric Utility	FC	\$15.00	meter/month	\$15.00	
27	POU Roseville Electric	FC	\$26.00	meter/month	\$26.00	
28	POU Sacramento Municipal Utility District	FC	\$20.00	month	\$20.00	
29	POU Shelter Code Resort Improvement District	FC	\$22.18	month	\$22.18	
30	POU Silicon Valley Power	FC	\$3.36	meter/month	\$3.36	
31	IOU Southern California Edison	FC	\$0.03	meter/day	\$0.93	
32	POU Truckee Donner Public Utilities District	FC	\$8.60	month	\$8.60	
33	POU Turlock Irrigation District	FC	\$17.00	meter/month	\$17.00	
34	POU Lathrop Irrigation District <sup>2</sup>	FC	\$24.00	month	\$24.00	
Utilities utilizing a minimum bill						
Type	Name	FC/MIN	Amount	per	per month equivalent <sup>1</sup>	
1	POU Asuza Light and Water	MIN	\$3.81	meter/month	\$3.81	
2	POU Biggs Municipal Utilities	MIN	\$6.25	meter/month	\$6.25	
3	POU City of Lompoc Electric Division	MIN	\$3.97	month	\$3.97	
4	POU City of Palo Alto	MIN	\$8.81	month	\$8.81	
5	POU Gridley Electric Utility	MIN	\$12.00	month	\$12.00	
6	POU Los Angeles Department of Water and Power	MIN	\$10.00	month	\$10.00	
7	POU Merced Irrigation District	MIN	\$3.00	meter/month	\$3.00	
8	IOU Pacific Gas & Electric	MIN	\$0.33	meter/day	\$9.90	
9	IOU San Diego Gas & Electric	MIN	\$0.33	day	\$9.87	
10	POU Trinity Public Utilities District	MIN	\$24.00	month	\$24.00	

<sup>1</sup>Assumes 30 days/month

<sup>2</sup>\$24 represents MSF for customers with 201-600 kWh usage/month. MSF for <200kWh is \$16, and for >600 kWh is \$32.

CPUC Regulated Class A Water Utilities <sup>1</sup>				
Name	FC/MIN <sup>2</sup>	Minimum <sup>3</sup>	Estimated residential maximum <sup>4</sup> per	
California Water Service <sup>6</sup>	FC	\$12.49	\$202.81	month
Golden State Water <sup>6</sup>	FC	\$8.25	\$140.40	month
San Jose Water	FC	\$25.45	\$135.68	month
California American Water <sup>6</sup>	FC	\$7.24	\$314.61	month
San Gabriel Valley Water	FC	\$22.43	\$179.50	month
Suburban Water	FC	\$4.05	\$29.70	month
Great Oaks	FC	\$8.33	\$66.64	month
Park Water	FC	\$21.97	\$175.76	month
Apple Valley Ranchos Water	FC	\$23.15	\$185.20	month

<sup>1</sup> Class A Water Utilities serve > 10,000 service points

<sup>2</sup> MSF is "Monthly Service Fee" aka Fixed Charge, MIN is minimum bill

<sup>3</sup> Monthly charge associated with minimum meter size - for all water utilities listed, the minimum meter size was 5/8 x 3/4 inch

<sup>4</sup> Average residential meter size in California is estimated to be up to 2 inches, per response to CEC at [http://www.energy.ca.gov/appliances/2013rulemaking/documents/responses/Water\\_Appliances\\_12-AAER-2C/California\\_IOU\\_Response\\_to\\_CEC\\_Invitation\\_to%20Participate-Water\\_Meters\\_2013-05-09\\_TN-70791.pdf](http://www.energy.ca.gov/appliances/2013rulemaking/documents/responses/Water_Appliances_12-AAER-2C/California_IOU_Response_to_CEC_Invitation_to%20Participate-Water_Meters_2013-05-09_TN-70791.pdf)

<sup>5</sup> Monthly charge associated with maximum meter size - varies between 10 and 14 inches

<sup>6</sup> Minimum and maximum across multiple service districts