

Company: San Diego Gas & Electric Company
Proceeding: Residential Untiered TOU Rate
Application: A.21-09-XXX
Exhibit: SDG&E-01

PREPARED DIRECT TESTIMONY OF
GWENDOLYN R. MORIEN
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

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

September 1, 2021



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1 **PREPARED DIRECT TESTIMONY OF**

2 **GWENDOLYN R. MORIEN**

3 **I. OVERVIEW AND PURPOSE**

4 The purpose of my prepared direct testimony is to present San Diego Gas & Electric
5 Company's (SDG&E) proposed new optional rate offering—Schedule TOU-ELEC¹—designed
6 to incentivize residential customer electrification, present rate design objectives, and introduce
7 subsequent chapters. This proposed optional rate is required to have un-tiered volumetric
8 charges and a fixed charge, the latter of which commensurately lowers the volumetric rate,
9 thereby improving the value proposition to customers who increase their electricity consumption
10 due to home and/or transportation electrification. All other household load will also be served on
11 this rate. Per Decision (D.) 20-03-003 at Ordering Paragraph (OP) 10, this rate offering will be
12 available to customers with one or more of three technologies (qualifying technologies):

- 13 • Electric vehicles (EV);
- 14 • Energy storage; or
- 15 • Electric heat pump for water heating or climate control.

16 Additionally, SDG&E was required to hold a public workshop to solicit feedback from
17 interested parties. Some of that feedback is reflected in the rate design proposed here, as
18 discussed in Section II.B.

19 SDG&E's TOU-ELEC rate offering reflects two relevant design features: 1) a greater
20 year-round differential between the peak-to-off-peak periods (POPP) and peak-to-super-off-peak
21 periods (PSOPP); and 2) a fixed customer charge differentiated based on a customer's maximum
22 demand. The time-of-use (TOU) differentials in this rate will encourage customers to shift their
23 usage outside of the on-peak period year-round and provide an improved value proposition for

¹ "TOU-ELEC" is an interim name for said rate. SDG&E reserves the right to rename this rate at a later date.

1 customer-sited storage through energy arbitrage. A fixed customer charge that assesses a fee
2 based on customer demand is an innovative rate design not previously offered to SDG&E's
3 residential customers. The proposed fixed customer charge is differentiated based on a
4 customer's use of the grid and is intended to limit cost shifting to nonparticipating customers.
5 As customers adopt qualifying technologies, SDG&E expects that they will be more engaged in
6 their energy consumption in order to realize potential bill savings. SDG&E's rate design policy
7 objectives are discussed further in Section III.A.

8 Chapter 2 is the Prepared Direct Testimony of Hannah Campi (Campi, Exhibit SDG&E-
9 02) who presents the rate design for this offering, and Chapter 3 is the Prepared Direct
10 Testimony of April Bernhardt (Bernhardt, Exhibit SDG&E-03) who discusses SDG&E's
11 Marketing, Education, and Outreach (ME&O) plan to reach eligible customers.

12 My testimony is organized as follows:

- 13 • **Section II – Background**
- 14 • **Section III – Electrification Rate**
- 15 • **Section IV – Customer Inequity Considerations**
- 16 • **Section V – Implementation**
- 17 • **Section VI – Summary and Conclusion:** provides a summary of
18 recommendations; and
- 19 • **Section VII – Statement of Qualifications:** presents my qualifications.

20 My testimony also contains the following attachments:

- 21 • **Attachment A:** Workshop Presentation of the Solar Energy Industries
22 Association (SEIA) and joint presentation of Sierra Club/Natural Resources
23 Defense Council (NRDC), dated December 14, 2020.

1 **II. BACKGROUND**

2 **A. Procedural Background**

3 On March 19, 2020, the California Public Utilities Commission (Commission) adopted
4 D. 20-03-003 (Decision) in Phase 3 of the electric investor-owned utilities’ (IOUs)²
5 consolidated 2018 Residential Rate Design Window (RDW) proceeding,³ requiring SDG&E to
6 propose an opt-in, un-tiered,⁴ residential time-of-use rate with a fixed charge in its next
7 residential rate design application.⁵ The goal of this whole-house rate would be to encourage
8 greenhouse gas (GHG) reduction through electrification of behind-the-meter (BTM)
9 technologies, and would be available to customers with one or more of three qualifying
10 technologies: 1) an EV; 2) an energy storage device; or 3) an electric heat pump for water
11 heating or climate control. The Decision also required SDG&E’s rate proposal to include a plan
12 for customer outreach and education to encourage potentially eligible customers to take
13 advantage of the rate.

14 This rate application was a topic of intervening party testimony in SDG&E’s 2019
15 General Rate Case (GRC) Phase 2.⁶ In the Joint Motion for Settlement in its 2019 GRC Phase 2
16 (2019 GRC Phase 2 Settlement), SDG&E and parties agreed to “conduct workshops and
17 subsequently propose an un-tiered, residential time-of-use (TOU) rate in a rate design

² The electric IOUs consist of SDG&E, Southern California Edison Company, Pacific Gas and Electric Company.

³ Application (A.) 17-12-013, consolidated with A.17-12-011 and A.17-12-012.

⁴ Un-tiered refers to volumetric (kWh) charges. Customers on un-tiered volumetric rates do not receive a baseline allowance.

⁵ D.20-03-003, at 51 (OP 10).

⁶ A.10-07-009 and A.19-03-002 (cons.), Prepared Direct Testimony of R. Thomas Beach on behalf of the Solar Energy Industries Association (April 6, 2020) at 27.

1 application to be filed no later than September 1, 2021.”⁷ The settlement agreement, as
2 amended, was adopted in full on July 15, 2021.⁸

3 **B. Interested Party Input**

4 D.20-03-003 required SDG&E to seek the assistance and input of interested parties to
5 encourage residential electrification by inviting parties to the 2018 RDW proceeding to a
6 workshop to be held no later than May 1, 2020, to discuss a rate proposal in accord with this
7 order.⁹ On May 1, 2020, pursuant to the Decision, SDG&E held a virtual workshop. A second
8 workshop was held on July 30, 2020. In the 2019 GRC Phase 2 Settlement, SDG&E agreed to
9 conduct additional workshops.¹⁰ On December 14, 2020, SDG&E held a virtual workshop where
10 interested parties presented their viewpoints and concerns about the upcoming electrification rate
11 application.¹¹ On February 18, 2021, SDG&E held a fourth and final virtual workshop on this
12 topic.

13 Interested parties had several concerns, including but not limited to the level of the fixed
14 charge and other mechanisms to recover fixed costs, potential revenue undercollections, cost

⁷ A.10-07-009 and A.19-03-002 (cons.), Joint Motion of San Diego Gas & Electric Company (U 902 E), et al, for the Approval of the General Rate Case Phase 2 Settlement Agreement (October 8, 2020) (2019 GRC Phase 2 Settlement) at 9. Parties to the settlement included the Public Advocates Office, Utility Consumers’ Action Network, Federal Executive Agencies, California Farm Bureau Federation, San Diego Airport Parking Company, Small Business Utility Advocates, Solar Energy Industries Association, Energy Producers and Users Coalition, California Large Energy Consumers Association, California City County Street Light Association, The Utility Reform Network, and the City of San Diego. See Section III.A.

⁸ D.21-07-010. The settling parties filed a Joint Motion for Admission of the Settlement Agreement Addendum on February 26, 2021, due to an issue unrelated to this proceeding. This motion was granted by Administrative Law Judges Lee and Lirag via Email ruling on March 29, 2021.

⁹ D.20-03-003, OP 10.

¹⁰ 2019 GRC Phase 2 Settlement, Attachment at 14, Section 2.2.7.2.

¹¹ These presentations are included in Attachment A to this testimony.

1 shifting, and TOU pricing differentials. SDG&E’s rate proposal in this testimony reflects
2 selected feedback.

3 **III. ELECTRIFICATION RATE**

4 **A. Rate Design Objectives & Eligibility**

5 California has set ambitious climate goals to reach its target of 100% zero-carbon energy
6 by 2045.¹² Achieving this level of GHG reduction will require extensive electrification in the
7 building and transportation sectors while ensuring that costs are not shifted to nonparticipating
8 customers without the ability to adopt specific electrification technologies.

9 SDG&E’s current residential rate structure is almost entirely volumetric, meaning that
10 customers are charged on a per kilowatt-hour (kWh) basis.¹³ This means that as a customer
11 increases consumption, their bill will also increase. Historically, this served California’s and the
12 Commission’s climate goals, encouraging the adoption of energy efficiency measures and an
13 overall reduction in customer usage. However, high volumetric rates can serve as a deterrent to
14 electrification of transportation and buildings. Recovery of certain costs through a different rate
15 design mechanism (e.g., a fixed charge) allows for a commensurate reduction of the volumetric
16 rate. Thus, under a rate structure that recovers more costs through non-kWh charges, customers
17 who increase their usage as a result of beneficial, GHG-reducing electrification do not see
18 significantly higher bills.

19 In D.15-07-001, the Commission adopted a set of ten Rate Design Principles (RDP).¹⁴

20 Figure 1 below presents these RDPs in four categories: (1) cost of service; (2) affordable

¹² See Senate Bill (SB) 100.

¹³ Note, however, that many of the costs recovered in volumetric (aka variable) rates are fixed and do not vary with a customer’s usage.

¹⁴ D.15-07-001 at 27-28.

1 electricity; (3) conservation; and (4) customer acceptance. Our proposal seeks to balance these
 2 RDPs, promoting energy policy that aligns with a vision of technological innovation and choice
 3 while providing a clean, safe, equitable, and sustainable future for all Californians.

4 **Figure 1 – CPUC Adopted Rate Design Principles**

Cost of Service RDP	Affordable Electricity	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.

5
 6 The Commission has historically focused on the overall reduction of usage (RDP 4)
 7 through policy instruments like volumetric tiered rates. However, customers must see a value
 8 proposition in choosing to electrify. Because nearly all of SDG&E’s costs, both fixed and
 9 variable, are recovered in volumetric kWh rates for residential customers—if a customer
 10 increases usage, that customer will also see an increase in their bill. In order for a customer to
 11 choose to adopt one of the qualifying technologies, volumetric rates must not penalize customers
 12 for their increased consumption.

13 SDG&E’s proposed rate structure encourages economically efficient decision-making
 14 (RDP 9) and is based on cost-causation principles (RDP 3). By recovering a portion of fixed
 15 costs in a cost-based fixed charge, customers see a lower kWh price that is more representative
 16 of the actual costs of the grid. TOU-ELEC also promotes the reduction of coincident and non-

1 coincident peak demand (RDP 5) through its on-peak volumetric prices and inclining block tier
2 customer charge.

3 Recent academic work has highlighted the impact fixed cost recovery in volumetric rates
4 has on electrification efforts and equity. For instance, a recent report from Next 10 and the
5 Energy Institute at University of California Berkeley Haas School of Business titled *Designing*
6 *Electricity Rates for An Equitable Energy Transition* states, “by recovering total system costs
7 through high volumetric prices, California’s IOUs are now operating a pricing scheme that sends
8 misleading signals about the true cost to society of consuming electricity. Pricing reform that
9 aligns the volumetric price of energy with marginal cost would dramatically reduce prices, which
10 has the potential to spur electrification of other sectors of the economy.”¹⁵ Additionally, the
11 report states, “A key finding of the report’s analysis is that the current system of recovering
12 system costs through high volumetric prices is not only inefficient; it is also far less equitable
13 than viable alternatives.”¹⁶ The rate proposed here aims to address the issues identified by the
14 above report with the goal of encouraging electrification.

15 The three different qualifying technologies for TOU-ELEC each have different load
16 profiles and may be adopted by different households. Therefore, it is important to consider how
17 customers with these technologies may respond to different price signals.

18 **1. EVs**

19 Customers with EVs typically charge overnight or during the day at work.

20 This pattern may change (to some extent) as a result of the pandemic, as

¹⁵ Next 10, *Designing Electricity Rates for An Equitable Energy Transition* (February 23, 2021) at 5, available at <https://www.next10.org/publications/electricity-rates>.

¹⁶ *Id.* at 7.

1 businesses allow employees to continue to work from home, part- or full-time.
2 SDG&E already offers a whole-house EV rate, EV-TOU-5, that encourages
3 overnight charging through a low super off-peak rate. SDG&E's rate design in
4 this application will continue to encourage customers to charge in the super off-
5 peak TOU period but will also encourage customers to charge EVs during the
6 daytime when there are significant solar generation resources producing clean
7 energy. SDG&E estimates that a customer with an EV uses an additional 250-300
8 kWh per month. The choice between EV-TOU-5 and TOU-ELEC will depend on
9 the customer's consumption profile and other adopted technologies.

10 **2. Energy Storage**

11 The majority of residential customers with energy storage devices have
12 behind-the-meter battery energy storage systems, often paired with onsite solar
13 generating systems. Customers with energy storage have the ability to shift their
14 usage out of the peak period by discharging their battery, thereby reducing the
15 energy (and subsequently, their bills) they pull from the grid at the on-peak price,
16 which can benefit the grid. Therefore, a strong price signal in the on-peak period
17 will encourage consistent and steady load shifting.¹⁷

18 **3. Heat Pumps for Water/Space Heating/Cooling**

19 Heat pumps exist for both water heating and for climate control, and both
20 types are eligible for this rate. A heat pump's load and incremental consumption
21 depend on the purpose it serves:

¹⁷ Note that the TOU differentials proposed meet the rate requirements of the Self-Generation Incentive Program (SGIP). SGIP-eligible rates must have a minimum summer differential of 1.69 between the on-peak and off-peak or super-off-peak TOU periods. *See* D.19-08-001, at 112 (OP 3.A).

1 **a. Water Heat Pumps**

2 Heat pump water heater (HPWH) load may depend on the size of
3 the accompanying water tank. A customer with a large tank may be able
4 to reduce consumption during peak periods and increase consumption
5 during non-peak periods, but a customer with a smaller tank may have
6 more limited flexibility to shift load out of higher-priced TOU periods.
7 SDG&E estimates that a HPWH will add approximately 80 kWh per
8 month to the average SDG&E customer’s consumption.¹⁸ However, if a
9 customer is replacing their current electric resistance heat pump, the
10 customer could save over 1,000 kWh per year just through efficiency
11 gains.¹⁹

12 **b. Climate Control (Space Heating & Cooling) Heat Pumps**

13 Heat pumps for climate control have limited flexibility. Load is
14 driven by a household’s profile. While customers may have the
15 opportunity to pre-cool or pre-heat (prior to the on-peak period) their
16 homes in summer and winter, this type of load is typically more inflexible
17 than the other types of technologies considered in this application.

¹⁸ California Energy Codes & Standards, 2019 Cost-Effectiveness Study: Existing Single Family Residential Building Upgrades (August 8, 2021). Estimates for increased electricity from HPWH replacement for climate zones 7 and 10, *see* Table 65 at 116 and Table 81 at 136. Available at, <https://localenergycodes.com/content/resources>.

¹⁹ ADM Associates, Inc., Sacramento Municipal Utility District (SMUD) Heat Pump Water Heater Field Testing Report (January 6, 2016), at 2-3. Note that SMUD’s estimate of annual HPWH usage is comparable to SDG&E’s. Available at, <https://www.smud.org/-/media/Documents/Corporate/About-Us/Reports-and-Documents/2018/HPWH-Field-Testing-Report-1-6-2016.ashx#:~:text=The%20average%20cost%20of%20the,average%20installation%20cost%20was%20%241%2C265>.

1 SDG&E estimates that the adoption of a heat pump for climate control
2 would add 50-125 kWh per month to the average SDG&E customer's
3 consumption.²⁰

4 **B. Rate Design Elements**

5 SDG&E's proposed rate is designed to encourage electrification through two rate design
6 features; adjusted commodity TOU differentials and fixed customer charges differentiated by a
7 customer's use of the grid. The details of these elements are discussed in Chapter 2, Campi,
8 Exhibit SDG&E-02.

9 **1. Commodity TOU Differentials**

10 First, SDG&E proposes recovering a portion of commodity generation capacity
11 costs in the winter on-peak TOU period. This change will increase the differential between the
12 PSOPP TOU periods in the winter cost-based TOU rates, but not to the extent that may deter
13 adoption of the more load-inflexible qualifying technologies (e.g., heat pump for climate
14 control). Additionally, SDG&E proposes setting the off-to-super-off-peak period (OSOPP)
15 commodity differential at 1.5 in both summer and winter. This consistent differential between
16 seasons will help customers with more inflexible load to manage their bills and can decrease bill
17 volatility, as well as encourage EV charging during the daytime when there are significant
18 renewables available.

19 **2. Fixed Customer Charge**

20 Second, SDG&E is proposing a fixed customer charge. This charge will be based
21 on the average of a customer's three maximum daily non-coincident historical peaks over the

²⁰ California Energy Commission, DNV-GL, 2019 Residential Appliance Saturation Survey (RASS), Volume 2: Results (July 2021) at 20, Tables 19-20 for climate zones 7, 10, and 13. Available at, <https://www.energy.ca.gov/sites/default/files/2021-08/CEC-200-2021-005-RSLTS.pdf>.

1 prior 12 months. A fixed customer charge is preferential to a single customer charge applicable
2 to all customers because it: (1) is more accurate to recover fixed distribution costs from
3 customers based on a real distribution of customer demands; (2) will help to mitigate any
4 potential undercollection that might arise from lowering the volumetric distribution rate; and (3)
5 gives customers the incentive to manage their demand throughout the year, so that in the
6 subsequent year they will be moved to a lower fixed customer charge. This charge will recover a
7 portion of fixed distribution costs while ensuring that SDG&E is still recovering marginal
8 distribution costs in each TOU period on a volumetric kWh basis. These features should help to
9 mitigate customer inequity, as discussed below in Section IV.

10 One of the primary barriers to expanding electrification is the high operating cost
11 of electric technologies. Higher fixed monthly charges enable reduced volumetric electric prices
12 that decrease the cost of operating appliances such as electric water heaters or electric vehicles.
13 SDG&E's proposal effectively lowers the volumetric rate that customers pay by approximately
14 8.7 cents/kWh, when compared to existing non-tiered volumetric TOU rates. While reducing
15 volumetric prices has the potential to reduce the incentive for customers to conserve energy,
16 SDG&E believes its rates are sufficiently high that adding the level of fixed charge proposed in
17 this testimony is unlikely to materially impact conservation at peak times. Additionally, the goal
18 of this rate design is to encourage beneficial increased consumption. Scaling the monthly
19 customer charge to a customer's three daily maximum non-coincident demands has the potential
20 to mitigate this problem by enabling the customer to lower their fixed charges if they reduce their
21 demand. Additionally, using the average of the three maximum daily demands will ensure that
22 customers are not locked into a higher fixed charge if they have one day with very high demand
23 that is not indicative of their normal behavior. This will incentivize overall load management

1 while still enabling the use of more electricity-intensive technologies at reduced volumetric
2 prices, particularly in the super-off and off-peak periods.

3 **3. Income-Qualified Rate**

4 SDG&E is proposing a California Alternate Rates for Energy (CARE) and Family
5 Electric Rates Assistance (FERA) version of TOU-ELEC. SDG&E believes it is important to
6 offer a version of this rate for income-qualified customers. Fixed charges can have a regressive
7 impact on income-qualified customers. Therefore, consistent with the current residential
8 minimum bill policy, SDG&E is proposing a 50% discount on the income-qualified version of
9 the fixed charge. The rate design details of this proposal are discussed in Chapter 2, Campi,
10 Exhibit SDG&E-02.

11 **C. Eligibility**

12 Per D.20-03-003, this rate would be available on an opt-in basis to customers with
13 qualifying technologies. Both bundled and unbundled customers would be able to take service
14 on this rate, with unbundled customers taking commodity service from their load serving entity.
15 SDG&E does not unilaterally set commodity rates, and therefore, an unbundled customer of a
16 Community Choice Aggregator (CCA) will receive commodity pricing from their commodity
17 provider. The CCA may or may not choose to provide pricing similar to SDG&E's. However,
18 these unbundled customers will still receive the benefit of a reduced volumetric rate as a result of
19 the fixed charge, lowering the average \$/kWh rate they pay.

20 Customers will be required to self-certify in the event they qualify for this rate through an
21 EV or a heat pump technology. In order for customers who have behind-the-meter (BTM)
22 energy storage devices to take service on this rate, they are required to interconnect those devices
23 according to SDG&E's Tariff Electric Rule 21.

1 In addition to qualifying technologies, SDG&E is proposing that customers who take
2 service under the new net energy metering (NEM) Reform Tariff (Reform Tariff), currently
3 under consideration in Rulemaking (R.) 20-08-020,²¹ be eligible to take service on TOU-ELEC
4 on an opt-in basis. It is important for solar customers who participate in NEM to be placed on
5 more cost-based rates with fixed charges to ensure they pay their cost of service and do not shift
6 costs to nonparticipating customers.

7 Further, in R.20-08-020, jointly Southern California Edison Company (SCE), Pacific Gas
8 and Electric Company (PG&E) and SDG&E submitted testimony with a proposal that includes
9 defaulting Reform Tariff customers to a new, more cost-based rate (referred to as “TOU-
10 DER”).²² SDG&E has also proposed that eligibility for TOU-DER should not be restricted only
11 to customers with certain technologies. Therefore, if SDG&E’s proposal for TOU-DER is
12 adopted in full, customers eligible for TOU-ELEC could also take service on TOU-DER. The
13 proposed TOU-DER rate design includes a flat fixed charge and cost-based commodity TOU
14 differentials. Because fewer costs are recovered in the proposed TOU-DER fixed charge, the
15 volumetric rates are higher than SDG&E’s proposal for TOU-ELEC. A comparison of TOU-
16 DER and TOU-ELEC is presented below in Table 1.

²¹ R.20-08-020, Order Instituting Rulemaking to Revisit Net Energy Metering Tariffs Pursuant to Decision 16-01-044, and to Address Other Issues Related to Net Metering (September 3, 2020).

²² See R.20-08-020, Joint Opening Testimony of SCE, PG&E and SDG&E . [...] . (June 18, 2021) (Exhibit Joint-01) at 98 and 114.

1

Table 1 – Comparison of TOU-ELEC and TOU-DER

Charge	Unit	TOU-ELEC Illustrative Total Rate	TOU-DER Illustrative Total Rate
Fixed Customer Charge	\$/month		24.10
0-4 kW	\$/month	28.53	
4-8 kW	\$/month	51.28	
8-10 kW	\$/month	68.35	
>10 kW	\$/month	85.41	
Energy Charges:			
<i>Summer:</i>			
On-Peak	\$/kWh	0.45211	0.54371
Off-Peak	\$/kWh	0.22010	0.28076
Super Off-Peak	\$/kWh	0.18959	0.21999
<i>Winter:</i>			
On-Peak	\$/kWh	0.29970	0.24087
Off-Peak	\$/kWh	0.21180	0.23139
Super Off-Peak	\$/kWh	0.18406	0.22089

2

3 SDG&E's proposal for TOU-DER is currently pending before the Commission.

4 SDG&E believes that TOU-ELEC is sufficiently different from TOU-DER, and adoption of both

5 rates will provide a meaningful choice for customers who adopt these technologies.

6 **IV. CUSTOMER INEQUITY CONSIDERATIONS**

7 It is important to consider how this rate offering may create inequity between customers

8 who adopt specific technologies and those who cannot. While this rate is designed to incentivize

9 customers to adopt certain technologies and provide the benefits of lower volumetric rates to

10 those customers who do, the rate also needs to be designed to properly recover costs from

11 customers so that customers who are not able to electrify or cannot afford these technologies do

12 not end up paying for those who can. In addition to the rate design features that limit cost

1 shifting, SDG&E is proposing an initial customer participation cap, which will be reviewed at a
2 later date.

3 **A. A Differentiated Fixed Charge Based on Grid Use Limits Cost Shifting**

4 In order to mitigate inequity between customers that could result from participating
5 customers paying a fixed charge and lower volumetric rates, SDG&E is proposing a fixed
6 customer charge based on customer demand, and volumetric distribution rates that ensure
7 marginal costs are recovered in all TOU periods. This fixed charge design ensures that
8 customers with higher demands (those who impose more costs on the grid) are not subsidized by
9 those who have lower demands, as would be the case if all customers had the same flat fixed
10 charge.

11 **B. Customer Participation Cap**

12 SDG&E proposes to limit the number of customers taking service on this rate at this time
13 to 40,000 customers. While SDG&E supports the goal of electrification, the cost shifting that
14 may occur from this rate should not increase the cost burden (through increased rates and bills)
15 to customers who do not or are unable to opt into this rate.

16 **C. Ex Post Review of Rate**

17 SDG&E proposes to review this rate three years from its date of implementation to assess
18 customer adoption trends, whether cost shifting has occurred, if changes should be made to the
19 tariff to address the cost shift, and whether to change the customer participation cap. Thus, if
20 SDG&E implements this rate by 2023, the review would commence by the end of 2026.
21 SDG&E anticipates this review could be incorporated into the next GRC Phase 2 that occurs
22 after this rate is implemented, which is expected to be filed in 2026.

1 **V. IMPLEMENTATION**

2 SDG&E is proposing to implement this optional rate offering in the second half of 2022,
3 assuming a timely resolution to this application. SDG&E’s proposed ME&O is discussed in the
4 Chapter 3, Bernhardt, Exhibit SDG&E-03.

5 **VI. SUMMARY AND CONCLUSION**

6 This concludes my prepared direct testimony.

1 **VII. STATEMENT OF QUALIFICATIONS**

2 My name is Gwendolyn Morien. My business address is 8330 Century Park Court, San
3 Diego, California 92123. I have been employed as a Rate Strategy Project Manager in the
4 Customer Pricing Department at San Diego Gas & Electric Company since 2017. My primary
5 responsibilities include the development of electric rate design and policy in various regulatory
6 filings. I began work at SDG&E in 2016 as a Business/Economics Analyst and have held
7 positions of increasing responsibility in the Customer Pricing group.

8 I received a Bachelor of Science in Accounting from the State University of New York at
9 Geneseo in 2010 and a Master of International Affairs with a concentration in Environmental and
10 Energy Policy from the School of Global Policy and Strategy at the University of California, San
11 Diego in 2016. I am a licensed CPA in New York.

12 I have previously testified before the California Public Utilities Commission and the
13 Federal Energy Regulatory Commission.

ATTACHMENT A



An Untiered Residential TOU Rate for SDG&E

Presentation to SDG&E Workshop

Tom Beach
Principal Consultant
Crossborder Energy

December 14, 2020

An Untiered Residential Rate for SDG&E

- D. 18-12-004 and D. 20-03-003 have directed SDG&E to develop a new residential TOU rate:
 - Untiered
 - Opt-in
 - With a fixed charge
 - To promote:
 - Storage
 - Electric heat pumps for water and space heating
 - Beneficial electrification
- PG&E and SCE already have such rates.
 - PG&E EV2
 - SCE TOU-D-PRIME

Potential Models

- **SDG&E TOU-EV-5**
 - Untiered
 - \$16 per month fixed charge
 - Substantial POP differences all year
- **PG&E E-ELEC, also ordered by D. 20-03-003**
 - Untiered
 - Fixed charge
 - PG&E - \$25.00
 - PAO - \$12.21
 - SEIA - \$7.55
 - PAO and SEIA – POPs based on fully-scaled marginal costs across all months

E-ELEC Proposals from A. 19-11-019

Table 2: *Proposed E-ELEC Volumetric Rates (\$/kWh) and Customer Charge (\$/Month)*

TOU Period	PG&E	PAO	SEIA
<i>Volumetric Rate (\$/kWh)</i>			
Summer Peak	0.42338	0.40318	0.40430
Summer Part Peak	0.26150	0.23628	0.24777
Summer Off Peak	0.20482	0.19505	0.20654
Winter Peak	0.21198	0.35226	0.36375
Winter Part Peak	0.18989	0.20628	0.21777
Winter Off Peak	0.17603	0.19505	0.20654
<i>Customer Charge (\$/Month)</i>	\$25.00	\$12.21	\$7.55



SEIA Supports These Design Principles

1. **Untiered**
2. **Fixed charge**
 - Recovers marginal customer costs
 - NCO / Rental compromise
 - Unscaled, per D. 17-09-035
3. **POP TOU rate differences**
 - Based on fully-scaled marginal costs
 - Significant POP differences in all months
4. **Positive CTM in all TOU periods**



Rate Design for Building Electrification

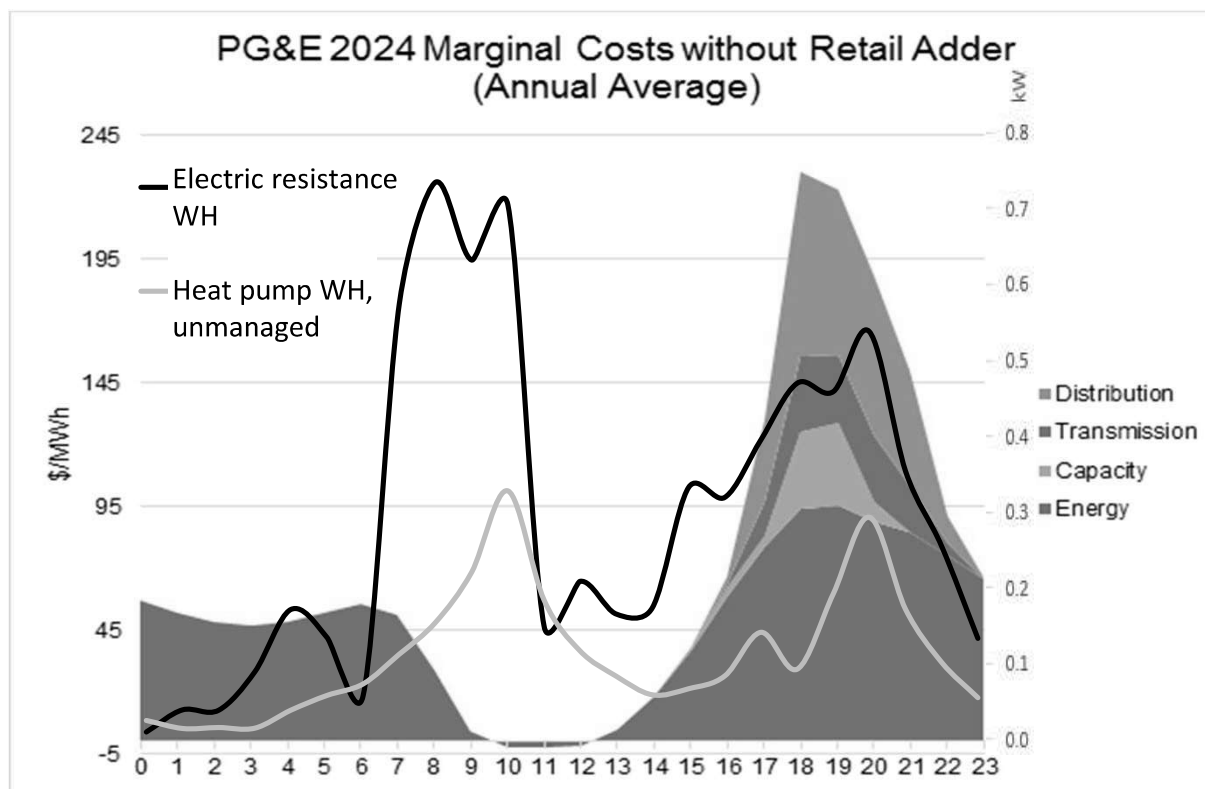
SDG&E Rate Design Workshop, December 2020

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Presentation Agenda

- **Thinking through today's electrification customers**
 - Partial electrification
 - Key load (water heating)
- **Specific equity considerations**
- **Implications for SDG&E analysis and proposal**

Key Load Shape: HPWH



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Specific Equity Considerations

Low-Income Customer Characteristic

- Smaller units with lower use
- Higher economic insecurity
- Reduced propensity to shift load

Rate Design Implication

- Fixed charges are regressive
- Need for more protective rates
- Should not assume savings based on shifting

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Implication for SDG&E Analysis

- Reconsider 500 kW and EV assumptions
- Optimizing rate for most likely “first load”
 - Off and super off-peak rates, specially in winter
- Limitations of fixed charge solution
- Consider a menu of rates



Thank you!
