**DATA REQUEST & SDG&E Responses to Questions 15-28 & 30-31**

15. RE – Workpapers Ch\_5\_WP#2\_marg Dist Cust Costs for Non School Classes\_Public.xlsx

 a. Cell B-20: Residential services. Please explain why the Company uses plant loading multiplied by working capital.

**SDG&E Response:**

As explained on page WS-8, line number 16, of the 2019 GRC Phase 2 Prepared Direct Testimony of William G. Saxe (Chapter 5), the service drop costs are multiplied by the Working Capital loading factor. The reason residential service drop costs are multiplied by the Working Capital loading factor, as shown in Row 20 of the “Resid Cust Cost Summary” tab in the “Ch\_5\_WP#2\_Marg Dist Cust Costs for Non School Class\_Public” workpaper, is to adjust the cost of service drops by the cost of having short-term assets (e.g., cash and material/supplies) to meet SDG&E’s business operations.

16. RE - WGS 4 line 18 – WGS line 6: Please provide both historical distribution investment data and forecasted distribution investment data for the years 2013-2017. For the forecasts, please use the forecasts that were filed in prior Phase 2 rate cases.

**SDG&E Response:**

The 2013-2017 historical and forecasted data requested is found in the “Ch\_5\_WP#4\_Marg Dist Demand Costs\_Public” workpaper. The “Distrib Capital Historic Data” tab provides the historical cost data for both the Feeder & Local Distribution and Substation, with Line No. 18 identifying which of the FERC Accounts are associated with Feeder & Local Distribution historical capacity costs as requested and Line No. 21 identifying which of the FERC Accounts are associated with Substation historical capacity costs. The “Distrib Capital Forecast Data” tab provides the forecasted cost data for both the Feeder & Local Distribution and Substation, with Line No. 17 identifying which of the cost categories are associated with Feeder & Local Distribution forecasted capacity costs as requested and Line No. 20 identifying which of the FERC Accounts are associated with Substation forecasted capacity costs.

17. RE - WGS 7 lines 15-19: For Transformer, Service Drop and Meter (TSM) costs, what portion is directly assigned? Please identify which components this accounts for in WGS 7 lines 15-19.

**SDG&E Response:**

SDG&E assumes that “directly assigned” means costs directly associated with TSM assets and thus, costs prior to applying the General Plant and Working Capital loading factors. The “Resid Cust Cost Summary” tab in both the “Ch\_5\_WP#2\_Marg Dist Cust Costs for Non School Class\_Public” and “Ch\_5\_WP#3\_Marg Dist Cust Costs for School Class\_Public” workpapers present the directly assigned TSM costs in Cells B8-L12.

18. RE - WGS 7 TSM costs: If a house with the load profile of a median home in that neighborhood is developed on an infill lot (i.e a ½ acre property with an existing property is subdivided, sold and a new residence is built on the ¼ acre), please list, for all the TSM elements listed in lines 17-18 which must be incrementally altered or replaced under all conditions, and associated costs. If there are some that have a contingent need, please explain what criteria would drive an upgrade or replacement.

**SDG&E Response:**

Any new residence built will require the installation of a service drop to the residence and meter to provide electric service to the customer. The need to upgrade the transformer to serve the customer will depend on the current capacity available on the existing transformer providing service to the existing properties near the new residence. SDG&E’s 2019 GRC Phase 2 proposed TSM costs assume all new residences require the installation of a transformer, service drop, and meter to serve them with the costs based on the type and kW size of the customer, as shown in the “Ch\_5\_WP#2\_Marg Dist Cust Costs for Non School Class\_Public” and “Ch\_5\_WP#3\_Marg Dist Cust Costs for School Class\_Public” workpapers.

 a. Are there TSM investments that are used to determine customer TSM allocation that are not listed here in lines 17-18? If so, please provide.

**SDG&E Response:**

No. The TSM investments used to develop the proposed cost allocations in this proceeding are the TSM costs developed and presented in the “Ch\_5\_WP#2\_Marg Dist Cust Costs for Non School Class\_Public” and “Ch\_5\_WP#3\_Marg Dist Cust Costs for School Class\_Public” workpapers.

19. RE - WGS -3/JE-2: If a new school equal to the size of the median school size (load profile-wise) was added to a residential neighborhood, would the substation transformer have to be modified? Please explain. What would be the incremental distribution investments (components and estimated costs) associated with this addition.

**SDG&E Response:**

Whether a “substation transformer” will need to be modified with the addition of a customer to a neighborhood will depend on the capacity availability of the transformer serving the neighborhood. The total Substation Costs that SDG&E proposes in this proceeding are $19.61 per kW, as shown in the “Marg Substation Costs” tab of “Ch\_5\_WP#4\_Marg Dist Demand Costs\_Public” workpaper.

20. RE - WGS 9: For Customer Service Distribution costs, what portion is directly assigned? Please identify which components this accounts for in WGS 9 lines 10-12.

**SDG&E Response:**

100% of the Customer Service Distribution costs, identified in the “Cust Service Cost Allocations” tab of the “Ch\_5\_WP#2\_Marg Dist Cust Costs for Non School Class\_Public” workpaper reflect “directly assigned” Customer Service Distribution costs associated with providing electric service to SDG&E customers. These Customer Service Distribution costs are used to develop the Customer Accounts/Services costs used to develop the proposed marginal distribution customer costs, as presented in for residential customers in Row 34 of the “Resid Cust Cost Summary” tab in the “Ch\_5\_WP#2\_Marg Dist Cust Costs for Non School Class\_Public” workpaper.

21. RE - WGS 9-11: The Proposed Rental Method

 a. Does the Company earn a rate of return on TSM investments?

**SDG&E Response:**

Yes. SDG&E earns a rate of return (“ROR”) on any capital asset it purchases to serve customers, including TSM assets. In the Rental Method, the TSM costs are converted to annual costs by applying the Real Economic Carrying Cost (“RECC”) factors to the costs, with SDG&E’s current authorized ROR of 7.55% included as an input in the RECC calculation.

 b. What is the lifespan for TSM assets? Does the lifespan match the depreciation schedules for those investments?

**SDG&E Response:**

The Rental Method calculations reflect the following book lives of the SDG&E TSM assets: a) final line transformers book life is 34 years; b) underground service drop book life is 53 years; and c) smart meter book life is 15 years. The book life of the TSM assets reflect the depreciation life of the TSM investments.

 c. Please explain, under the Rental Method, what happens if a TSM asset outlives its full recovery (as calculated by the rental price x expected longevity)? Does that additional recovery flow back to customers? Please explain?

**SDG&E Response:**

The book lives of the TSM assets reflect the average useful lives of these assets. For various reasons some assets may have useful lives longer than the book life identified while other assets may have useful lives shorter than the book life identified. Additional recovery of TSM costs due to a TSM asset outliving its book life will not flow back to the customer because there will also be undercollections of TSM costs due a TSM asset having a useful life less than the assumed book life and thus, any additional revenue collected under the hypothetical example would offset the undercollection in revenues when the useful live of the TSM asset is less than the book life of that asset.

 d. Please explain, under the Rental Method, what happens if a TSM asset is obsolete before its full recovery (as calculated by the rental price x expected longevity). Does the Company absorb the under-recovery? Does the Company continue to charge customers rental for the old technology and stack that with rental for the new technology?

**SDG&E Response:**

As explained in response to Question 21c above, if a TSM asset is obsolete before its cost has been fully recovered, the TSM costs would not be fully recovered under the Rental Method. However, the Rental Method assumes that, on average, the estimated book lives of these TSM assets are correct and thus, on average, costs of TSM assets will be fully recovered over their respective book lives. For this reason, the Rental Method does not assume the under-recovery of TSM costs and thus, there is no possibility of charging customers for both obsolete and newly installed TSM technology under the Rental Method.

22. RE - WGS 7-8: On average, for the past 10 years, in residential neighborhoods, what is the ratio of substation distribution transformers to households

**SDG&E Response:**

As requested, the attached file (TURN DR-01, Q22) provides the ratios of the number of substation transformers to residential customers in years 2009-2018.



23. RE - WGS 3: SDG&E’s marginal distribution demand cost component includes distribution investment costs related to load and customer growth for the period 2005-2019. Please detail the direct relationship that the company is referring to. In particular, please explain how an incremental increase in load causes an increase in distribution costs, and please explain which distribution components are affected.

**SDG&E Response:**

As stated on page WGS-2, lines 18-21, of the 2019 GRC Phase 2 Prepared Direct Testimony of William G. Saxe (Chapter 5), “Marginal distribution demand costs measure the cost of serving an additional unit of customer (“kW”) demand on the electric distribution system while marginal distribution customer costs reflect the cost of adding an additional customer to the electric distribution system.” As explained on pages WGS-3 through WGS-6 of that testimony, the proposed marginal distribution demand costs are based on the costs of providing facilities from the substation to the customer access point in order to meet the customer’s individual demand and are based on distribution investments related to load and customer growth from the period of 2005-2019. Also, as explained on pages WGS-6 through WGS-9 of that testimony, the proposed distribution customer costs are associated with distribution investment required to provide access (hook-up) to a new electric customer such as final line transformer, service drop, and meter investments, and the ongoing distribution costs to maintain the new customer such as distribution operation & maintenance and customer service costs.

24. RE - WGS -11: Please provide in a working Excel document a table that demonstrates for each customer class, the amount (in $ and in percentages) of revenue that is directly assigned (labeled as Non-Marginal Revenue Requirement) vs allocated.

**SDG&E Response:**

Column C in the “Distrib Revenue Allocation” tab of the “Ch\_5\_WP#1\_Dist Rev Alloc\_Public” workpaper identifies the non-marginal revenues directly assigned and allocated to the SDG&E customer classes.

 a. Please do this for the existing method, under current rates.

**SDG&E Response:**

As explained in footnotes 5-7 in the “Distrib Revenue Allocation” tab of the “Ch\_5\_WP#1\_Dist Rev Alloc\_Public” workpaper, the proposed non-marginal revenues are based on current rates at the time SDG&E’s 2019 GRC Phase 2 Application was filed on March 2, 2019, which was SDG&E January 1, 2019 rates.

 b. Please do this for the Company’s proposal.

**SDG&E Response:**

As explained in response to Question 24a above, the non-marginal revenues presented in this workpaper reflect the non-marginal revenues SDG&E used to develop the proposed distribution revenue allocations in SDG&E’s 2019 GRC Phase 2 proceeding.

25. In the Company’s May 23rd workshop, on the slide labeled “Step 2 – Effective Demand Factors”, the Company describes in the first bullet point identifying max hourly demands for each individual customer for each customer class. Please explain how this works for a group of four residential customers that are all situated on the same substation, and, for instance on a hot day, all their air conditioners are running, but only for 15 minutes at a time, each at a different quarter of the hour, driving each of their max hourly demands in a different quarter of the hour. Would the Company sum the four customers’ peak demands for that hour?

**SDG&E Response:** The decision to use hourly data to build EDFs was made because hourly data is available for all of SDG&E’s customers, whereas 15-minute data is only available for all Non-Residential customers and a subset of Residential customers. Because EDFs were developed on a customer class basis, no results would be derived on a small group of customers, as our classes have at least thousands of customers in each class. It must be noted that kWh, by definition, is the average demand (kW) over the hour period.  If a group of customers used their air conditioner in the different parts of any particular hour, other factors would also help determine which hour is the peak hour (non-coincident demand) for those customers, such as base load, other high load end-uses, and the demand of the AC unit as well.  If all those other factors are similar, and AC usage draws similar levels for similar times, even if it is at different parts of the hour, it is likely that hour would be the peak individual hour for those customers. It also is important to note that the circuit and substation demands were also derived from hourly data, to make for an “apples to apples” calculation.

26. RE - JE - 8: Please provide the cost savings by class for each dollar spent on energy efficiency for the past 10 years (or as long as available).

**SDG&E Response:**

SDG&E objects to this request under Rule 10.1 of the Commission’s Rules of Practice and Procedure to the extent it seeks the production of information that is neither relevant to the subject matter involved in the pending proceeding nor is likely reasonably calculated to lead to the discovery of admissible evidence, is unduly burdensome and is outside the scope of this proceeding.

27. RE JE - 8: Please provide the energy need abated for each dollar spent on energy efficiency for each customer class (and confirm that these are also paid for by the same customer class) 10 years (or as long as available)

**SDG&E Response:**

SDG&E objects to this request under Rule 10.1 of the Commission’s Rules of Practice and Procedure to the extent it seeks the production of information that is neither relevant to the subject matter involved in the pending proceeding nor is likely reasonably calculated to lead to the discovery of admissible evidence, is unduly burdensome and is outside the scope of this proceeding.

28. RE JE - 8: Please provide the total dollars and total cumulative MWh savings annually, for the past 10 years (or as long as available), paid for by each customer class.

**SDG&E Response:**

SDG&E objects to this request under Rule 10.1 of the Commission’s Rules of Practice and Procedure to the extent it seeks the production of information that is neither relevant to the subject matter involved in the pending proceeding nor is likely reasonably calculated to lead to the discovery of admissible evidence, is unduly burdensome and is outside the scope of this proceeding.

30. DR JE 1-10 - Please provide a record for each customer class the date and duration of customer service interruption.

**SDG&E Response:**

SDG&E objects to this request under Rule 10.1 of the Commission’s Rules of Practice and Procedure to the extent it seeks the production of information that is neither relevant to the subject matter involved in the pending proceeding nor is likely reasonably calculated to lead to the discovery of admissible evidence, is unduly burdensome and is outside the scope of this proceeding.

31. DR JE 1-10. Please explain how the Company determines which customers should experience interrupted service first when it expects a service interruption

 a. For transmission reasons

 b. For capacity reasons

**SDG&E Response:**

SDG&E objects to this request under Rule 10.1 of the Commission’s Rules of Practice and Procedure to the extent it seeks the production of information that is neither relevant to the subject matter involved in the pending proceeding nor is likely reasonably calculated to lead to the discovery of admissible evidence, is unduly burdensome and is outside the scope of this proceeding.