Application: A.23-01-008
Exhibit No.: SDG&E-
Witness: William G. Saxe

CHAPTER 4
PREPARED REBUTTAL TESTIMONY OF
WILLIAM G. SAXE
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

FEBRUARY 7, 2024

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PREPARED REBUTTAL TESTIMONY OF WILLIAM G. SAXE (CHAPTER 4)

I. OVERVIEW AND PURPOSE

The purpose of this prepared rebuttal testimony is to address the following direct testimony submitted on marginal customer access costs (MCAC) and marginal distribution demand costs (MDDC) issues by:

- The Public Advocates Office (Cal Advocates) of the California Public Utilities Commission (CPUC or Commission), submitted prepared testimony of Christopher Hogan on MCAC (Chapter 1), dated December 8, 2023, and errata prepared testimony of Otto Nichols on MDDC (Chapter 2), dated January 19, 2024.
- California City County Street Light Association (CALSLA), submitted prepared direct testimony of Alison Lechowicz, dated January 8, 2024.
- The Federal Executive Agencies (FEA), submitted direct testimony of Maurice Brubaker, dated January 8, 2024.
- Small Business Advocates (SBUA), submitted direct testimony of Maureen L. Reno, dated January 8, 2024.
- Solar Energy Industries Association (SEIA), submitted prepared direct testimony of R. Thomas Beach, dated January 8, 2024.
- The Utility Reform Network (TURN), submitted revised prepared testimony of Garrick Jones, dated Revised January 17, 2024.

Specifically, my prepared rebuttal testimony provides the following conclusions regarding recommendations raised in intervenor testimony as follows:

- The Commission should adopt the MCAC in this proceeding based on the Rental Method (also referred to as the Real Economic Carrying Charge (RECC) Method), proposed by San Diego Gas & Electric Company's (SDG&E's) and supported by FEA,[1] instead of the New Customer Only Method (NCO) Method proposed by Cal Advocates, TURN, SUBA, and CALSLA because, as discussed in Section II.A below, the Rental Method is based on marginal costs, provides more accurate price signals, and is more accurate and less volatile with respect to allocations of authorized distribution revenue requirements.
- In considering different MCAC calculation methodologies, SDG&E disagrees with Cal Advocates' assertion that the NCO Method is a better MCAC methodology than the Replacement Cost New Less Depreciation (RCNLD) Method, as described in Section II.B below.
- If the CPUC adopts the NCO Method, the calculation should include final line transformer, service drop, and meter (TSM) replacement costs, as described in Section II.C below.
- The CPUC should adopt the MDDC proposed by SDG&E and not the MDDC proposed by Cal Advocates, SEIA, or TURN because: (a) the National Economic Research Associates (NERA) regression analysis SDG&E used to calculate the MDDC correctly uses the planning forecasted loads for distribution growth-related investments, unlike the Cal Advocates' NERA

[1] Direct Testimony and Schedules of Maurice Brubaker on behalf of The Federal Executive Agencies (January 8, 2024) (FEA Direct Testimony), pp. 11-20.

regression analysis, as described in Section III.A below; (b) SDG&E's proposed MDDC calculation is based on the correct amount of distribution capital costs unlike the SEIA proposed MDDC, as described in Section III.B below; and (c) SDG&E's proposed MDDC correctly excludes TSM replacement costs unlike the TURN proposed MDDC, as described in Section III.C below.

- The CPUC should disregard Cal Advocates suggestion to change the 2022 data used in the NERA regression analysis from forecasted data to historical data, as described in Section III.A.
- The CPUC should disregard Cal Advocates' assertion that SDG&E did not provide details on the peak/non-peak distribution split. SDG&E provided this information in its workpapers, as described in Section III.D.
- The CPUC should disregard Cal Advocates recommendation that SDG&E be required to modify the D-CPP rate component used for its Schedules VGI and Public GIR rates. The D-CPP rate and its relevant components are being evaluated in the ongoing Demand Flexibility OIR (Rulemaking (R.) 22-07-005) for use in future dynamic rates, as described in Section III.E.

In this prepared rebuttal testimony, failure to address any individual issue does not imply any agreement by SDG&E with the proposal made by these or other parties.

II. MARGINAL DISTRIBUTION CUSTOMER COSTS

A. Rental Method versus NCO Method

1. Rental Method is a Better Proxy for MCAC than the NCO Method

Cal Advocates, TURN, SUBA, and CALSLA argue that the NCO Method is a better methodology to calculate the MCAC in this proceeding. Cal Advocates asserts that the Commission should adopt the NCO Method for determining the MCAC, arguing that the NCO

Method provides a better proxy for MCAC than the Rental Method and that the Rental Method produces a less practical price signal to customers on the cost to connect to the SDG&E grid because it includes TSM costs for all customers, not just new customers like the NCO Method.[2] Cal Advocates states that the NCO Method calculation "is a direct reflection of the customer's choice to connect to the grid and the TSM costs a customer can potentially avoid by not connecting to the grid."[3] It states that the Rental Method "provides an inflated price signal to prospective customers because the Rental Method assumes that previously purchased TSM connection equipment can always defer the purchase of new connection equipment (deferral concept)."[4] TURN states that the NCO Method is superior to the Rental Method "for reflecting cost causation since the only time when customer costs are in fact marginal is when the customer is making the decision to connect to the SDG&E system." It states that "[o]nce the customer has decided to install the connection equipment, the costs become sunk, and society cannot avoid them (except for the salvage value associated with removable equipment such as regulators and meters)." TURN goes on to state that the Rental Method "simply dresses up sunk [costs], embedded costs, into marginal cost[s]."[5] SBUA argues that the Rental Method "violates marginal cost principles and serves only to inflate the cost of customer access equipment."[6]

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[2] Cal Advocates Prepared Testimony of Christopher Hogan - Marginal Customer Access Costs (Chapter 1) (December 8, 2023) (Cal Advocates Prepared Testimony on Marginal Customer Access Costs), pp. 1-10 through 1-12.

[3] *Id*.

[4] *Id.,* p. 1-12.

[5] Prepared Testimony of Garrick Jones, Marginal Cost, Revenue Allocation and Rate Design Policy Issues for SDG&E on behalf of TURN (January 17, 2024) (TURN Revised Prepared Testimony), pp. 11-12 (citation omitted).

[6] Direct Testimony of Maureen L. Reno on behalf of the SBUA Regarding SDG&E Authority to Update Marginal Costs, Cost Allocation, and Electric Rate Design in Application 23-01-008 (January 8, 2024) (SBUA Direct Testimony), p. 13.

CALSLA states that the relevant cost in the calculation of the MCAC "is the incremental cost of a new hookup."[7] It states that the cost of the new hookup is caused by new customers and the NCO Method captures this relationship by only including the costs of new customers while the Rental Method does not.[8]

Cal Advocates is mistaken in stating that the Rental Method assumes that previously purchased connection equipment can defer the purchase of new connection equipment by assigning a rental value to TSM equipment (deferral concept).[9] While SDG&E would argue that existing TSM equipment does have some value, the deferral concept is not SDG&E's justification for using the Rental Method to calculate MCAC.

The Rental Method calculates a rental price based on the TSM costs to serve the next customer; and thus, the Rental Method calculates the correct MCAC price. In fact, the NCO and Rental Methods use the same TSM costs in the development of MCAC. The difference in these two MCAC methodologies is the conversion of the TSM costs into a cost per customer amount. The Rental Method, using the RECC factors to annualize the cost of connection assets, correctly reflects the MCAC of providing service to the next customer and correctly applies these MCAC to all customers taking electric service from SDG&E.

Conversely, the NCO Method does not calculate the MCAC to provide service to the next customer but rather calculates the incremental change in total MCAC due to the expected customer growth rate of each customer class. The NCO Method applies the Present Value Revenue Requirement (PVRR) factors to the TSM costs to determine the present value of the

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[7] Prepared Direct Testimony of Alison Lechowicz of the CALSLA regarding SDG&E 2024 GRC Phase 2 (January 8, 2024) (CALSLA Prepared Direct Testimony), p. 3.

[8] *Id.*

[9] Cal Advocates Prepared Testimony on Marginal Customer Access Costs, pp. 1-11 through 1-14.

revenue requirements for the life of the TSM equipment, multiplies that value by the forecasted growth rate in the customer class to calculate the MCAC for new customers in that class, and then divides that amount by all customers in that customer class. Given the NCO Method's dependency on the customer growth rate by customer class, a growth rate that has no relationship to the cost of TSM equipment as discussed below, the NCO Method does not accurately reflect MCAC. Contrary to what Cal Advocates claims, the Rental Method does not overstate the MCAC but actually properly calculates MCAC and the resulting MCAC rental price needed for a customer to decide whether to connect to the SDG&E electric grid; whereas the NCO Method does not properly calculate the MCAC and thus does not provide customers with an accurate opportunity cost to connect to the SDG&E electric grid.

The following example demonstrates how the NCO Method dependency on customer class growth rates result in a flawed MCAC price signal. Assume you have two customers taking service using the same TSM equipment, but the customers are in different customers classes, with one class having a higher forecasted customer growth rate than the other class. The customer class having the higher customer growth rate would have a higher MCAC under the NCO Method. This demonstrates one of the flaws in the NCO Method, since the MCAC for both customers would be different because of differences in the customer class growth rates of the two customers and not because of any differences in the TSM costs needed to serve the customers. If we instead use the Rental Method, the MCAC for both customers would be identical, as they should be, since the TSM costs to serve the two customers are exactly the same.

TURN appears to misunderstand the difference between marginal and embedded costs. Marginal customer costs reflect the incremental costs to serve the next customer whereas embedded customer costs reflect the historical costs incurred to serve customers. The Rental

Method is based on the incremental TSM costs (not historical costs) to serve the next customer and thus, the Rental Method is based on marginal costs. As mentioned below, the NCO and Rental methodologies use the same incremental TSM costs in the development of the MCAC. The difference in these two methodologies is how these incremental costs are converted to a MCAC. SDG&E believes that the Rental Method properly calculates the marginal distribution customer cost by customer class to provide service to the next customer; whereas the NCO Method fails to do this because it calculates the incremental change in total forecasted customer costs due to the expected customer growth rate of each customer class.

SBUA asserts that the Rental Method violates marginal cost principles and serves only to inflate the cost of customer access equipment, without explaining the basis for either of these assertions.[10] As explained above in response to similar claims by Cal Advocates and TURN, the Rental Method properly calculates the MCAC and thus, does not overstate the MCAC as SBUA alleges.

CALSLA, like Cal Advocates, is trying to use the value argument against the Rental Method by saying that the Rental Method assumes that hook-up costs have value but actually hook-up costs have no opportunity value. Again, as stated above, SDG&E is not justifying the Rental Method based on the opportunity value argument, but rather SDG&E is arguing for the use of the Rental Method to calculate the MCAC because this method provides customers with the more accurate opportunity cost to connect to the SDG&E electric grid and fully pay for the customer hookup costs.

For the reasons stated above, contrary to the claims of Cal Advocates, TURN, SBUA, and CALSLA, the Rental Method properly calculates the MCAC, and the NCO Method is the

[10] SBUA Direct Testimony, p. 13.

methodology that does not properly calculate the MCAC for the next customer requiring electric service.

2. CPUC Decisions from Two Decades Ago Should Not Set the Precedent on MCAC Methodology

Cal Advocates, TURN, and CALSLA assert that the Commission should continue to adopt the NCO Method for determining the MCAC and cite decisions back in the 1990s for setting the precedent for using the NCO method for developing the MCAC for electric utilities.[11]

SDG&E disagrees with Cal Advocates, TURN, and CALSLA that decisions adopting the use of NCO Method in proceedings more than two decades ago in non-SDG&E electric proceedings should set the precedent for the MCAC adopted in this proceeding. Which methodology to use in developing MCAC has always been a complicated and contentious issue in rate design proceedings. SDG&E recommends that the CPUC determine its preferred MCAC methodology in this proceeding based on evidence presented in this proceeding and not evidence presented in non-SDG&E electric proceedings more than two decades ago. As discussed in my revised direct testimony,[12] and in Section II.A.2 below, SDG&E believes that the Rental Method is the appropriate methodology to use in the development of MCAC in this proceeding because the Rental Method is based on marginal costs, provides more accurate price signals regarding TSM costs, and provides more accurate and less volatile allocations of authorized distribution revenue requirements based on MCAC compared to the NCO Method.

[11] Cal Advocates Prepared Testimony on Marginal Customer Access Costs, pp. 1-9 through 1-14; TURN Revised Prepared Testimony, p. 8; and CALSLA Prepared Direct Testimony, pp. 2 and 3.

[12] SDG&E 2024 GRC Phase 2 Chapter 4 Revised Prepared Direct Testimony, Section IV.F, pp. WGS-10 and WGS-11.

Indeed, a 2020 CPUC decision, D.20-02-045, is instructive in adopting the Rental Method to develop marginal distribution customer costs for SDG&E gas and Southern California Gas Company (SoCalGas). In D.20-02-045, the CPUC stated:

> As discussed below, we find that neither the Rental Method nor the New Customer Only Method are optimal approaches to determining marginal costs. However, the results of the Rental Method provide the Commission marginal costs with less dramatic increases across all customer classes, thus avoiding disproportionate rate impacts to customer classes with few new customers. The use of the Rental Method in this proceeding will result in the most reasonable revenue allocation and near cost-based rates for SoCalGas and SDG&E customers.[13]
>
> In the past, the Commission has supported both Methods for varying reasons. Parties discuss the Commission support of the Rental Method in D.92-12-058, while parties opposing the Rental Method discuss Commission support of the New Customer Only Method in D.95-12-053. Most recently, in D.19-10-036, the Commission adopted a marginal cost study based on the Rental Method, stating that it 'will result in the most reasonable revenue allocation and the most reasonable cost-based rates' for customers. The Commission found that the use of the Rental Method would 'produce results that are fair across customer classes' and would 'avoid disproportionate rate impacts to customer classes that have few new entrants.'[14]
>
> In this review of the two Methods, we are faced with the same arguments that these parties have presented in prior proceedings. Supporters of each approach contend their preferred approach most accurately captures marginal capital related customer cost. We find that neither side fully validates the use of its preferred model but rather focuses on invalidating the opposing model. Hence, we are left with two imperfect models. However, in looking at the results of the models, we find the Rental Method results in costs that are fair across the customer classes, as seen in Tables 11 and 12 below.[15]

As stated above, SDG&E recommends that the appropriate MCAC methodology to adopt in this proceeding should be based on the evidence presented in this proceeding, which supports the use of the Rental Method. Recent CPUC precedent in D.20-02-045 also supports the adoption of the Rental Method.

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[13] D.20-02-045, p. 49.

[14] *Id.*, p. 50 (citations omitted).

[15] *Id.*, pp. 50-51.

3. Rental Method Provides a More Efficient Price Signal than the NCO Method for Fully Recovering MCAC

Cal Advocates, TURN, and CALSLA argue that the NCO Method better reflects the recovery of customer hookup costs. Cal Advocates states that,

> [t]he most efficient Method to establish an interconnection price signal would be to require all developers and customers to pay for their own connection equipment upfront. This hypothetical Method would align the costs imposed by the new customer on the grid in accordance with their own decisions about whether to connect to the grid. However, this Method is inconsistent with the Commission's policy which requires that new customer connection equipment costs be subsidized by all ratepayers.[16]

Cal Advocates goes on to state that the NCO Method replicates how customer connection equipment costs are incurred ensuring that the price signal customers receive reflects, as closely as possible, the recovery process set forth by the Commission. It states that in contrast, the Rental Method simulates a fictitious rental market and recovers TSM costs through a rental price which is inconsistent with the socialization of new customer connection equipment costs that occurs in practice.[17] TURN also states that charging customers the full cost of hook-up at installation is the most efficient approach, if possible, but claims that the NCO Method is the second-best approach.[18] It goes on to states that the NCO Method fully recovers the costs of new hook-ups and the Rental Method overcharges customers for hook-ups.[19] CALSLA argues that the NCO Method only charges customers for TSM hook-ups once, while the Rental Method

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[16] Cal Advocates Prepared Testimony on Marginal Customer Access Costs, p. 1-9 (citation omitted).

[17] *Id*., pp. 1-8 and 1-9.

[18] TURN Revised Prepared Testimony, p. 12.

[19] *Id.*, pp. 12-13.

overcharges customers over time for these hookups.[20] It goes on to state that MCAC costs are unique to one customer and thus, have no opportunity value.[21]

SDG&E agrees with Cal Advocates and TURN that the most efficient Method to recover MCAC would be for customers or developers to pay for these connection costs in full, upfront. But as Cal Advocates indicates, collecting these costs upfront is not practical under utility regulation and thus, we need to determine the next best approach. This is where SDG&E disagrees with Cal Advocates, TURN, and CALSLA. Contrary to what Cal Advocates states, the Rental Method and not the NCO Method replicates the process for fully recovering MCAC costs. The CPUC adopted the concept of TSM service line allowances under Rules 15 and 16 to collect the TSM costs over the life of the assets from all customers through authorized distribution revenue requirements based on the recovery of TSM service line allowances. Basically, developers receive an allowance towards the cost of new customer connection costs from SDG&E and these costs are then recovered over the life of the connection assets as part of the authorized distribution revenue requirement adopted for SDG&E in its GRC Phase 1 proceedings, which is then proposed to be allocated to customer classes based on the MCAC adopted in this proceeding.[22] The development of MCAC based on the Rental Method is in fact consistent with the TSM service line allowance recovery methodology because it calculates the MCAC based on recovery of connection costs from customers over the life of the TSM equipment, which is consistent with how Rule 15 and Rule 16 allowances are recovered.

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[20] CALSLA Prepared Direct Testimony, p. 3.

[21] *Id*.

[22] SDG&E Rule 15, Section on "Distribution Line Extension Allowances".

Conversely, the NCO Method calculates marginal costs for connection assets at a point in time not over the life of the connection asset.

Because customers do not pay TSM hookup costs upfront prior to taking electric service from SDG&E, the Rental Method doesn't overcharge customers for the TSM costs, as implied by Cal Advocates, TURN, and CALSLA; but rather the NCO Method understates the TSM costs. As explained above, the NCO Method fails to calculate the MCAC to provide service to the next customer but rather calculates the incremental change in total customer costs due to the assumed customer growth rate in each customer class. By applying TSM costs to only expected new customers in a given year and then dividing these incremental costs by all customers, the NCO Method is economically inefficient because it generally understates MCAC, and thus, when applied for distribution revenue allocation purposes, understates the TSM costs to be recovered from customer classes.

Cal Advocates also claims that unlike the NCO Method, the Rental Method fails to simulate a competitive market price for MCAC because it does not reflect the option for customers to reap the financial benefits of an outright purchase of TSM equipment.[23] SDG&E is confused by this claim since, as Cal Advocates knows, neither the NCO nor the Rental Methods provide an option for customers to purchase the TSM equipment upfront. The Rental and NCO Methods both start with the same TSM costs and thus, the TSM cost starting point for both Methods reflect the TSM full purchase price. The Rental Method converts this purchase price into a rental price and the NCO Method manipulates this price based on growth rates in the customer class. While neither Method presents the upfront market price of the TSM equipment as an option, the Rental Method at least follows the real option available for customers to take

[23] Cal Advocates Prepared Testimony on Marginal Customer Access Costs, p. 1-14.

electric service using TSM equipment, which is renting the TSM equipment through their electric rates.

In conclusion, Cal Advocates, TURN, and CALSLA are mistaken when they assume that the NCO Method is a better Method for replicating the process for fully recovering MCAC costs and a better proxy for a competitive market price because the NCO Method understates MCAC and thus, does not follow the CPUC process for fully recovering TSM costs like the Rental Method does.

For the reasons stated above, the CPUC should adopt the MCAC in this proceeding based on the Rental Method proposed by SDG&E,[24] instead of the MCAC based on the NCO Method as proposed by Cal Advocates, TURN, SBUA, and CALSLA.

B. RCNLD Method

Cal Advocates describes the RCNLD Method that was adopted to calculate Pacific Gas and Electric Company's (PG&E) MCAC in PG&E's 2020 GRC Phase 2 and explains why the NCO Method is superior to the RCNLD Method for calculating the MCAC.[25] TURN also mentioned the RCNLD Method that was adopted for PG&E and questions why SDG&E did not mention this methodology.[26]

As Cal Advocates and TURN describe, the RCNLD Method adjusts the MCAC results based on the Rental Method by the amount of depreciation. The intent of this adjustment is to include the depreciated value of existing TSM equipment to account for the lower value of existing TSM equipment. SDG&E did not mention the RCNLD Method adopted by the CPUC

[24] SDG&E 2024 GRC Phase 2 Chapter 4 Revised Prepared Direct Testimony, Attachment A.

[25] Cal Advocates Prepared Testimony on Marginal Customer Access Costs, pp. 1-15 and 1-16.

[26] TURN Revised Prepared Testimony, p. 7.

for PG&E because SDG&E does not agree with making this adjustment to the Rental Method MCAC results because applying this adjustment diminishes the efficiency of the MCAC marginal price signal by adjusting incremental TSM costs by historical accumulated depreciation values. However, SDG&E disagrees with Cal Advocates that the NCO Method sends a more accurate price signal to customers on MCAC than the RCNLD Method. Cal Advocates indicates that the CPUC denied the Rental Method in this PG&E proceeding but fails to also acknowledge that the CPUC rejected the NCO Method in this proceeding too, which is why the CPUC adopted the RCNLD Method.[27] In fact what the CPUC adopted for PG&E is closer to the Rental Method since the RCNLD Method reflects the Rental Method with modification, not the NCO Method with modifications.[28]

While SDG&E believes that the Rental Method calculates a more accurate MCAC than the RCNLD Method, SDG&E would prefer the use of the RCNLD Method over the NCO Method.

C. Inclusion of TSM Replacement Costs in NCO Method Calculations

If the CPUC ultimately adopts the use of the NCO Method to calculate the MCAC in this proceeding, SDG&E recommends that the CPUC reject Cal Advocates' proposal to exclude TSM replacement costs from the NCO Method calculation. Cal Advocates proposes the exclusion of TSM replacement costs in the calculation of MCAC using the NCO Method because it believes TSM replacement costs are not technically marginal costs. Cal Advocates argues that replacement costs are driven by the existing useful life of the TSM equipment and are

[27] Cal Advocates Prepared Testimony on Marginal Customer Access Costs, pp. 1-15 and 1-16.

[28] D.21-11-016, p. 23.

not driven by customer behavior, and thus, should not be included in the calculation of the MCAC based on the NCO Method.[29]

SDG&E and TURN disagree with Cal Advocates' proposal to exclude TSM replacement costs in the calculation of MCAC using the NCO Method.[30] TURN agrees that TSM replacement costs should be included in the NCO MCAC calculation. TSM replacement costs need to be included in the NCO Method because replacement of TSM equipment results in a real cost that should be included in the calculation of MCAC based on the NCO Method. Cal Advocates is correct that TSM replacement costs are tied to the life of the asset that needs to be replaced, which is precisely the reason they should be included in the NCO Method calculation (as they already are in the Rental Method which takes into account the life of the asset).

For this reason, if the CPUC ultimately adopts the use of the NCO Method to calculate the MCAC in this proceeding, SDG&E recommends that the CPUC reject Cal Advocates' proposal to exclude TSM replacement costs from the NCO Method calculation and adopt the illustrative MCAC based on the NCO Method that includes TSM replacement costs, as presented in my revised direct testimony.[31]

D. Collection of Replacement Cost Data

TURN recommends that the Commission order SDG&E to begin collecting replacement data for all TSM equipment prior to the filing of SDG&E's next GRC Phase 2.[32] As TURN indicated, it requested replacement data from SDG&E in data request TURN-SDG&E-DR 1,

[29] Cal Advocates Prepared Testimony on Marginal Customer Access Costs, pp. 1-16 through 1-18.

[30] TURN Revised Prepared Testimony, pp. 13-14.

[31] SDG&E 2024 GRC Phase 2 Chapter 4 Revised Prepared Direct Testimony, Attachment C.

[32] TURN Revised Prepared Testimony, p. 14.

attached in TURN's testimony, and SDG&E provided TURN with the replacement data that SDG&E currently collects.[33] As shown in response to the questions in this data request, SDG&E was able to provide replacement data for meters and final line transformers, and informed TURN that replacement data for service drops is not available because SDG&E does not currently map service drop replacements.

Because replacement data is not needed by SDG&E to operate its electric business and to SDG&E's knowledge is only used in the NCO Method, a methodology used by other parties to calculate MCAC, SDG&E disagrees with TURN that the CPUC should order SDG&E to change its business practice and begin collecting replacement data for all TSM equipment. Such a requirement would be very time-consuming and expensive to implement, and SDG&E does not believe that having the actual service drop replacement data will provide a commensurate benefit. The replacement percentage currently used in the NCO Method is an estimate, similar to the TSM costs used in the NCO Method, and thus, SDG&E believes that estimates for replacement data based on the data that SDG&E currently has and the data of other investor-owned-utilities can still be used as the basis for the replacement percentage in the NCO Method. While SDG&E willing to work with TURN to figure out the most appropriate replacement percentage for TURN to use in the NCO Method in SDG&E's next GRC Phase 2, SDG&E recommends that the CPUC reject TURN's request for the Commission to order SDG&E to begin collecting replacement data for all TSM equipment prior to the filing of SDG&E's next GRC Phase 2.

[33] *Id.*

III. MARGINAL DISTRIBUTION DEMAND COSTS

A. Load Data Used in NERA Regression Analysis

Cal Advocates uses the NERA Regression Method to calculate MDDC.[34] Cal Advocates proposes the following two changes to the NERA Regression Method MDDC calculation that SDG&E proposed:

Use cumulative historic recorded load (actual load data) rather than SDG&E's proposed planning forecasted load; and

Account for any load decreases by applying a rolling maximum method.[35]

In addition, Cal Advocates proposes to update the data used in the NERA Regression Method to reflect historical loads for years 2010-2022 and forecasted loads for years 2023-2024 for circuits and substations instead of historical loads for years 2010-2021 and forecasted loads for years 2022-2024 as SDG&E proposed.[36]

Cal Advocates agrees with SDG&E that the NERA Regression Method is a valid Method to use in calculating MDDC. However, Cal Advocates' proposal to use actual load data,[37] that is supported by SEIA[38] rather than SDG&E's planning forecasted load data is incorrect because SDG&E's distribution growth-related investments are based on SDG&E's planning forecasted load data, as used by SDG&E's distribution planning department when determining the capacity

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[34] Cal Advocates Errata Prepared Testimony on Otto Nichols - Marginal Distribution Demand Costs (Chapter 2) (January 19, 2024) (Cal Advocates Errata Prepared Testimony on Marginal Distribution Demand Costs), pp. 2-1 through 2-11.

[35] *Id.*, pp. 2-7 through 2-11.

[36] *Id.*, pp. 2-3 through 2-11.

[37] *Id.*, pp. 2-7 through 2-11.

[38] Prepared Direct Testimony of R. Thomas Beach on Behalf of SEIA (January 8, 2024) (SEIA Prepared Direct Testimony), p. 19.

upgrades needed. As stated in my revised direct testimony, the "NERA Regression Method identifies the utility's cumulative incremental changes in distribution peak load data as the independent variable, the utility's cumulative incremental distribution growth-related investments as the dependent variable, and then regresses the data over a fifteen-year period of data points."[39] SDG&E used the planning forecasted load data as the independent variable because the incremental distribution growth-related investments are based on this planning forecasted load data—not the actual load data. Cal Advocates argues for this change because it states that the forecasted annual loads by year are much higher than the actual loads by year and thus, believes using forecasted loads for this regression analysis will not provide realistic indicators of MDDC.[40] But actually, the opposite is true because the planning forecasted load are the basis for the distribution growth-related investments and it would be inappropriate not to use the planning forecasted load data in this regression analysis. The planning forecasted load takes into consideration actual loads that are known for prior years and thus, actual loads are taken into consideration. It would be inappropriate to regress actual load data against the distribution growth-related investments. The investments for a given year were not based on actual loads for that year as actual loads were not known at the time the investments were being made. For this reason, the CPUC should adopt MDDC based on the NERA regression analysis proposed by SDG&E, as presented in my revised direct testimony,[41] that correctly uses the planning forecasted load that the distribution growth-related investments are based on.

[39] SDG&E 2024 GRC Phase 2 Chapter 4 Revised Prepared Direct Testimony, p. WGS-3.

[40] Cal Advocates Errata Prepared Testimony on Marginal Distribution Demand Costs, pp. 2-9 through 2-11.

[41] SDG&E 2024 GRC Phase 2 Chapter 4 Revised Prepared Direct Testimony, Attachment A.

Cal Advocates' second proposed change to the NERA regression analysis to apply a rolling maximum method for loads[42]--is also part of SDG&E's proposal. SDG&E also applies the rolling maximum method for calculating the planning forecasted loads. For this reason, SDG&E agrees with Cal Advocates that whatever load data is used in the NERA regression analysis, the rolling maximum method should be used to handle load decreases.

Finally, Cal Advocates proposes to update the data used in the NERA Regression Method to reflect 2022 as an additional historical year.[43] When SDG&E submitted its 2024 GRC Phase 2 application on January 17, 2023, actual 2022 data was not yet known, which is the reason that 2022 data was included in the forecasted data. While actual 2022 data is now known, SDG&E disagrees with Cal Advocates proposal to update the data in the proceeding to reflect 2022 actual data since this change will result in the need to also update other parts of the filing such as updating SDG&E's proposed electric rates. Because GRC Phase 2 proceedings normally take more than a year to complete, it would be a never-ending process if we had to update the data used in these proceedings for actual data as we moved forward in the proceeding. In addition, updating the MDDC for 2022 actual data only results in a decrease of $0.08/kW in the total MDDC, or a change in the MDDC of only 0.09%. For this reason, SDG&E recommends that the CPUC disregard Cal Advocates' request.

For the reasons stated above, the CPUC should adopt the MDDC in this proceeding proposed by SDG&E, as presented in my revised direct testimony,[44] instead of the MDDC proposed by Cal Advocates.

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[42] Cal Advocates Errata Prepared Testimony on Marginal Distribution Demand Costs, pp. 2-7 through 2-11.

[43] *Id.*, pp. 2-8 through 2-9.

[44] SDG&E 2024 GRC Phase 2 Chapter 4 Revised Prepared Direct Testimony, Attachment A.

B. Distribution Investments used in the NERA Regression Analysis

SEIA states that SDG&E and Cal Advocates have not included enough distribution capital costs in their NERA regression analysis used to calculate the MDDC. SEIA argues that SDG&E only included distribution capital investments whose stated purpose was to meet capacity additions when it really should be including a broader set of distribution investments whose secondary purpose was to meet capacity additions. SEIA recommends that the Commission adopt the MDDC for substations that SEIA calculated based on a broader set of distribution costs and accept the MDDC for Feeder & Local Distribution (FLD) that Cal Advocates proposed, but wants the Commission to direct SDG&E to work with other parties to develop MDDC for FLD.[45]

SDG&E disagrees with SEIA that the MDDC calculations that SDG&E and Cal Advocates performed did not properly include the correct amount of SDG&E distribution capital costs. MDDC represent the cost of providing facilities from the substation to the customer access point in order to meet the customer's individual kW demand, and does not include reliability investments, replacement costs, or customer access costs, because these costs are not considered peak growth-related.[46] SEIA argues that if a distribution investment whose primary purpose is not capacity-related, like a reliability investment, ends up increasing the kW capacity of the facility due to the conversion of that facility, that this investment needs to be included in the MDDC since the kW capacity of the facility was increased based on the investment.[47] For example, assume SDG&E has to rebuild a substation to meet reliability needs and in rebuilding the substation the kW capacity of the substation increases, SEIA is arguing that the costs of this

[45] SEIA Prepared Direct Testimony, pp. 19-24.

[46] SDG&E 2024 GRC Phase 2 Chapter 4 Revised Prepared Direct Testimony, pp. WGS-3 and WGS-4.

[47] SEIA Prepared Direct Testimony, pp. 19-24.

substation rebuild needs to be included in the MDDC calculation. SDG&E disagrees with SEIA on this because the increase in the substation kW capacity was not needed to meet customer kW load growth. The substation kW capacity only increased because the rebuild of the substation, for reliability purposes using newer equipment, resulted in a kW capacity increase of the substation. Accordingly, the MDDC calculation is based on the distribution capital costs to meet customer kW demand and should only reflect capital investments whose purpose is to meet kW customer capacity additions.

For the reasons stated above, the CPUC should adopt the MDDC proposed by SDG&E, as presented in my revised direct testimony,[48] and reject the substation MDDC proposed by SEIA and the FLD MDDC proposed by Cal Advocates, for the reason described in Section 1.A above. Additionally, the CPUC does not need to require SDG&E to work with other parties to examine and discuss the MDDC calculations. As part of the GRC Phase 2, in addition to responding to data requests, SDG&E is willing to meet with other parties to review and answer questions they have on the GRC Phase 2 MDDC calculations.

C. TSM Replacement Costs in MDDC Calculation

TURN proposes that MDDC should include TSM replacement costs. TURN states that,

> [b]y not including replacement costs in the MDDC, SDG&E assumes in its marginal cost methodology that, once a piece of equipment is added, it will always replace that equipment; and the future customers who benefit from the replacement— through receiving continued service—will never have to pay for the replacement costs. Instead, the cost of the equipment would be recovered from all current customers as a non-marginal cost included in the EPMC multiplier.[49]

TURN goes on to state that "SDG&E's analysis of this issue is based on the assumption that marginal costs only applies to new demand and not to the retention of existing demand. But this

[48] SDG&E 2024 GRC Phase 2 Chapter 4 Revised Prepared Direct Testimony, Attachment A.

[49] TURN Revised Prepared Testimony, p. 15.

view of marginal cost is not economically correct."[50] For these reasons, TURN proposes the inclusion of TSM replacement costs in the calculation of MDDC.[51]

SDG&E disagrees with TURN that distribution demand costs not associated with load growth, such as replacement costs, should be included in the calculation of MDDC. TURN appears to misunderstand the purpose of developing MDDC in this proceeding, which is to develop a marginal cost per kW to add incremental demand to the SDG&E distribution system. These marginal costs are developed by regressing the incremental distribution demand costs needed to add load to the distribution system by the incremental distribution load added. Replacement costs should not be included in these marginal costs because these replacement costs are not associated with the incremental load being added to the distribution system. The annual $/kW MDDC based on the RECC factors contains depreciation charges that account for the eventual replacement of the distribution demand investment made to meet the load growth. For this reason, the MDDC calculation should only reflect the cost of adding demand to the distribution system and thus, should exclude costs not associated with load growth such as replacement costs as SDG&E's calculation correctly does.

TURN incorrectly argues that not including replacement costs in the MDDC analysis results in future customers not having to pay for the cost of substation and FLD costs and customers in areas without load growth not paying for the costs to maintain the existing distribution system for their use.[52] This is not correct because SDG&E's proposed MDDC

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[50] *Id.*, p. 16 (original emphases).

[51] *Id.*, pp. 14-21.

[52] TURN Revised Prepared Testimony, p. 15.

reflects an annual $/kW for substations and FLD costs that applies to all customers, both existing and future customers, and customers in high-growth and low-growth areas.

TURN also implies that by not including replacement costs in the MDDC, SDG&E is understating MDDC and thus, overstating the Equal Percent of Marginal Cost (EPMC) multiplier. The opposite is true. TURN is overstating the MDDC by including replacement costs because it inconsistently adds distribution demand costs without adjusting the load used in the MDDC regression analysis to reflect the costs added. As described above, replacement costs should not be included in the MDDC analysis because these marginal costs should be based on adding load. However, if replacement costs are included, the distribution load used in the MDDC regression analysis needs to be adjusted to include the distribution load associated with the replacement costs. By increasing distribution demand costs used in the MDDC regression analysis to reflect the addition of replacement costs but not increasing the distribution load to reflect the inclusion of these distribution replacement costs, TURN significantly overstates the MDDC and thus, understates the EPMC multiplier.

While TURN states that it is including replacement costs in the MDDC calculation, it is actually including other types of costs. Based on TURN's workpapers, the costs that TURN is labeling as replacement costs are actually reliability-substation costs for the substation MDDC calculation and reliability, safety and risk management, and mandated costs for the FLD MDDC calculation. Regardless of whether the distribution costs TURN is including in the MDDC are actually replacement costs or reflect reliability and other types of distribution costs, these costs additions are inappropriate to include in the MDDC calculation because none of these costs reflect distribution capacity costs.

For the reasons stated above, contrary to what TURN states SDG&E's calculation of marginal costs in the MDDC is economically correct and TURN's calculation of marginal costs in the MDDC with replacement costs is not economically correct. For this reason, the CPUC should reject TURN's proposal to include distribution replacement costs in the calculation of the MDDC and adopt the MDDC proposed by SDG&E, as presented in my revised direct testimony.[53]

D. SDG&E Already Provided Peak/Non-Peak Distribution Costs

Cal Advocates proposes that the Commission require SDG&E to provide the load data and criteria it uses to determine its peak/non-peak splits for distribution demand costs to fully evaluate and consider SDG&E's proposals. It states that SDG&E's current level of detail in testimony and workpapers is lacking because it fails to provide the overall peak and non-peak cost splits used to allocate distribution demand costs.[54] This assertion is incorrect as SDG&E already provided this data.

SDG&E clearly provided the source and the location of the peak/non-peak split for distribution demand costs in its workpapers in the response to Cal Advocates DR-015, Question 2, as shown below:

> SDG&E's cost-based marginal distribution demand costs are allocated between non-coincident demand and on-peak demand charges based on the non-coincident/on-peak split presented in the May 3, 2019, Supplemental Testimony on SDG&E's demand charge research distribution study, submitted in SDG&E's 2019 GRC Phase 2 (A.19-03- 002). This non-coincident/on-peak distribution cost split can be found in Cells L19-33 of the 'Distrib Class EPMC Rates & Rev' tab of the 'Ch_4 Dist Rev Alloc_WP#1' workpaper in SDG&E's 2024 GRC Phase 2 proceeding.[55]

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[53] SDG&E 2024 GRC Phase 2 Chapter 4 Revised Prepared Direct Testimony, Attachment A.

[54] Cal Advocates Errata Prepared Testimony on Marginal Distribution Demand Costs, pp. 2-11 through 2-13.

[55] SDG&E Response to Cal Advocates DR-015, Question 2.

The "Ch_4 Dist Rev Alloc_WP#1" workpaper provides the cost-based distribution peak/non-peak split, referred to as the distribution demand costs that are driven by non-coincident rather than coincident peak demand, that SDG&E used to develop the proposed distribution demand charges for commercial and industrial customers, as explained in SDG&E's 2024 GRC Phase 2 revised direct testimony.[56]

It appears that Cal Advocates did not understand this data request response and did not locate the distribution peak/non-peak split data it is seeking. SDG&E was not aware of this misunderstanding and is willing to work with Cal Advocates to locate and understand the distribution peak/non-peak split data available to Cal Advocates in SDG&E's 2024 GRC Phase 2 workpapers.[57]

E. SDG&E Agrees with Cal Advocates That a New Dynamic Distribution Rate Component Might be Necessary—But It Should Be Developed After The Upcoming Decision in Track B of R.22-07-005

Cal Advocates recommends the Commission require SDG&E to modify the D-CPP component used for its Schedules VGI and Public GIR rates so that other dynamic rates can utilize the same rate design. Additionally, Cal Advocates argues that modification of the VGI and Public GIR rates will alleviate customer equity concerns and implementation challenges regarding circuit assignment.[58]

Although SDG&E agrees that modification of the D-CPP component may be necessary, any proposed modification should comply with the direction provided by the Commission in Track B of R.22-07-005. The Commission is expected to issue a proposed decision in R.22-07-

[56] SDG&E 2024 GRC Phase 2 Chapter 3 Revised Prepared Direct Testimony, p. 29

[57] SDG&E 2024 GRC Phase 2 Chapter 4 Revised Prepared Direct Testimony, Attachment A.

[58] Cal Advocates Errata Prepared Testimony on Marginal Distribution Demand Costs, pp. 2-13 through 2-15.

005 in March 2024 providing further direction to the electric investor-owned utilities, including SDG&E, on dynamic rate design.[59] Implementation of a modification to VGI and Public GIR in advance of that forthcoming decision are premature.

Cal Advocates argues that "SDG&E does not need to wait for future guidance to start considering how to improve its dynamic distribution component[,]"[60] and that "SDG&E should leverage the discussion in the Demand Flexibility Rulemaking"[61] to resolve the issues with VGI and Public GIR now so that SDG&E is "better suited to scale up rate that include a D-CPP component or other dynamic distribution component."[62] SDG&E disagrees. Creating a solution for a new D-CPP component that potentially conflicts with direction in a forthcoming Commission decision, could mean unnecessary costs for modifications that will have to be further modified and revised to comply with Commission direction. Such a premature rate change has the additional downside of potentially requiring multiple rate changes for VGI and Public GIR customers in a short-period of time, which could result in customer confusion and a negative customer experience. To clarify, while SDG&E has stated that there may be customer equity issues with the D-CPP component, SDG&E has not come to a definitive conclusion on whether the potential equity concern is supported by the data. Similarly, while SDG&E has identified implementation challenges with circuit assignment, SDG&E is still in the infancy of gathering data on individual circuits and studying how the needs of various circuits differ. Once information on circuits has been studied, a circuit specific distribution rate component can be

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[59] R.22-07-005, Assigned Commissioner's Phase 1 Scoping Memo and Ruling (November 2, 2022), p. 9, Track B Event.

[60] Cal Advocates Errata Prepared Testimony on Marginal Distribution Demand Costs, pp. 2-14 at lines 7-8.

[61] *Id.* at line 16.

[62] *Id.* at lines 11-12.

introduced for Schedules VGI and Public GIR, as well as other rates. In R.22-07-005, Southern California Edison Company, PG&E and SDG&E proposed for initial dynamic pricing rates to be developed without a distribution rate component or with a non-locational (non-circuit specific) distribution rate component, with the long-term goal of introducing a circuit specific distribution rate component in the dynamic pricing rates.[63]

Therefore, while SDG&E is supportive of Cal Advocates recommendation to modify the D-CPP component used for VGI and Public GIR, it is not clear what changes are necessary and more information is needed to properly design any modifications. For these reasons, SDG&E recommends that the CPUC hold off requiring SDG&E to make any modifications to Schedules VGI and Public GIR and instead allow the distribution rates for dynamic pricing rates to be handled pursuant to the Demand Flexibility Track B Dynamic pricing proceeding.

IV. SUMMARY AND CONCLUSION

For the reasons stated above, the CPUC should adopt: (a) SDG&E's proposed MCAC based on the Rental Method, as described in Section II above and presented in Attachment A of my revised direct testimony; and (b) SDG&E's proposed MDDC based on the NERA regression analysis, as described in Section III above and presented in Attachment A of my revised direct testimony.

This concludes my prepared rebuttal testimony.

[63] R.22-07-005,Track B Working Group Report and Notice of Availability (October 11, 2023), pp. 77-80.