Application: A.23-01-008

Exhibit No.: SDG&E-

Witness: Jeff De Turi

CHAPTER 5

PREPARED REBUTTAL TESTIMONY OF

JEFF DE TURI

ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

FEBRUARY 7, 2024

TABLE OF CONTENTS

<div align="center">

PREPARED REBUTTAL TESTIMONY OF
JEFF DE TURI
(CHAPTER 5)

</div>

I. INTRODUCTION AND PURPOSE

This rebuttal testimony chapter addresses the following testimony regarding the Marginal Energy Costs (MEC) and Marginal Generation Capacity Costs (MGCC) from other parties:

- The Public Advocates Office (Cal Advocates) of the California Public Utilities Commission (Commission or CPUC), submitted by Mr. Christopher Hogan (Chapter 3), dated December 8, 2023, and submitted by Lauren Schenck (Chapter 4), dated January 19, 2024.

- The Utility Reform Network (TURN), as submitted by Mr. Garrick Jones, dated January 17, 2024.

- The Federal Executive Accounts (FEA), as submitted by Mr. Maurice Brubaker, dated January 8, 2024.

- Solar Energy Industries Association (SEIA), as submitted by Mr. R. Thomas Beach, dated January 8, 2024.

In this 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.

A. Cal Advocates

Cal Advocates served direct testimony on MEC on December 8, 2023.[1] The following is a summary of Cal Advocates' proposals:

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[1] Cal Advocates Prepared Testimony on Marginal Energy Costs in San Diego Gas and Electric's General Rate Case Phase 2, Chapter 3 (Christopher Hogan) (December 8, 2023) (Cal Advocates Prepared Testimony on Marginal Energy Costs (Ch 3)).

1   • Update the price forecast model version from the one originally used

2   by SDG&E.

3   • Update the fuel cost forecast to the California Energy Commission's

4   (CEC) Integrated Energy Policy Report (IEPR) as an input to the

5   price forecasting model.

6   • Update the green benchmark adder for Renewable Portfolio

7   Standards.

8   Cal Advocates served direct testimony on MGCC on January 19, 2023.[2] The

9   following is a summary of Cal Advocates' proposals:

10   • Update battery storage costs from the latest information published in

11   the Integrated Resource Plan (IRP).

12   • Use a six-year average of the battery storage costs.

13   • Eliminate the use of the Effective Load Carrying Capability (ELCC)

14   as an adder to the MGCC.

15   • Update escalation factors used in the MGCC calculation.

16   Cal Advocates served prepared direct testimony on Revenue Allocation on

17   December 8, 2023.[3] The following is a summary of Cal Advocates' position(s):

18   • Use an "all hours" Loss of Load Expectation (LOLE) methodology

19   instead of SDG&E's top 100 hour methodology.

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[2]   Cal Advocates Errata on Prepared Testimony on Marginal Generation Capacity Costs in San Diego Gas and Electric's General Rate Case Phase 2, Chapter 4 (Lauren Schenck).

[3]   Cal Advocates Errata on Prepared Testimony on Revenue Allocation in San Diego Gas and Electric's General Rate Case Phase 2, Chapter 5 (Christopher Hogan).

1   **B.**   **TURN**

2   The Utility Reform Network (TURN) submitted testimony on January 17, 2024.[4]

3 The following is a summary of TURN's position(s):

4   •   Update the price forecast model version from the one originally used

5   by SDG&E.

6   •   Update battery storage costs from the latest information published in

7   the IRP.

8   •   Agrees with Cal Advocates on using a six-year average of battery

9   storage costs.

10   •   Update escalation factors used in the MGCC calculation.

11   •   Update the green benchmark adder for Renewable Portfolio Standards

12   (RPS).

13   •   Prorate the average RPS load percentage out to 2027 rather than using

14   2024 as the test year.

15   •   Include an Ancillary Services (AS) adder.

16   •   Include the ELCC but use a weighted average based on LOLE.

17   **C.**   **FEA**

18   The Federal Executive Agencies (FEA) submitted testimony on January 8, 2024.[5]

19 The following is a summary of FEA's position:

20   •   Update battery storage costs per Cal Advocates recommendations.

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[4]   TURN Prepared Testimony of Garrick Jones Marginal Cost, Revenue Allocation and Rate Design Policy Issues for San Diego Gas and Electric Company, (Garrick Jones) (revised January 17, 2024) (TURN Prepared Testimony).

[5]   FEA Direct Testimony and Schedules of Maurice Brubaker (January 8, 2024).

1   • Do not subtract the energy market earnings from the MGCC.

2   **D.   SEIA**

3   Party Solar Energy Industries Association (SEIA) submitted testimony on January 8,

4   2024.[6] The following is a summary of SEIA's position:

5   • Update battery storage costs using the Avoided Cost Calculator

6   (ACC).

7   • Do not use the green adder benchmark.

8   • Use the ACC to calculate the MEC.

9   • Update the fuel cost forecast from the CEC's IEPR as an input to the

10   price forecasting model.

11   • Include the ELCC but use an average based on the IRP 2024-2026.

12   **II.   REBUTTAL TO PARTIES' PROPOSALS**

13   **A.   Marginal Energy Cost**

14   **1.   Updated PLEXOS Model**

15   **a.   Cal Advocates and TURN**

16   Cal Advocates and TURN take issue with SDG&E's PLEXOS model. Cal

17   Advocates state that because the model is out of date, it is causing the large off-peak and

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[6]   SEIA Prepared Direct Testimony of R. Thomas Beach (January 8, 2024).

1   super off-peak prices.[7] TURN also acknowledges Cal Advocates recommendation to use an

2   updated PLEXOS model.[8]

3   PLEXOS is continuously improving its model, and it is a best practice to use updated

4   versions as they become available and can be incorporated into SDG&E's workflow.

5   SDG&E uses PLEXOS for more than just General Rate Case (GRC) Phase 2 modeling[9] and

6   therefore may not always have the latest PLEXOS version tested and installed to ensure

7   consistency of modeling across related proceedings.

8   SDG&E agrees with Cal Advocates and TURN that the most up-to-date PLEXOS

9   model should be used whenever possible. However, it is unclear how the updated MECs

10   would be used in the instant proceeding. SDG&E proposes, and Cal Advocates agrees for

11   residential and small commercial,[10] with the use of the 2019 GRC Phase 2 cost study results

12   for commodity rate design purposes. Additionally, the Chapter 2 Rebuttal Testimony of

13   SDG&E witness Mindy Guardado proposes to continue allocating the commodity revenues

14   based on SAPC methodology and thus, the cost-based commodity revenue allocations are

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7   Cal Advocates Prepared Testimony on Marginal Energy Costs (Ch 3), at 3-11 lines 6-9, ("Specifically, they more accurately reflect 2024 MECs by using updated generator fuel price forecasts, and are developed using a more current version of Plexos that does not produce inconsistently large MECs during off-peak and super off-peak periods.").

8   TURN Prepared Testimony at 27 ("TURN acknowledges Cal Advocates' recommendations regarding the updated energy prices and use of the most recent PLEXOS model for modeling marginal costs by time-of-use.").

9   The PLEXOS Model is the same production cost model used by SDG&E to forecast procurement costs in the Energy Resource Recovery Account (ERRA) proceeding.

10   Cal Advocates' Response to SDG&E Date Request, SDGE-CAL Advocates-DR-02, (January 3, 2024), Response 2.1, ("Cal Advocates generally proposes that SDG&E update its electricity rates to reflect Cal Advocates' proposed marginal costs for all rate schedules, with the exception of Cal Advocates' proposals in testimony chapters seven and eight, where Cal Advocates references maintaining rate stability as a goal.") (citations omitted).

1   not used.[11] Similarly, SDG&E is proposing to use its current TOU differentials for rate

2   design as explained in Chapter 1 of SDG&E's Direct Testimony (Pate). For these reasons,

3   SDG&E believes there is no need or added value to updating the illustrative marginal

4   commodity cost study.

5   Cal Advocates points out that there is a possibility that the marginal generation

6   capacity cost may be used for dynamic rates, the design of which is currently being

7   considered in the Demand Flexibility Order Instituting Rulemaking (R.) 22-07-005 (DFOIR)

8   proceeding.[12] The ALJ for the DFOIR proceeding is not scheduled to issue a Proposed

9   Decision (PD) until March 2024, which means it is unknowable at this time what

10   recommendation or guidelines, if any, will be forthcoming.[13] It is important to point out that

11   the DFOIR is only providing a set of guidelines,[14] so SDG&E will still be able to adjust and

12   update our MGCC calculation specifically for dynamic pricing pilots. In other words,

13   SDG&E will have the option to ignore the illustrative MGCC used in this immediate

14   proceeding and can calculate an updated MGCC specifically for dynamic rates.

15   Accordingly, SDG&E does not agree that marginal costs should be updated if the 2019 GRC

16   Phase 2 cost study results will be used in rate design for residential and small commercial

17   customers.[15]

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[11]   SDG&E Prepared Rebuttal Testimony of Mindy Guardado (Ch. 2 Revenue Allocation), at MRG-8.

[12]   Cal Advocates Errata on Prepared Testimony on Marginal Generation Capacity Costs in San Diego Gas and Electric's General Rate Case Phase 2, Chapter 4 (Lauren Schenck) (January 19, 2024) (Cal Advocates Prepared Testimony on Marginal Generation Capacity Costs (Ch 4)), at 4-9, lines 12-13.

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

[14]   *Id.* at 6.

[15]   Cal Advocates' Response to SDG&E Date Request, SDGE-CAL Advocates-DR-02, (January 3, 2024), Response 2.1 ("Cal Advocates generally proposes that SDG&E update its electricity rates to

1   As a general rule, SDG&E would agree with the intervenors who are calling for

2   updated data to be used in the marginal cost studies if it were practical. It is reasonable that

3   the most updated data available at the time of filing should be used to derive the 2024

4   forecast. However, it is not practical in this case since the GRC Phase 2 proceeding is over

5   a year long, and this change will result in the need to also update other parts of the filing

6   such as updating SDG&E's proposed electric rates. It would be a never-ending process if

7   SDG&E had to update the data used in these proceedings for actual data as we moved

8   forward in the proceeding. In this proceeding alone we would have had to perform the cost

9   studies and calculate the rates for the original filing, then again with the revised testimony,

10 and per the intervenor's recommendations, the entire process would have had to be redone

11 again for a third time as part of this rebuttal testimony. To reiterate, all of this work would

12 only encompass changes to the forecasted data as new information becomes available and is

13 updated. This is unnecessary since the cost study is based on forecasted data. Cal

14 Advocates and TURN agree with SDG&E's methodology, which is far more important than

15 tweaking the forecasted data as new information becomes available.[16]

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reflect Cal Advocates' proposed marginal costs for all rate schedules, with the exception of Cal Advocates' proposals in testimony chapters seven and eight, where Cal Advocates references maintaining rate stability as a goal.") (citations omitted).

[16] Cal Advocates Prepared Testimony on Marginal Energy Costs (Ch 3), at 3-4 lines 3-4 ("SDG&E's use of PCM software is a generally reasonable method for forecasting MECs."); Cal Advocates Prepared Testimony on Marginal Generation Capacity Costs (Ch 4) at 4-5 lines 1-3, ("Since SDG&E expects load departure due to customers opting to join Community Choice Aggregators in the short term, a long term MGCC value based on the Net-CONE of an ESS is the appropriate method to use in this proceeding.") (citation omitted); TURN Prepared Testimony at 22 ("TURN accepts SDG&E's general framework for analysis of the value of capacity. … This framework is reasonable in light of the following theoretical and policy-related considerations.").

1   Additionally, because Cal Advocates agreed with SDG&E's TOU differentials, it

2   does not make sense to update the MECs, as they would not be used for rate design.[17] The

3   Commission should reject Cal Advocates' and TURN's proposal to require SDG&E to use

4   the most updated PLEXOS model in the instant proceeding.

5   **b.   SEIA**

6   SEIA recommends using MECs from the Production Cost Modeling (PCM) used in

7   the 2022 Avoided Cost Calculator (ACC) rather than the PCM used by SDG&E,

8   rationalizing that the PCM from the ACC is consistent with the current IRP resource

9   portfolio.[18] The Commission should reject this proposal. The PCM used in the ACC does

10   not use PLEXOS modeling. Instead, it uses SERVM. SERVM has several modeling issues

11   which must be adjusted for in the ACC, as outlined in the 2022 ACC documentation. These

12   issues include setting a price cap and floor for day-ahead prices, and adjusting implied

13   market heat rates to capture system scarcity.[19]

14   Additionally, the 2022 ACC uses a baseline "No New DER" scenario, which Energy

15   Division has proposed to move away from in the 2024 major update of the ACC, because in

16   practice the "No New DER" scenario resulted in unexpected rebalancing dynamics, with the

17   RESOLVE model optimizing the portfolio and selecting an alternate resource mix that is

18   very different from the IRP, which can impact marginal GHG, generation capacity and

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[17] SDG&E's Revised Prepared Direct Testimony of Jeff De Turi (Ch. 5) (September 29, 2023), at JDT-7, line 3-7.

[18] Prepared Direct Testimony of R. Thomas Beach on Behalf of SEIA (January 8, 2024) (SEIA Prepared Direct Testimony), at i ("SEIA recommends a set of MECs from the production cost modeling used for the marginal/avoided energy costs in the 2022 Avoided Cost Calculator (ACC), because this modeling is based on the current Integrated Resource Plan (IRP).").

[19] 2022 Distributed Energy Resources Avoided Cost Calculator Documentation, 2022 ACC Documentation v1b updated.pdf (ca.gov), at 21.

1   energy avoided costs in different directions, and often led to counter-intuitive results.[20]

2   SDG&E and other parties agree that the Commission should move away from the "No New

3   DER" scenario and move to the latest adopted system plan in the IRP proceeding, as the

4   IRP's latest adopted system plan is more consistent with how supply-side resources are

5   evaluated in the IRP and therefore better reflect an estimated avoided cost.[21] SEIA

6   acknowledges that the "No New DER" scenario may be an undesirable underlying

7   assumption when using the ACC PCM, but attempts to downplay its relevance, stating in a

8   footnote that "[t]he 2022 ACC does use a 'No New DER' variant of the approved IRP

9   portfolio in which future DER additions are removed. However, the amounts of these

10   removed DERs are small in the initial years of the modeling that SEIA has used here."[22]

11   Clearly, SEIA realizes that the "No New DER" scenario is a vestige of past ACC versions

12   and understands its implications. Because the 2022 ACC uses an outdated PCM that

13   produces counter-intuitive results, it makes little sense to use in SDG&E's GRC Phase 2,

14   when the Commission and many parties agree on moving away from the "No New DER"

15   scenario, as proposed in the 2024 ACC Staff Proposal. Therefore, the Commission should

16   reject SEIA's proposal to use the 2022 ACC SERVM PCM results for marginal energy costs

17   in SDG&E's GRC Phase 2.

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[20]   R.22-11-013, ALJ's Ruling Issuing the 2024 ACC Staff Proposal for Party Input (August 8, 2023), Attachment A - 2024 IDER Avoided Cost Calculator Staff Proposal, at 2-3.

[21]   R.22-11-013, Opening Testimony of Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company in Response to Administrative Law Judge's Ruling Issuing the 2024 Avoided Cost Calculator Staff Proposal for Party Input (October 30, 2023), at 2-3.

[22]   SEIA Prepared Direct Testimony, at 14, n.19.

1   SDG&E's PLEXOS production cost modeling relies heavily on the inputs and

2   assumptions from the IRP and is the same modeling used to forecast SDG&E's Energy

3   Resource Recover Account (ERRA). Therefore, it is the single best source of SDG&E-

4   specific cost forecasting, and the Commission should reject SEIA's proposal to use ACC

5   inputs to calculate the MEC.

6   **2.   Updated Gas Price Forecast**

7   Cal Advocates and SEIA argue that the natural gas forecast used in calculation of

8   marginal energy costs should be based on the CEC's 2023 IEPR.[23] Cal Advocates further

9   argues that the IEPR's base case scenario should be used as a "middle ground approach".[24]

10   SDG&E agrees that using the CEC's IEPR natural gas price forecast for the base

11   case scenario is reasonable as SDG&E generally prefers to use publicly available forecasts

12   from state agencies when possible. Accordingly, SDG&E will use the CEC's IEPR natural

13   gas price forecast in its next GRC Phase 2 application. However, as stated above, it is

14   unnecessary to update the forecast in the instant proceeding as SDG&E maintains that the

15   TOU differentials from the 2019 GRC Phase 2 cost study should continue to be used for rate

16   design purposes. Therefore, the Commission should not require SDG&E to update its

17   natural gas forecast for the instant GRC Phase 2 MEC study.

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[23]   Cal Advocates Prepared Testimony on Marginal Energy Costs (Ch 3), at 3-11; SEIA Prepared Direct
       Testimony, at 15, lines 5-7.

[24]   Cal Advocates Prepared Testimony on Marginal Energy Costs (Ch 3), at 3-12.

3. Green Benchmark

Cal Advocates and TURN both seek for SDG&E to use an updated Green Benchmark (also known as the RPS Adder) in its MEC study.[25] Importantly, SDG&E used the best available information at the time of filing—a fact that Cal Advocates acknowledge in stating that the updated forecast for the Green Benchmark/RPS Adder was not released until *after* SDG&E filed its revised testimony in September 2023.[26] In any event, SDG&E does not believe it is necessary to re-run the MEC study, as it was merely used for illustrative purposes and the 2019 GRC Phase 2 cost study TOU differentials should be maintained, as many parties agree.

SDG&E also disagrees with TURN's recommendation to prorate the Renewable Portfolio Standards (RPS) out to 2027.[27] TURN uses an average of the RPS requirement for 2024 through 2027.[28] This change is small in that it moves from a 44% RPS requirement for 2024 to a 48% RPS requirement using the average of the 2024-2027 requirement. That's less than a 10% difference to the adder. This recommendation should be rejected. Forecasting out to 2027 defeats the purpose of using a test year and results in a minor impact.

SEIA argues that no green benchmark needs to be added to the MEC and justifies its position by claiming that California is ahead of reaching their RPS goals.[29] SEIA goes on to

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[25] Cal Advocates Prepared Testimony on Marginal Energy Costs (Ch 3), at 3-13 and 3-14; TURN Prepared Testimony at 27, lines 16-18.

[26] Cal Advocates Prepared Testimony on Marginal Energy Costs (Ch 3), at 3-13 and 3-14.

[27] TURN Prepared Testimony at 32.

[28] *Id.* at Table 9.

[29] SEIA Prepared Direct Testimony at 15, lines 10-21.

1 | claim that the RPS adders used are not marginal and are based on historical long-term

2 | contracts.[30] SEIA is incorrect on all counts. First, the RPS adder is based on short-term

3 | forward contracts for the year in question as stated in Energy Division's report which

4 | calculates the Market Price Benchmark (MPB).[31] Also from that report, Energy Division

5 | states the following for the forecasted RPS adder:

6
7
8 | > The Forecast RPS Adder was calculated using the volume-weighted average of all eligible IOU, CCA, and ESP market transactions executed from September 2022 through August 2023, with delivery in 2024.[32]

9 | Thus, the RPS Adder is not based on historical long-term contracts as SEIA states. It is a

10 | marginal cost adder for renewable energy.

11 | Second, if SEIA was correct in its assessment that California is ahead of reaching its

12 | RPS goals and renewable energy has no value, then it would not make sense that the RPS

13 | MPB has dramatically increased in price for 2023 and 2024. The below chart displays the

14 | final RPS MPB adders and the forecasted adder for 2024. The value of the RPS MPB

15 | sharply increases in 2023 and remains at that elevated level for the forecast of 2024. This

16 | would indicate that renewable energy is still very much in demand and commanding

17 | premium prices.

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[30] SEIA Prepared Direct Testimony at 15, lines 15-19, ("Further, the RPS adders that SDG&E and CalPA propose to use are not marginal cost values, but instead represent the average cost premium for SDG&E's full portfolio of renewable resources, including expensive renewable generation procured in the past under long-term contracts.").

[31] Calculation of the Market Price Benchmarks for the Power Charge Indifference Adjustment Forecast and True Up (October 2, 2023) at 3, ("Both the forecast and the final adders are based on bundled, short-term (under ten years), index-plus, Portfolio Content Category 1 (PCC-1) transactions.") (citations omitted) available at Calculation of MPB 2023-2024 Final.pdf.

[32] *Id*.

1   **Chart JDT-1: Renewable Portfolio Standard Market Price Benchmarks**
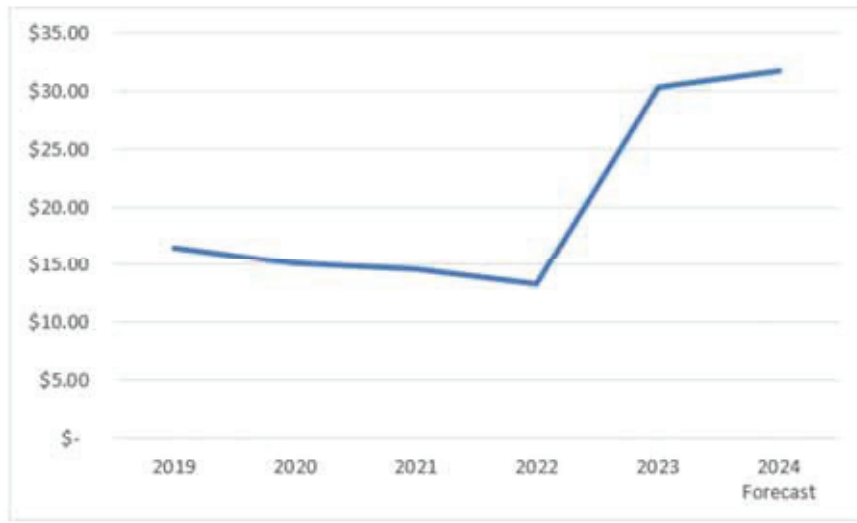
2

3   SEIA's argument that the RPS adder should not be added to the MEC is incorrect

4   and should be rejected.

5   **4.   Ancillary Services**

6   TURN argues that Ancillary Service (AS) costs should be added to the MEC.[33]

7   TURN points out that AS reserves are load based and that increasing load would not only

8   result in increased energy costs but also increased AS costs.[34]

9   SDG&E agrees with TURN in regard to the necessity of accounting for AS and has

10   already done so as part of the PLEXOS model. SDG&E accounts for increased AS costs by

11   modeling AS reserves in the PLEXOS model, which holds generating capacity in reserve

12   according to each ancillary service's generation type and minimum MW requirements. Any

13   generation capacity held in reserve as an ancillary service is not available to serve load,

14   effectively reducing the pool of available generation capacity. This method of accounting

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[33]   TURN Prepared Testimony at 32 ("It is correspondingly reasonable to include the cost of AS in the
       marginal energy cost calculation.")

[34]   *Id* at 31.

1 for AS costs is superior to the method TURN proposed because it more accurately mirrors

2 the CAISO market by co-optimizing AS capacity with energy. TURN's method takes

3 historical CAISO AS prices and percentages of load and forecasts them into the future using

4 a trend line. One of the main problems with this method is that it relies too heavily on

5 historical AS costs as a percentage of load in an ever-changing CAISO market that is seeing

6 changes due to the addition of battery storage.[35] Therefore, TURN's proposal to account for

7 AS costs within SDG&E's MEC should be rejected.

8   **B.**   **Marginal Generation Capacity Cost**

9   **1.**   **Battery Storage Costs**

10   **a.**   **Cal Advocates and TURN**

11   Cal Advocates, TURN, and FEA note that the underlying input data used in

12 SDG&E's capacity calculation has been updated since SDG&E's original filing.[36] While

13 the CPUC has updated its IRP values since SDG&E's original filing, updating the battery

14 storage costs are unnecessary due to the 2019 GRC Phase 2 MEC being used for rate design

15 purposes.

16   In addition, Cal Advocates and TURN state that using a six-year average of MGCC

17 costs is most appropriate, citing Pacific Gas and Electric Company's (PG&E) 2021 GRC

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[35] 2022 Annual Report on Market Issues and Performance (July 11, 2023) at 148, ("Average ancillary service hourly procurement served by battery resources has been steadily increasing the past three years, growing from 212 MW in 2020 to 802 MW in 2022. In 2022, battery resources provided the majority of regulation capacity."), available at 2022-annual-report-on-market-issues-and-performance-jul-11-2023.pdf (SECURED) (caiso.com).

[36] Cal Advocates Errata on Prepared Testimony on Marginal Generation Capacity Costs (Ch 4), at 4-5; TURN Prepared Testimony, at 23, line 21 through 24, lines 1-3.

1   Phase 2 proceeding.[37] [38]   TURN offers no support for their reasoning behind their

2   recommendation to use a six-year cost average. Cal Advocates cites to PG&E's GRC Phase

3   2, which specifically notes that the Commission's "approval of an MGCC using a six-year

4   average is only for use during this GRC cycle[,]" and may be reconsidered in the next GRC

5   Phase 2.[39]   Given that the Commission indicated uncertainty and potential reconsideration of

6   the six-year period for the MGCC, SDG&E does not believe this decision should be

7   considered persuasive precedent. Indeed, part of the Commission's reasoning to use a six-

8   year average in PG&E's last GRC Phase 2 decision was that it would help level out price

9   fluctuations.[40]   However, per Cal Advocates' recommendation, the use of a six-year (2024-

10   2029) average 4-hour lithium ion battery for utility standalone levelized fixed costs from the

11   2023 Preferred System Plan is only 0.16% different from the 2024 levelized fixed costs.

12   Since the costs vary by so little, SDG&E does not believe using a six-year average adds

13   significant value to the calculation of MGCC, and therefore use of a 2024 test year approach

14   is still appropriate and should be approved.

15   **b.   FEA**

16   FEA argues that energy market earnings should not be subtracted from the MGCC.[41]

17   FEA argues that once the capacity is sold it is no longer available to meet retail customer

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[37]   TURN Prepared Testimony, at 21, lines 7-8.

[38]   Cal Advocates Errata on Prepared Testimony on Marginal Generation Capacity Costs (Ch. 4), at 4-5
       lines 12-13, ("Additionally, Cal Advocates uses a six-year average of the new build cost and the fixed
       O&M, as the Commission previously adopted this approach.").

[39]   D.21-11-016 at 52.

[40]   *Id.* at 51, ("The use of six-year average helps to level out annual fluctuations in prices and therefore is
       a superior basis for calculating MGCC.").

[41]   FEA Direct Testimony, at 9, lines 15-16.

1 requirements.[42] However, FEA points out that the Commission has approved such

2 subtraction of earning from MCGG in the past, and admits that it is not "unreasonable" to

3 consider earnings as an offset to capital costs.[43] FEA asks the Commission to adopt Cal

4 Advocate's MGCC value, which does in fact subtract the energy market earnings.[44] Thus,

5 there is no evidence to support FEA's recommendation to subtract energy market earnings

6 from MGCC and indeed, their support for Cal Advocates' proposal undermines their

7 suggestion that a change should be adopted.

8 c. **SEIA**

9 SEIA argues that SDG&E should use the ACC to determine the market revenues to

10 be subtracted from the MGCC.[45] As discussed above in Section II.A.1.b, because the ACC

11 is based on SERVM PCM and the 2022 ACC uses an outdated "No New DER" scenario

12 methodology to model costs, the Commission should reject this recommendation.

13 **2. Effective Load Carrying Capability (ELCC)**

14 a. **Cal Advocates**

15 Cal Advocates disagrees with SDG&E's use of adjusting the MGCC by the ELCC

16 value, stating that the use of an ELCC is unnecessary since it only measures a unit's ability

17 to provide reliability during peak stress.[46] Instead, Cal Advocates argues that augmentation

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[42] *Id.* at 10, lines 4-9.

[43] *Id.* at pp. 10-9.

[44] *Id.* at 10, lines 11.

[45] SEIA Prepared Direct Testimony at 18, line 1-4.

[46] Cal Advocates Errata on Prepared Testimony on Marginal Generation Capacity Costs (Ch 4), at 4-7 ("ELCC is a measure of generation resource's ability to contribute to system reliability needs during peak grid stress and so Cal Advocates did not use SDG&E's approach in applying ELCC to the calculation.") (citation omitted).

1   costs better account for diminishing returns and points out that augmentation costs are

2   included in the IRP cost estimate of capacity costs.[47]

3   Cal Advocates misunderstands the purpose of SDG&E's use of the ELCC. ELCC

4   allows for a comparison of a resource's ability to provide reliability versus a perfect

5   resource.[48] Batteries are not always fully charged at the time when their reliability is needed

6   most. The ELCC calculates how likely batteries are able to supply capacity as compared to

7   an ideal generator. Since the marginal unit of capacity will need to be covered, it is logical

8   to scale up the costs of a battery storage unit by its ELCC factor to ensure that the full unit

9   of capacity will be procured. Excluding the ELCC from the MGCC calculation would result

10 in an understated MGCC and would not collect the full costs associated with a battery

11 storage system. TURN and SEIA also agree with SDG&E that the use of the ELCC is

12 appropriate.[49] [50]

13   **b.   TURN and SEIA**

14   TURN and SEIA agreed with SDG&E to use an ELCC value although they argued

15 that a different calculation should be used.[51] SDG&E used a simple average of all the

16 months in the 2024 test year to determine the ELCC value, whereas TURN took a weighted

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[47]   *Id* at 4-7.

[48]   R.21-10-002, ALJ's Ruling on Loss of Load Expectation Study and Supply-Side Demand Response Report, and Setting Comment Scheduled (February 18, 2022), Attachment – Energy Division Study for Proceeding R.21-10-002, Loss of Load Expectation and Effective Load Carrying Capability Study Results for 2024, at 5, ("Through a series of ELCC studies, it is possible to determine the effectiveness of a resource or group of resources at contributing to a targeted level of reliability relative to an ideal generator.").

[49]   TURN Prepared Testimony, at 24, lines 12-14.

[50]   SEIA Prepared Direct Testimony at 18, lines 6-7.

[51]   TURN Prepared Testimony, at 24, lines 12-14; SEIA Prepared Direct Testimony at 18, lines 6-7.

1 average based on the LOLE in the 2024 test year, since the LOLE hours were the most

2 likely to have reliability issues.[52] SEIA used an average of IRP ELCC values from 2024-

3 2026.[53]

4   While SDG&E does not disagree with TURN's proposal in theory, SDG&E chose a

5 simple averaging method to calculate the ELCC to simplify an already complex set of

6 calculations. TURN's recommendation results in a difference of just over $2/kW-year.

7 Since $2/kW-year is not a material difference, SDG&E believes the use of the simple

8 average to calculate the ELCC is prudent.

9   While SDG&E agrees with SEIA that it may be appropriate to use the IRP to

10 determine the ELCC values, SEIA's method extends out to 2026 which ignores using 2024

11 as a test year. Forecasting out to 2026 defeats the purpose of using a test year, and therefore,

12 the Commission should reject SEIA's recommendation to use a 2024-2026 average of

13 ELCCs.

14   **3.   Escalation Factors**

15   **a.   Cal Advocates and TURN**

16   Cal Advocates and TURN use updated escalation factors based on updated testimony

17 from SDG&E's 2024 GRC Phase 1 application.[54] [55] SDG&E does not believe that updating

18 the escalation factors for the MGCC calculation is necessary. The escalation factors used

19 were the best available at the time of filing, and, as stated multiple times, updating the inputs

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[52] TURN Prepared Testimony, at 25, lines 2-4.

[53] SEIA Prepared Direct Testimony at 18, lines 17-20.

[54] Cal Advocates Errata on Prepared Testimony on Marginal Generation Capacity Costs (Ch 4), at 4-5, lines 11-12.

[55] TURN Prepared Testimony, at 24, lines 7-8.

1 of the MEC is unnecessary, as SDG&E maintains its Opening Testimony proposal to

2 maintain the TOU differentials from the 2019 GRC Phase 2 for rate design purposes.

3   **C.**   **Loss of Load Expectation**

4   Cal Advocates argues for an "all hours" methodology approach for calculating

5 LOLE, as opposed to SDG&E's top 100 hours methodology.[56] The LOLE is a method of

6 calculating the relative need for capacity in every hour. SDG&E only uses the top 100 hours

7 of LOLE to allocate generation capacity marginal costs, as this is a method of allocating

8 capacity that is typically driven by need in peak hours. If SDG&E were to use all hours with

9 a positive LOLE, as Cal Advocates suggests, it would allocate peak driven capacity costs

10 across all hours and all customer classes. This defeats the intent of the LOLE method as an

11 allocation method for marginal capacity costs, distinct from energy costs, which occur in

12 every hour.

13   The important metric in LOLE analysis is the relative magnitude of loss of load in

14 each hour. Summing the cumulative risk of multiple hours does not increase the risk in each

15 of the hours summed. The cumulative risk of many hours of relatively insignificant loss of

16 load, while it might add up to a significant total, does not present any greater risk than the

17 fewer hours with greatest risk. Cal Advocates' all hours approach would include 17 more

18 hours than SDG&E's top 100 hours approach. Also note that SDG&E's top 100 hours

19 approach captures over 99% of the lost load. Cal Advocate's recommendation would not

20 materially affect the calculations and should be rejected.

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[56]   Cal Advocates Errata on Prepared Testimony on Revenue Allocation (Adam Barsch) (Ch 5)
     (January 19, 2024) at 5-8, lines 23-25.

1 **III.   CONCLUSION**

2   To summarize, SDG&E disagrees with parties recommending updated inputs, data

3   and forecasts and rejects methodological changes that would not significantly improve the

4   process. Since SDG&E is proposing to maintain its existing commodity rate design and

5   revenue allocation, such updates would be purely illustrative.

6   This concludes my prepared rebuttal testimony.

ATTACHMENT A

SAN DIEGO GAS & ELECTRIC COMPANY
General Rate Case Phase II
Application 23-01-008
Data Request

From:	SDGE		
To:	Cal Advocates		
Date Requested:	December 18, 2023	Request No: 2	Question: 1
Response Date:	January 3, 2024	Witness(es)	Christopher Hogan

Q 2.1: Cal Advocates proposes that SDG&E adopt Cal Advocates' marginal energy costs[1] and marginal generation capacity costs[2] for rate design purposes, but also proposes SDG&E maintain its existing TOU differentials for residential rate design.[3] Is Cal Advocates proposing that SDG&E update marginal costs for non-residential rate design only or only for a subset of residential rates? Please identify which rates Cal Advocates proposes SDG&E update with Cal Advocates' marginal costs.

Response 2.1: Cal Advocates generally proposes that SDG&E update its electricity rates to reflect Cal Advocates' proposed marginal costs for all rate schedules, with the exception of Cal Advocates' proposals in testimony chapters seven[4] and eight,[5] where Cal Advocates references maintaining rate stability as a goal. The underlying revenues for residential rates are reflect Cal Advocates' proposed revenue allocations, which utilize Cal Advocates' proposed marginal cost inputs. With regards to rate design, Cal Advocates is does not oppose considering alternative proposals like those which would gradually update rate schedules to reflect Cal Advocates' proposed marginal costs over a multi-year period. Cal Advocates looks forward to vetting such proposals in parties' opening testimony in this proceeding.

For residential customers, Cal Advocates supports SDG&E's proposal to fix the summer super off-peak commodity rate for residential schedule TOU-DR-1 at marginal cost consistent with SDG&E's 2019 GRC Phase 2 commodity cost study to maintain rate stability.[6] Cal Advocates also supports SDG&E's proposed glidepath for increasing the

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[1] Chapter 3-1 at lines 16-18

[2] Chapter 4-8 at 20

[3] Chapter 7-5 at 10

[4] Cal Advocates' Prepared Testimony on Residential Rate Design in San Diego Gas & Electric's 2024 General Rate Case Phase 2, December 8, 2024 (Cal Advocates' Chapter 7 Testimony).

[5] Cal Advocates' Prepared Testimony on Small Commercial Rates in San Diego Gas & Electric's 2024 General Rate Case Phase 2, December 8, 2024 (Cal Advocates' Chapter 8 Testimony).

[6] Cal Advocates' Chapter 7 Testimony at 7-6, lines 3-5.

super off-peak rate for schedule EV-TOU-5.[7] Cal Advocates supports SDG&E's proposal to eliminate seasonal rate differentials in residential rates through the commodity rate component instead of through the total rate adjustment component.[8] However, the underlying inputs should reflect Cal Advocates' proposed marginal costs.

In addition, Cal Advocates also proposes to maintain current fixed charges for small commercial rate schedules instead of updating the small commercial fixed charges to reflect Cal Advocates' proposed marginal customer access costs.[9]

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[7] Cal Advocates' Chapter 7 Testimony at 7-7, lines 8-10.

[8] Cal Advocates' Chapter 7 Testimony at 7-5, lines 3-5.

[9] Cal Advocates' Chapter 8 Testimony at 8-12, lines 23-24.

From:	SDGE		
To:	Cal Advocates		
Date Requested:	December 18, 2023	Request No: 2	Question: 2
Response Date:	January 3, 2024	Witness(es)	Adam Barsch

Q 2.2: Cal Advocates proposes (Chapter 5, p. 5-1 lines 22-23 and p. 5-14 lines 6-16) that the Commission require SDG&E to provide a capping and flooring capability in its model to moderate class average rate changes. However, Cal Advocates also proposes that the System Average Percent Change (SAPC) methodology should be used to allocate revenue responsibility among customer classes. Because the SAPC methodology ensures that all customer classes see the same average rate change for certain rate components, please explain why a rate capping/flooring mechanism is necessary.

Response 2.2:   A capping and flooring model may be necessary in this proceeding to increase rate stability based on party proposals. If marginal costs, revenue allocation or rate design proposals are litigated, the Commission may adopt proposals from separate parties. The adoption of proposals from separate parties may result in the need for rate or revenue capping to increase rate stability. Further, rate or revenue capping may also be necessary for the facilitation of productive settlement discussions.

From:	SDGE		
To:	Cal Advocates		
Date Requested:	December 18, 2023	Request No: 2	Question: 3
Response Date:	January 3, 2024	Witness(es)	Adam Barsch

Q 2.3: Please explain how rate collaring/capping and using a SAPC methodology for revenue allocations could be implemented simultaneously.

a. If rate collaring/capping and SAPC are capable of simultaneous implementation, please explain how unnecessary cost shifts are prevented while collecting the full revenue requirement

Response 2.3.a: Rate collaring/capping and SAPC would need to be performed in sequential stages. Sequential steps are also required to implement sales changes and revenue changes adopted in the same proceeding sequentially using the SAPC method.

From:	SDGE		
To:	Cal Advocates		
Date Requested:	December 18, 2023	Request No: 2	Question: 4
Response Date:	January 3, 2024	Witness(es)	Lauren Schenk

Q 2.4: On Cal Advocates' Ch. 4 Testimony Table 4.1 the "Cal Advocates Amounts" column Total Peak MGCC value does not tie to the subtotals on the table. When the Generation Capacity Costs Subtotal of $76.82 is added to the PRM of $13.06, the total is $89.88, not the $89.84 as listed on the total line.

a. Why don't the subtotals add up to the total value?
b. Which value is correct for the MGCC, the $89.84 from the total line from Table 4.1 or $89.88 which is the total by adding the subtotal value with the PRM of $89.84?

Response 2.4.a: During testimony drafting, a rounding error was found. This rounding error was accounted for in the body of the testimony and in the "Total" row of Table 4.1. The "PRM" row was not updated to reflect the rounding error, hence the discrepancy.

Response 2.4.b: Upon review of the associated workbook (see (Public) Cal Adv Chapter 4 Marginal Generation Capacity Costs A2301008), another rounding error was found. The correct MGCC value is $89.20 (see column "Cal Advocates Amount" in the updated table 4-1: Peak MGCC Calculations below).
Cal Advocates intends to submit errata testimony that will correct this error.

1.   Table 4-1: Peak MGCC Calculations

(2024$)					
Line #	Line Item	SDG&E Amount	Cal Advocates Amount	Nominal Difference	Percent Difference
1	ESS Marginal Cost	$136.18	$207.54	$71.36	34%
2	Energy Market Earnings	-$115.33	-$131.30	-$15.97	-12%
3	Generation Capacity Costs Subtotal	$20.85	$76.24	$55.39	73%
4	ELCC	$6.46	$0.00	-$6.46	-100%
5	PRM	$4.64	$12.96	$8.32	64%
6	Total Peak MGCC	$31.95	$89.20	$57.25	64%

From:	SDGE		
To:	Cal Advocates		
Date Requested:	December 18, 2023	Request No: 2	Question: 5
Response Date:	January 3, 2024	Witness(es)	Lauren Schenk

Q 2.5: In Cal Advocates' Ch. 4 Testimony at 4-7 lines 6-9, the same CAISO report was used by SDG&E and Cal Advocates and yet Cal Advocates has a value of -$131.30 on their Table 4.1, as opposed to the SDG&E value of -$115.33.

a. How did Cal Advocates end up with a different value when using the same inputs?

Response 2.5.a: The CAISO report energy market earnings value of $100.23 was used for both SDG&E's and Cal Advocates' calculations. The difference in value stems from the different escalation factors used. See Cal Advocates' Ch 4 Testimony at 4-3 lines 4-7 and lines 11-12 for discussion on SDG&E's escalation values. See Cal Advocates' Ch 4 Testimony at 4-7 lines 1-9 for a discussion on Cal Advocates' escalation values. See also workpaper supporting Cal Advocates' Chapter 4 Testimony, "(Public) Cal Adv Chapter 4 Marginal Generation Capacity Costs A2301008," line 14 to compare the two escalation factor values.

From:	SDGE		
To:	Cal Advocates		
Date Requested:	December 18, 2023	Request No: 2	Question: 6
Response Date:	January 3, 2024	Witness(es)	Christopher Hogan

Q 2.6: In Cal Advocates' Ch. 5 Testimony at 5-8 lines 11-13, Cal Advocates proposes for Marginal Energy Prices to increase for summer and decrease for winter. Please explain the benefits of increasing summer rates and decreasing winter rates.

Response 2.6: Cal Advocates' Chapter 5 testimony at 5-8, lines 11-13 states "Cal Advocates proposes increasing the Marginal Energy Prices across the summer period and decreasing the marginal energy prices across the winter period. A summary of the proposal can be seen in Table 3-1 of Cal Advocates' Chapter 3 testimony."

These sentences summarize the result of Cal Advocates' proposed Marginal Energy Costs (MEC) and are not reflective of an end goal by Cal Advocates. Adopting Cal Advocates' MECs are beneficial because they: (1) utilize a recent natural gas price forecast that better reflects recent electric generator fuel price changes, (2) use a recent Plexos production cost modeling (PCM) software version that uses updated algorithms to produce MECs that better align with the cost to serve customers, and (3) use a recent Commission forecast of the renewable portfolio standard (RPS) adder for converting MECs to Marginal Energy Prices.[10]

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[10] See Chapter 3, Cal Advocates Testimony on MEC proposals at 3-1 line 19 to 3-2 line 2.

From:	SDGE		
To:	Cal Advocates		
Date Requested:	December 18, 2023	Request No: 2	Question: 7
Response Date:	January 3, 2024	Witness(es)	Adam Barsch

Q 2.7: In Cal Advocates' Ch. 5 Testimony at pg. 5-9 lines 1-2, Cal Advocates states that All Hours LOLE method is better than SDG&E's top 100 hours method. Please explain the benefits of the All-Hours LOLE method as compared to the top 100 hours method.

Response 2.7: The All Hours LOLE method is superior to the Top 100 method, because it allocates marginal generation capacity costs across all hours when loss of load is expected to occur. The top 100 hours method only allocates marginal generation capacity costs across the 100 hours where loss of load is expected to occur. Cal Advocates has not reviewed evidence to suggest using the top 100 hours more accurately allocates generation capacity costs compared to a different quantity of hours such as the top 101 or 99 hours. Thus, using the All Hours LOLE method is a more inclusive and less subjective approach.

From:	SDGE		
To:	Cal Advocates		
Date Requested:	December 18, 2023	Request No: 2	Question: 8
Response Date:	January 3, 2024	Witness(es)	Adam Barsch

Q 2.8: In Cal Advocates' Ch. 5 Testimony at pg. 5-12 lines 1-2, Cal Advocates Table 5-5 shows illustrative revenue and revenue allocation percentages for Wildfire Revenue Allocation Proposal. Please provide the source of the amount and allocation percentages.

Response 2.8: Cal Advocates' illustrative Wildfire revenues were provided by SDG&E in the September 14, 2023 response to Cal Advocates' data request 28. Cal Advocates calculated the Wildfire Revenue Allocation percentages based on each class's percentage of 2023 sales.[11] See Table: Wildfire Revenue Allocation Percentages below.

Table: Wildfire Revenue Allocation Percentages

Customer Class	2023 Sales Forecast (kWh)	Percentage of Sales
Residential	7,201,555,042	38.60%
Small Commercial	1,737,576,431	9.31%
Medium Commercial	2,722,268,779	14.59%
Large C&I	6,571,584,645	35.23%
Agriculture	343,438,204	1.84%
Lighting	78,329,120	0.42%
System Total	18,654,752,220	100.00%

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[11] SDG&E's workpapers supporting Chapter 2 Revenue Allocation, "CH2_REVISED_2023 PPP (Updated for 2024 GRCP2)WP#3," tab "Rate Calculation," cells C20:C32.

From:	SDGE		
To:	Cal Advocates		
Date Requested:	December 18, 2023	Request No: 2	Question: 9
Response Date:	January 3, 2024	Witness(es)	Adam Barsch

Q 2.9: In Cal Advocates' Ch. 5 Testimony at pg. 5-13 lines 12-16, Cal Advocates cites to Southern California Edison's GRC 2 decision and its revenue allocation for wildfire mitigation as an example of SAPC that could be used by SDG&E. Please provide an example calculation for this method of revenue allocation for wildfire mitigation.

Response 2.9: This question's assertion is incorrect; Cal Advocates cites to Southern California Edison's GRC 2 decision and its revenue allocation for wildfire mitigation as an example of a Commission approved method for allocating wildfire costs that differs from allocating wildfire costs using the distribution allocator. The System Average Percent (SAP) allocator represents each customer class's percentage share of the system revenue, which is different than utilizing the System Average Percentage Change (SAPC) method for determining revenue allocations based on changes in approved electricity sales.

Below is a quote from SCE's GRC 2 Decision that explains the currently approved method SCE uses to allocate wildfire costs.

"This complex allocation continues with the development of a capped and an incremental revenue allocation that will be combined to develop a composite weighted average allocator (Special Allocator) that combines the distribution and SAP weights multiplied by the respective class allocators:

SPECIAL ALLOCATOR = (DISTRIBUTION WEIGHT*DISTRIBUTION ALLOCATOR) + (SAP WEIGHT*SAP ALLOCATOR).

There is a Special Allocator assigned to each rate class, using this formula where the subscript "i" in the formula represents each rate class. The Motion summarizes the subsequent impact of the formula until the next Phase 2 GRC decision: Once the Special Allocator is established for each class, it will also be used to allocate any additional WRR authorized for rate recovery during the year until the next annual adjustment. The Special Allocator will be adjusted annually during the attrition years, concurrent with the annual sales forecast adjustment, to account for the then-current amount of the total annual WRR. The average distribution and SAP allocators will be updated annually to reflect changes to the billing determinants (sales), each class's percentage share of total system revenues, and the Distribution and SAP weights. These updates will be inputted using the formulas above to derive the Special Allocator that will be used during each year."[12]

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[12] D.22-08-001 at 15.