

Application of SAN DIEGO GAS & ELECTRIC
COMPANY (U 902 E) For Authority To
Update Marginal Costs, Cost Allocation,
And Electric Rate Design.

Application 11-10-002
Exhibit No.: (SDG&E-201)

**PREPARED REBUTTAL TESTIMONY OF
CHRIS YUNKER
CHAPTER 1
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY**

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

JULY 17, 2012



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PREPARED REBUTTAL TESTIMONY OF
CHRIS YUNKER
(CHAPTER 1)

I. OVERVIEW AND PURPOSE

The purpose of my rebuttal testimony is to respond on a policy basis to the assertions set forth in the testimony of the following parties (Parties):

- Division of Ratepayer Advocates (DRA): witness Dexter Khoury
- San Diego Consumers' Action Network (SDCAN): witnesses Steven McClary and Laura Norin of MRW & Associates (MRW) and witness William B. Marcus.
- Greenlining Institute (Greenlining): witness Enrique Gallardo.
- Center for Accessible Technology (CforAT): witness Dmitri Belser.
- City of San Diego (CSD): witness William A. Monsen.
- City of Chula Vista (CCV): witness Brendan J. Reed.
- Solar Energy Industries Association (SEIA): witness R. Thomas Beach.
- The San Diego Solar Coalition (SDSC): witness Bill Powers.
- San Diego County Public Agencies: witness Lon W. House.

Before rebutting assertions that lack basis in policy or fact, my testimony outlines adjustments to SDG&E's application based on issues several parties have raised. As an example, SDCAN has stated that Federal Energy Regulatory Commission (FERC) account 908 refundable costs (Energy Efficiency (EE), Demand Response (DR), California Solar Initiative (CSI), and Self-Generation Incentive Program (SGIP) costs) of approximately \$133.3 million were incorrectly included in developing marginal distribution customer costs. SDG&E agrees with this adjustment and reflects this adjustment in our rebuttal testimony.

Next, SDG&E rebuts party's assertions that, in general, oppose proposals that would advance the adoption of accurate prices consistent with the California Public Utilities Commission's (CPUC's or Commission's) guiding principles for rate design. These positions would lead to less accurate prices at a time when California requires greater accuracy in pricing.

Where a regulated utility is obligated to serve all customers, inaccurate price signals that reflect hidden subsidies rather than an accurate reflection of the cost a utility incurs in providing service can be managed. However, whenever alternatives to utility services exist that enable the bypass of costs and subsidies (for example as is the case today with distributed solar) then utility rates must accurately reflect the costs the utility incurs in providing service in order to ensure the

1 continued ability to provide just and reasonable rates to customers who choose not to, or cannot,
2 participate in those alternatives and to accurately inform customers that are considering competitive
3 alternatives. That is why SDG&E's proposals to move towards more accurate price signals are
4 necessary steps that need to be taken now in order to realize California's vision of the future – where
5 customers are empowered to participate as both consumers and suppliers of energy services enabled
6 by distributed renewables, smart inverters, battery storage, electric vehicles, Home Area Networks
7 and emerging low carbon technologies yet to be contemplated.

8 **My testimony is organized as follows:**

- 9 • **Section II – Amendments to SDG&E's Proposal**
- 10 • **Section III – Rebuttal of Parties Positions to SDG&E Proposals that are Counter to**
11 **California and SDG&E Policy**

- 12 A. Promote Fairness and Equity - Create Clear and Accurate Price Signals Support
13 California Policy
- 14 B. Promote Fairness and Equity – Empower and Inform Customers
- 15 C. Promote Fairness and Equity – Mitigate Customer Impacts Associated with Rate
16 Proposals

- 17 • **Section IV – Conclusion and Summary**

18 **II. AMENDMENTS TO SDG&E'S PROPOSAL**

19 SDG&E re-examined its proposals as presented in its direct testimony in light of Parties'
20 testimony and presents updated proposals in this rebuttal. Specifically, SDG&E presents updates in
21 the following areas:

22 **A. Chapter 6: Marginal Distribution Costs**

23 In its rebuttal, SDG&E determines that some of the proposed adjustments related to the
24 development of marginal distribution customer costs to be appropriate and reasonable and therefore
25 SDG&E is proposing to adopt them in the updated marginal distribution customer costs provided in
26 its rebuttal testimony. Most notable is the adjustment to the treatment of costs associated with FERC
27 Account 908. The details of these adjustments are presented in the rebuttal testimony of SDG&E
28 witness Saxe in Chapter 6: Marginal Distribution Costs. The updated Marginal Distribution Costs
29 result in updated distribution revenue allocations (presented in Chapter 3) and distribution rates
30 (presented in Chapter 2).

1 **B. Chapter 2: Rate Design**

2 In its rebuttal, SDG&E recognizes that in particular instances there is the need to mitigate bill
3 impacts as we move to clear and accurate price signals. For this reason, SDG&E presents updated
4 positions to address that need in the rebuttal testimony of SDG&E witness Fang in Chapter 2.

5 **III. REBUTTAL OF PARTIES POSITIONS TO SDG&E PROPOSALS THAT ARE**
6 **COUNTER TO CALIFORNIA AND SDG&E POLICY**

7 Parties have argued that SDG&E’s proposals are counter to Commission and SDG&E policy.
8 To understand why Parties’ opposition to SDG&E proposals are counter to policy it is important to
9 view those policies in the context of what the state is trying to accomplish, what has changed, how
10 this change is relevant and why SDG&E’s proposals are steps that need to be taken now. It is the
11 opposition to SDG&E’s proposals, rather than SDG&E’s proposals, that are counter to California’s
12 ratemaking policies.

13 California’s vision of a low carbon energy market has led to technologies and market
14 changes that have empowered customers to generate their own electricity on-site with distributed
15 generation such as solar panels and to rely on lower emitting electricity resources rather than oil for
16 a larger percentage of their transportation needs. Today, roughly 18,000 SDG&E customers have
17 installed over 137 MW of customer-owned solar, with each month in 2012 setting record sales for
18 residential installations. Currently, the San Diego region has one of the highest concentrations of
19 plug-in electric vehicle (EV) adoption in the United States, with about 1,700 light duty EVs in the
20 SDG&E service territory, supported by a variety of home and commercial EV charging
21 infrastructure. The CPUC is currently working on developing rules for participation of demand
22 response from customers in the California energy market in Rulemaking 07-01-041. Looking to the
23 near future, California has set a policy to have all new construction be net-zero energy by 2020,
24 which will require the adoption of distributed energy resources and energy management systems.
25 These developments are changing the utility landscape in significant ways and require a rate design
26 structure based on accurate price signals to create the foundation for sustainable long-term market
27 growth in a way that is fair to all customers.

28 Historically, electric public utilities have provided all services and recovered all costs from
29 bundled customers, under the watchful eye of the Commission. Under such circumstances, subsidies
30 hidden in rates, while inconsistent with the CPUC’s guiding principles for rate design listed below,
31 can be managed because there is no means by which customers can reasonably bypass the cost of

1 those subsidies through alternative services.¹ The same goes for bundling service into one rate
2 component. While once again inconsistent with the CPUC's rate policy, where customers cannot
3 reasonably bypass the cost of one service that has been bundled with other services in a utility rate,
4 rates can effectively bundle those services. However, if a customer can avoid one of the services
5 bundled into that rate, such as commodity services, they can avoid paying for any of the services that
6 have been bundled into that rate, such as reliability, standby and power quality services. For
7 example, a customer that elects to self-provide commodity services through Distributed Generation
8 (DG), is now able to avoid paying for reliability, standby and power quality services to the extent
9 those costs have been bundled in the rate the customer is able to avoid.

10 The situation posed by DG elections is different from that created by Demand Response
11 (DR) or Energy Efficiency (EE). DR or EE programs promote reductions of service, rather than
12 replacement of service through another alternative. The difference is obvious when looking at
13 reduction of service versus an alternative sourcing of service in the extreme. While not realistic, if a
14 customer were able to reduce their energy use to 0 kWh then they would effectively only create
15 fixed customer costs and pay a minimum bill of \$0.17/day. The fact that this is not realistic is
16 evident in the existence of a baseline, originally termed "lifeline," which implies that there is a
17 minimum level of energy use customers require. What is realistic today is that a customer choosing
18 an alternative commodity source such as distributed solar can net out all commodity costs effectively
19 showing 0 billable kWh and pay a minimum bill of \$0.17/day, yet still create significant reliability,
20 standby and power quality costs.

21 Given that alternatives to services exist today, an increasing number of service alternatives
22 are emerging and that California aspires to implement net-zero energy construction policies, require
23 rates to transition to those consistent with the CPUC's guiding principles for rate design. Steps need
24 to be taken now in order to transition rate design in such a way that encourages economically

¹ In the testimony of San Diego Solar Coalition's witness B. Powers starting on page 17 line 14 Powers incorrectly states that in my opening testimony "SDG&E witness Yunker recognizes that state energy policy has historically used the rate structure to encourage conservation,...". My testimony does not say this is state policy. Instead, I acknowledged that a state practice has been to encourage conservation through inclining tier block rates. However the Commission itself has questioned whether this reflects its ratemaking policies. In that regard, in R.12-06-013, *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*, p. 2., the Commission explicitly questions whether this practice is in line with policy objectives. "The Commission seeks to explore if the current rate structure is meeting the stated objectives or whether alternative rate designs other than an inclining block rate can better achieve all of these objectives. Moreover, the Commission opens this rulemaking to examine whether the current tiered rate structure continues to support the underlying statewide-energy goals, facilitates the development of technologies that enable customers to better manage their usage and bills, and whether the rates result in inequitable treatment across customers and customer classes."

1 efficient customer investments and minimizes bill impacts for participant and non-participant
2 customers alike. The proposals included in SDG&E's application are designed with those objectives
3 in mind.

4 The Commission's stated policy objectives for rate design as articulated through five guiding
5 principles in the Residential Rate Design OIR,² originating from Decision (D.) 08-07-045 (which
6 applies to all customers), are as follows:

- 7 1. Rates should be based on marginal cost;
- 8 2. Rates should be based on cost-causation principles;
- 9 3. Rates should encourage conservation and reduce peak demand;
- 10 4. Rates should provide stability, simplicity and customer choice; and
- 11 5. Rates should encourage economically efficient decision-making.

12 SDG&E rate policy objectives are aligned with the stated rate policy of the CPUC.
13 SDG&E's policy of promoting fairness and equity, is, in essence, a reflection of the Commission's
14 policy to ensure just and reasonable rates. Just and reasonable rates allow customers to get what
15 they pay for and pay for what they get. To accomplish just and reasonable rates requires creating
16 clear and accurate price signals, an SDG&E rate policy, through rates based on marginal costs
17 (CPUC Rate Policy Principle No. 1) and cost-causation principles (CPUC Rate Policy Principle No.
18 2). Promoting Equity and Fairness also necessitates that, to the extent subsidies and incentives are
19 required to meet policy objectives such as energy efficiency and demand response (CPUC Rate
20 Policy Guiding Principle No. 3), all customers should be able to participate in the subsidized market.
21 Fairness and equity also necessitates equitable allocation of subsidy and incentive costs between
22 customers. Another SDG&E Rate Policy component is empowering and informing Customers
23 (CPUC Rate Policy Guiding Principle No. 4) through accurate price signals such that customers can
24 make economically efficient decisions with greater future certainty (CPUC Rate Policy Guiding
25 Principle No. 5). It is the fact that current rate design does not reflect the CPUC guiding rate
26 principles that SDG&E includes mitigate customer impacts associated with rate proposals as one of
27 our policies. If rates reflected the CPUC rate policy guiding principles, then this would not be an
28 issue. Because California will need to transition existing rate design to match the CPUC rate policy
29 guiding principles, the impact on customers' needs to be clearly understood and carefully managed.

² June 21, 2012, "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," p. 2.

1 As further explained below, Parties’ arguments opposing SDG&E’s proposals go against the
2 CPUC’s five rate policy guiding principles and ultimately create a barrier to achieving California’s
3 policy objectives.

4 **A. Promote Fairness and Equity - Create Clear and Accurate Price Signals Support**
5 **California Policy**

6 i. **Fixed Charges for Fixed Costs**

7 Opposition to SDG&E’s Basic Service Fee (BSF) proposal by City of San Diego,³ DRA,⁴
8 Greenlining,⁵ SEIA,⁶ Center for Accessible Technology⁷ and SDCAN⁸ is counter to CPUC rate
9 policy. The City of San Diego witness Monsen states that “...increasing fixed charges clearly
10 conflicts with established California state policy by reducing price signals for energy efficiency and
11 distributed generation.”⁹ This conclusion is not supported by the CPUC’s guiding rate design
12 principles 1, 2, 4 and 5 and need not be counter to CPUC principle 3 as discussed below in Section
13 III.B.iii, when coupling direct transparent incentives with accurate prices. Taking a measured step
14 towards recovery of fixed costs through fixed charges clearly supports both rates based on marginal
15 costs and cost causation, both of which are necessary to encourage economically efficient decision
16 making. (See, CPUC Guiding Rate Principals Nos. 1, 2, and 5.) Recovery of fixed costs through
17 fixed charges also provides stability consistent with CPUC Principle No. 4, compared to recovery of
18 fixed costs through variable rates.

19 ii. **Cost-Causation Supports Distribution Demand Costs Collected through Non-**
20 **coincident Demand Charges**

21 The City of San Diego,¹⁰ SDSC,¹¹ SEIA,¹² and San Diego County Public Agencies¹³ argue
22 that collecting distribution demand costs through non-coincident charges is against California policy
23 and/or is not cost based. While parties offer a variety of arguments, none set forth any evidence that
24 would suggest that this proposal is inconsistent with the manner in which SDG&E incurs these costs
25 based on its actual design and basis for investment in distribution infrastructure.

³ CSD (Monsen), pp. 17-22.

⁴ DRA (Khoury), pp. 5-10 – 5-12.

⁵ Greenlining (Gallardo), pp. 4-6.

⁶ SEIA (Beach), pp. 13-14 and 26.

⁷ CforAT (Belser), pp. 8 and 12.

⁸ SDCAN (MRW), pp. 5-8.

⁹ CSD (Monsen), p. 18.

¹⁰ CSD (Monsen), pp. 11-16.

¹¹ SDSC (Powers), pp. 17-23.

¹² SEIA (Beach), pp. 28-35.

¹³ San Diego County Public Agencies (House), pp. 4-10.

1 Recovery of distribution demand charges through non-coincident demand charges is
2 consistent with the way in which SDG&E actually incurs these costs and therefore creates an
3 accurate price signal that charges a customer based on their cost of service. Contrary to parties'
4 arguments, the rebuttal testimony of SDG&E witness Jose Carranza (Chapter 10) clarifies that the
5 distribution system is designed to meet the service requirements of the customers on it. The capital
6 requests for distribution system infrastructure, including substations, are based on, and incurred (as
7 Mr. Carranza testifies), to meet the customers' peak demand on individual portions of the
8 distribution system; i.e., to meet non-coincident peak demand.¹⁴ Accurate pricing for recovery of
9 distribution demand costs should be based on a customer's impact on distribution system
10 requirements. SDG&E's proposal that distribution demand charges be collected through non-
11 coincident demand charges is consistent with the manner in which these costs are incurred.

12 This is therefore consistent with three guiding principles listed by the CPUC: rates should be
13 based on marginal cost (Principle No. 1) and cost-causation principles (Principle No. 2) and
14 encourage economically efficient decision making (Principle No. 5). These accurate price signals
15 also create an economically efficient price signal for promoting demand reduction and conservation
16 (Principle No. 3).

17 Historically, the concept of conservation (Principle No. 3) has been a commodity only
18 discussion. However, in the rapidly changing environment California faces the concept of
19 "conservation," and the ratemaking policies that are embraced to encourage conservation, should no
20 longer be limited to electric commodity services. Unnecessary excessive construction of
21 infrastructure such as distribution demand capacity can also have adverse environmental impacts.
22 Currently, because customers do not see rates that reflect how they actually use the system, and
23 which reflect the actual amount of distribution capacity that must be constructed and maintained on
24 their behalf, they have no incentive, or an incentive that fails to reflect the actual savings that would
25 be realized through a reduction in their non-coincident demand. As we see more and more electric
26 vehicles enter our market, and as fast charging facilities become more prevalent, it will become
27 increasingly important to send a price signal that encourages economically efficient decisions with
28 regard to non-coincident demand to minimize unnecessary distribution capacity construction and any
29 environmental impacts that construction would otherwise entail.

¹⁴ Mr. Carranza testifies (at p. 1) as to how the diversity of load contributes to the non-coincident nature of peak demand on SDG&E's distribution system.

1 The San Diego Solar Coalition has provided no evidence contrary to the testimony of witness
2 Mr. Carranza despite the assertions made by witness Mr. Powers that “Adding commercial NEM PV
3 at the current DG-R tariff is demonstrably more cost effective for SDG&E ratepayers than
4 weakening the tariff, slowing C&I rooftop PV development, and thereby creating a justification for
5 SDG&E to contract for 450 MW of high-cost peakers and pass on the peaker capacity costs to
6 SDG&E ratepayers.”¹⁵ Mr. Powers points to Southern California’s Edison’s (SCE) Option R Study
7 as evidence to that effect. To begin, SDG&E was not involved in the SCE study. Whatever the
8 study means with regards to SCE it is about SCE. In this proceeding SDG&E has presented the
9 direct testimony of Mr. Carranza with specific reference to SDG&E’s system. Mr. Carranza sets
10 forth how our system is in fact planned and designed based on non-coincident peak demand.
11 Because the distribution system’s capital costs are incurred based on non-coincident peak demand, it
12 is appropriate, i.e., consistent with cost causation, to collect distribution demand costs through non-
13 coincident demand. SDG&E is responsible for safe and reliable service on its system and the
14 planning criteria identified herein is consistent with the obligations that have been imposed on us by
15 the CPUC.

16 To clarify, a number of parties have misrepresented Figure 4 on page CY-7 in my opening
17 testimony (Chapter 1). The chart illustrates that customers’ peak at different times. This highlights
18 the point of Mr. Carranza’s testimony, that distribution infrastructure must be built to meet the needs
19 of the customers on those substations and circuits. As the system peak is driven by the combination
20 of all the classes, it is evident that peak demands are driven by the combination of customer
21 demands. Contrary to parties’ arguments, any correlation of those demands with system peaks is
22 coincidental. In other words, system peak demands do not drive substation and circuit demands, and
23 therefore do not drive distribution system design (as Mr. Carranza’s rebuttal explains) and resulting
24 costs.

25 Also, the chart does not suggest that Net Energy Metering (NEM) Photovoltaic (PV) results
26 in distribution system savings as the distribution system is not designed on based on classes. The
27 chart does not suggest all circuits dominated by a particular class peak at the same time. In fact the

¹⁵ In addition, the section starting on page 19, line 1 through page 20, line 2 should be ignored because of incorrect data. Mr. Barker’s rebuttal testimony shows the cost of generation used by SDSC is vastly overestimated. In addition, SDSC/Powers makes conclusions about 750 MW of NEM PV when Mr. Barker’s analysis in Attachment A uses a combination of NEM PV (DG) and more optimized local and central station solar (Mr. Barker direct testimony, DTB-3-A, line 27 through page DTB-4-A, line 4.). The result is an overestimation of NEM PV expected benefits.

1 Chart itself includes a text box stating “Customer and circuit peaks can vary significantly from
2 SDG&E’s system peak.”

3 **B. Promote Fairness and Equity – Empower and Inform Customers**

4 DRA,¹⁶ Greenlining,¹⁷ SEIA,¹⁸ Center for Accessible Technology¹⁹ and SDCAN’s²⁰
5 objections that SDG&E’s rate design proposals do not support California policy because they do not
6 encourage conservation imply that incentives hidden in rates are the most effective means to achieve
7 California’s energy conservation policy objectives. This is not the case.

8 The objective of incentives should be to achieve the policy objectives and targets sought at
9 the lowest cost to customers and with those costs recovered with equity and fairness. In the case of
10 conservation, price signals that increase costs to one customer and provide below-cost service to
11 another customer actually reduce the incentive for the second customer to pursue conservation.

12 Accurate price signals allow for greater equity and fairness to be exercised in implementing
13 policy. In order to consider whether a rate design proposal furthers state policy, several factors
14 should be considered:

- 15 (a) What level of incentive is required to drive the policy;
- 16 (b) The cost for that level of incentive; and
- 17 (c) How those costs are allocated to customers.

18 **i. Inform Customers and Policy Makers Through Direct and Transparent**
19 **Incentives**

20 Accurate price signals with direct and transparent incentives provide greater certainty to
21 participating customers. The City of Chula Vista notes that “First, the rate restructuring will create
22 the impression that “early adopters” of renewable energy generation and other energy technologies
23 may be penalized later by regulatory shifts. Secondly, the DG-R rate restructure will stymie future
24 investment in local solar generation by creating uncertainty around Return on Investment assumption
25 for renewable energy systems.”²¹ But if rates were accurately based on cost of service and
26 incentives were provided directly, neither point that Chula Vista raises would be of issue.
27 Maintaining the existing rate structure goes against CPUC principle 4, in that existing rate design is
28 ultimately unsustainable due to the cost shifts created from subsidies in rates as discussed in Section

¹⁶ DRA (Khoury), pp. 5-10 – 5-15.

¹⁷ Greenlining (Gallardo), pp. 5-6 and 8-9.

¹⁸ SEIA (Beach), pp. 13-14 and 17-18.

¹⁹ CforAT (Belser), pp. 10-11.

²⁰ SDCAN (MRW), pp. 22-28.

²¹ CCV (Reed), p. 4.

1 III.C. It also goes against CPUC principle 5, in that current rate design provides customers with
2 inaccurate price information that undermines economically efficient decisions. The two points
3 raised by Chula Vista will be an issue for the existing ~18,000 customers with distributed solar today
4 and all of SDG&E's ~1.2 million customers going forward if hidden subsidies are perpetuated.

5 Clear and accurate price signals inform customers and policy makers on the level of
6 incentives and allocation of costs. Incentives that are incorporated into rates hide the economic
7 consequences of a particular policy. Distributed solar, for example, has two distinct examples of
8 how subsidies can be provided, CSI and NEM. CSI was an incentive provided directly that gives
9 customer's certainty and cost transparency. The CPUC's latest requested study on the costs of
10 NEM²² makes it abundantly clear that the costs of the NEM subsidy are neither clear nor widely
11 agreed upon.

12 **ii. Empower Customers with Service Choices**

13 The optional Pre-pay program supports the CPUC's Guiding Rate Principle 4 by providing
14 customer choices. However, parties have argued that the program targets low-income customers,
15 exposing them to an increased risk of shut off.

16 As discussed by SDG&E witness David Cheng in Chapter 9, the program is a pilot limited to
17 one percent of total residential customers, and SDG&E is committed to educating customers when
18 they sign up as to the changes in service, including service termination provisions under traditional
19 and the optional Pre-pay program, so that they can make educated decisions. As Mr. Cheng testifies,
20 pre-pay programs exist and have been popular where they have been provided. SDG&E seeks to
21 offer a limited pilot to see if it would be an option that appeals to SDG&E customers as well.

22 **iii. Hidden Rate Subsidies do not Empower Customer Participation**

23 Parties argue against accurate pricing and for subsidies hidden in rates by opposing a
24 residential basic service fee²³ and maintaining 4 tiers in residential encourage conservation.²⁴
25 However, direct incentives would open up all energy sales to energy efficiency and demand
26 response, which is more consistent with CPUC guiding principle (4). Currently, upper tier

²² D.12-05-036; Ordering Paragraph 8, page 19 (May 24, 2012).

²³ Parties arguments that fixed costs recovery in energy rates encourages conservation are found at DRA (Khoury), pp. 5-4 – 5-12. Greenlining (Gallardo), pp. 2-8., CforAT (Belsler), pp. 8 and 12., SEIA (Beach), pp. 10-19., SDCAN (MRW), pp. 4-13 and 18-22.

²⁴ Parties arguments that retaining 4 tiers encourages energy conservation are found at DRA (Khoury), pp. 5-12, 5-13 and 5-14., SEIA (Beach), pp. 11-14., SDCAN (MRW), pp. 22-24., Greenlining (Gallardo), pp. 8-9.)

1 customers, roughly one third of residential sales, are sent a price signal to conserve, while two-thirds
2 of sales pay less than their cost of service at significant discounts to the upper tier rates.

3 While direct incentives could encourage both distributed renewables and energy efficiency,
4 right now there is a tension between the adoption of distributed renewables and energy efficiency
5 which limits either the effectiveness of guiding principle (4) or the ability to reach distributed solar
6 installation targets. Most residential customers who have adopted solar were upper tier customers
7 who sized their systems such that they would no longer be in the upper tiers. At this point they no
8 longer receive the high user incentive to conserve energy, even though they still consume the same
9 amount of energy and provide just as many conservation opportunities as other high energy users.

10 **iv. Residential Customer Characterization Analysis is Flawed**

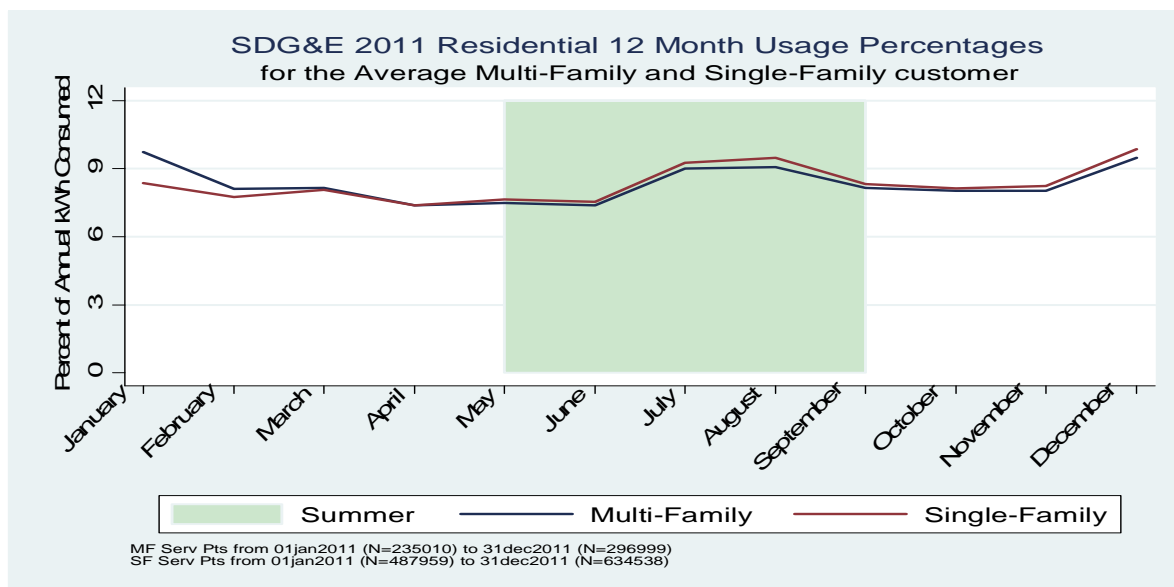
11 The residential customer characterization developed by SDCAN's witness Marcus is used to
12 argue against fixed charges for fixed costs and to maintain four tiers in order to increase Tier 4 rates
13 to increase conservation signals.²⁵ This goes against four of the five CPUC Guiding Rate Principles
14 as outlined in Section III.A.i and III.B.iii above. Party's opposition arguably falls short of
15 encouraging conservation, the remaining CPUC Guiding Rate Principle, in that the focus on high-
16 use customers ignores roughly 70% of the load as discussed in III.C.ii., and the focus on energy only
17 ignores the consequences of building additional infrastructure as discussed in III.A.ii above. Not
18 only does the analysis go to support arguments that are counter to CPUC's guiding principles for rate
19 design, Mr. Marcus' support for the contention is based on a questionable analysis. There are a
20 number of issues with the use of the data provided by SDG&E that invalidate his conclusions.

- 21 • The SDG&E load research data, "a sample of 372 customers" that was then further
22 cut-down per Section I.A. on page 26 of the testimony of Mr. Marcus) was not
23 designed to represent the groupings shown in Table 11, on page 27 of the testimony
24 of Mr. Marcus, such as multi-family and single-family basic/all-electric. Therefore,
25 the conclusions drawn from this grouping methodology are invalid.
- 26 • In Table 12, page 28, the break-down of customers based on summer usage into 7
27 categories, has similar validity problems as Table 11. The load research sample Mr.
28 Marcus uses for this analysis was not designed to be so disaggregated. The load
29 research sample was designed to represent three levels of usage, not seven and does

²⁵ SDCAN (Marcus), pp. 26-44.

1 not coincide with the break points that SDG&E uses. Therefore, the conclusions
2 drawn from Table 12 are invalid.

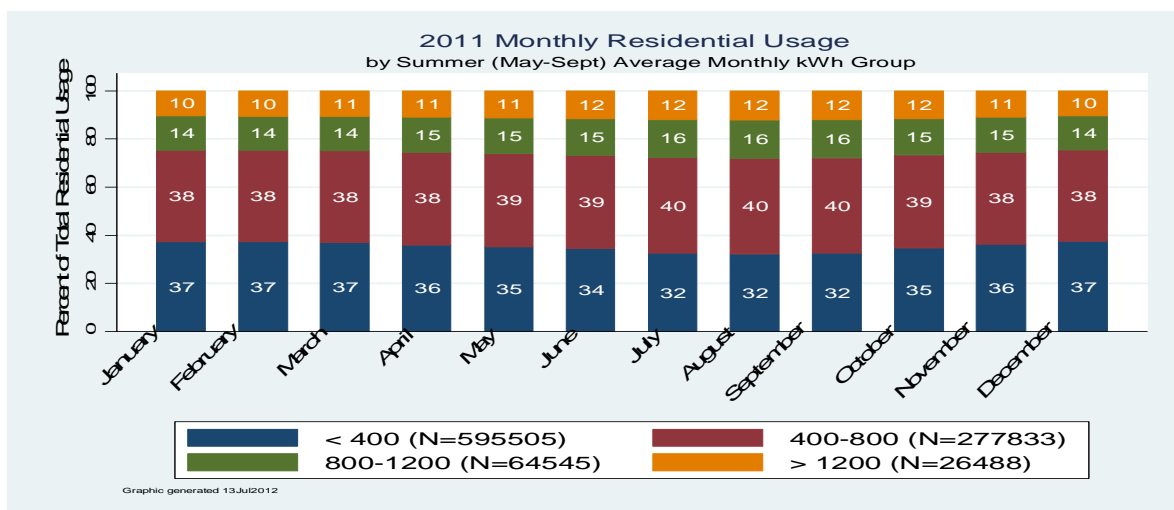
- 3 • In addition to the load research sample being misused, Mr. Marcus fails to provide the
4 number of sample points (or n) used to calculate the statistics he presents in Table 11
5 and Table 12.
- 6 • Assertions represented as “fact” made on pages 26 through 28 are based on the
7 misapplication of the sample group. An example of this is the statement: “A
8 customer using under 400 kWh per in the summer months has an average load factor
9 of 104% (actually having more energy use in the average hour across the entire year
10 than in the average coincident peak hour in August and September)...”²⁶ In this case,
11 SDG&E reviewed 2011 monthly consumption data for its entire population on
12 Schedule DR of Single Family and Multi Family usage and finds that the 2 groups are
13 very similar in their usage patterns of the percent of annual kWh used. The chart
14 below represents the average SDG&E multi-family customer and the average single-
15 family customer (on Schedule DR) in 2011. The way that they use energy is very
16 similar. Here, summer is highlighted as May-September per the definition used by
17 Mr. Marcus.



- 18 • Additionally, if the goal is to target conservation and energy efficiency, and
19 customers that Mr. Marcus defines as “low use” are not a focus of conservation
20

²⁶ SDCAN (Marcus), p. 28.

1 efforts, then the opportunity to reap the potential conservation benefits that could be
 2 gained from the group that contributes 72-75% of the residential load during a given
 3 month will be missed. For purposes of comparison, the graph below was generated
 4 using the same break-down by summer use method that witness Mr. Marcus uses. It
 5 includes data from all SDG&E residential customers billed for consumption on
 6 Schedule-DR in 2011.



7 The RASS data analysis also has issues which question the validity of the analysis.

- 8 • Mr. Marcus maps climates that are not in SDG&E’s service territory to SDG&E’s
 9 customers and/or used the California Energy Commission (CEC) title 24 climate
 10 zones, despite the fact that SDG&E’s baseline climate zones were included in the data
 11 request response to UCAN.²⁷
- 12 • It is unclear how Mr. Marcus mapped tier usage into the incorrect CEC title 20
 13 climate zones. Any results from using the incorrect climate zones to “create”
 14 SDG&E’s tiers are questionable and should not be used.
- 15 • Mr. Marcus states “We have not reported results for SDG&E’s hot zone, due to a
 16 statistically insignificant number of RASS survey responses (only 16 respondents),”²⁸
 17 Yet, on the very next page in Figure 1, the “hot zone” is represented in the graphic.²⁹
 18 SDG&E contends that the RASS statistics containing climate zones and/or tier usage
 19 as presented by SDCAN is invalid and should not be used for this proceeding.
 20

²⁷ SDCAN (Marcus - Table 13 in Attachment E, p130)

²⁸ SDCAN (Marcus, p. 29.)

²⁹ SDCAN (Marcus, p. 30.)

1 In short, Mr. Marcus’ questionable analysis invalidates any conclusions that depend upon it.

2 **C. Promote Fairness and Equity – Mitigate Customer Impacts Associated with Rate**
3 **Proposals**

4 DRA,³⁰ Greenlining,³¹ and Center for Accessible Technology³² argue against removing the
5 freeze on Care Tier 3 rates as it would increase Tier 3 CARE customer bills. The details of the
6 actual impacts to CARE rates are detailed in SDG&E’s testimony of witness Ms. Fang (Chapter 2).
7 However, these parties’ arguments for maintaining the freeze on CARE Tier 3 rates go against their
8 own rate policy as it relates to conservation. Parties argue to encourage conservation by sending
9 elevated price signals to high users. Here however, Parties argue to maintain the current freeze on
10 CARE Tier 3 rates dampening energy conservation signals to CARE customers for energy use above
11 130% of baseline quantities. Under section 2.1 of the recent Residential Rate OIR, (R.12-06-013)
12 the CPUC states that:

13 “The Warren-Miller Energy Lifeline Act of 1976 required the Commission to
14 designate a baseline quantity of gas and electricity necessary to supply a significant
15 portion of the reasonable energy needs of the average residential customer at rates
16 below average cost. “...The goals of the Warren-Miller Act were two-fold: ensuring
17 an equitable rate and encouraging electricity conservation.”³³

18 The frozen CARE Tier 3 goes beyond this and diminishes the price signal for all of a CARE
19 customer’s energy consumption. This diminished conservation price signal for customers who use
20 more than “a significant portion of the reasonable energy needs of the average residential customer”
21 comes at the expense of other customers. SDG&E advocates for accurate price signals with
22 incentives provided directly so all customers can participate in conservation, rather than
23 incentivizing conservation through hidden subsidies in rates. However, SDG&E seeks to minimize
24 cost shifts and bill impacts created by such caps and rate freezes where possible and there is an
25 inconsistency in the application of opposing Parties’ policy arguments that appears opportunistic.

26 Capping or freezing rates increases bills for other customers because California investor-
27 owned-utilities are decoupled with balanced revenues that are trued up over time, ultimately making
28 rate design a zero-sum exercise. To provide a subsidy through rates to one customer requires costs
29 to other customers to go up. All uncapped rates will face upward pressure resulting from the cost

³⁰ DRA (Khoury), pp. 5-15 – 5-16.

³¹ Greenlining (Gallardo), pp. 9-10.

³² CforAT (Belsler), pp. 8-9 and 12.

³³ June 21, 2012, “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”, R.12-06-013,Section 2.1, p. 3.

1 shift created by providing subsidies through rates. Limiting caps where reasonable is a means of
2 managing the transition to one which supports the CPUC guiding rate principles and mitigates bill
3 impacts during that transition.

4 **IV. SUMMARY AND CONCLUSION**

5 In summary, SDG&E's has recognized Parties' arguments, such as SDCAN's suggestion for
6 adjustment to the treatment of costs associated with FERC Account 908 as sound. However,
7 SDG&E disagrees with Parties to the extent that they go against CPUC Guiding Rate Principles and
8 SDG&E Rate Policy. For example, SDG&E disagrees with Parties' opposition to a Basic Service
9 Fee, consolidating Tiers 3 & 4 and collecting distribution demand costs through non-coincident
10 demand charges. If California is to achieve its vision of the future, where customers participate as
11 both consumers and suppliers of energy services enabled by distributed renewables, smart inverters,
12 battery storage, electric vehicles, Home Area Networks and emerging low carbon technologies yet to
13 be contemplated; then rates need to be designed according to the CPUC Guiding Rate Principles.
14 SDG&E has designed its proposals in line with those principles and necessary steps that need to be
15 taken today in order to manage the transition while mitigating impacts to customers.

16 This concludes my prepared rebuttal testimony.