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QUESTION IS-1:

Please provide all of the tables in Attachment C to the Application as executable versions in native format with all formulas intact. Please also provide any supporting workpapers and models used to derive the revenue allocation and rate design proposals.

RESPONSE IS-1:

QUESTION IS-2:

Please provide executable versions in native format of all tables, attachments, appendices and workpapers supporting each of the chapters in the July 31, 2018 filing.

RESPONSE IS-2:

QUESTION IS-3:

With respect to the discussion of storage capacities at pages 2-5 of Chapter 1, please provide a comprehensive discussion and any supporting studies, models or workpapers for the following proposed changes:

- a. A reduction in summer injections from 915 MMcfd to 790 MMcfd.
- b. A reduction in winter withdrawal from 3,175 MMcfd to 2,400 MMcfd.
- c. A reduction in summer withdrawal from 1,812 MMcfd to 1,240 MMcfd.

RESPONSE IS-3:

SoCalGas objects to this question to the extent it requests information and/or material that contains storage field-specific information that is market-sensitive. Subject to and without waiving this objection, SoCalGas provides the following responses.

(a) The 790 MMcfd is the combination of projected summer injection capabilities for all four storage fields at the time of 2020 TCAP filing. Injection capability depends upon several factors, including compressor equipment capability and availability, well capability and availability, and field inventory. Safety enhancements which have modified the configuration of certain wells is expected to reduce injection capabilities. While the attached document was not relied upon to quantify that impact per field, it does provide support for the assertion that tubing-only flow enhancements are projected to impact storage field capabilities.



The 790 MMcfd forecasted firm minimum injection capability represents the minimum level of injection capacity projected to be available through the summer season for the combined storage fields at the time of 2020 TCAP filing. This takes into account the storage fields being at maximum inventory with all equipment operational, and is the estimate for well performance based on historical operation conditions and performance decrease due to currently ongoing safety enhancement work.

APPLICATION OF SOUTHERN CALIFORNIA GAS COMPANY & SAN DIEGO GAS & ELECTRIC COMPANY FOR AUTHORITY TO REVISE THEIR NATURAL GAS RATES AND IMPLEMENT STORAGE PROPOSALS EFFECTIVE JANUARY 1, 2020 IN THE TRIENNIAL COST ALLOCATION PROCEEDING

(A.18-07-024)

(1st DATA REQUEST FROM THE INDICATED SHIPPERS)

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- (b) In addition to the workpapers supporting Chapter 1 (Dandridge), the projected winter withdrawal of 2,400 MMcfd is likewise showing a reduction due to the safety enhancement well work. That figure represents the total combined forecasted winter withdrawal at the four storage wells at the time of the 2020 TCAP filing.
- (c) In addition to the workpapers supporting Chapter 1 (Dandridge), the projected summer withdrawal of 1,240 MMcfd is likewise showing a reduction from prior-authorized summer withdrawal due to the safety enhancement well work. That figure represents the total combined forecasted summer withdrawal at the four storage wells at the time of the 2020 TCAP filing.

QUESTION IS-4:

At pages 8-10 of Chapter 1, there is a discussion and derivation of the various components of storage which SoCalGas proposes to assign or allocate to core customers. In that regard:

- a. Please provide the analysis similar to this discussion, including Table 2, used to derive the "currently authorized" components of storage for the core class shown in Table 1 on page 8 of Chapter 1.
- b. If a different approach was used to derive these "currently authorized" amounts, please provide the details (with supporting workpapers) of that approach.

RESPONSE IS-4:

(a) Source document for currently authorized storage core components is the TCAP Phase 1 (A.14-12-017), Prepared Direct Testimony of Steve Watson, Section IV, Core Storage Allocation (pp. 9-10) and Table 2, Core Storage Requirements. See attached file.



Data for Table 2 can be found in TCAP Phase 1 workpapers, Section 4 "Combined Core Data." See attached file.



Off-cycle allocation of winter injection and summer withdrawals can be found in D.16-06-039, Appendix A (TCAP Phase 1 Settlement Agreement) p. A-2.

(b) A different approach was not used.

QUESTION IS-5:

On page 12 of Chapter 1, SoCalGas describes the proposal to increase the allocation of storage inventory for the balancing function from 8 Bcf to 16 Bcf. With regard to this proposal:

- a. Please describe in detail the basis for the current 8 Bcf allocation of storage inventory for balancing.
- b. Please describe what has changed about system capabilities and customer usage of the system that would require a doubling of the allocation of storage to the balancing function. IS-6.

RESPONSE IS-5:

(a) The current 8 Bcf allocation for storage inventory for the balancing function was part of the TCAP Phase 1 Settlement Agreement as adopted in D.16-06-039.

(b) The proposal to increase balancing storage inventory from 8 Bcf to 16 Bcf takes into account the possibility that on a combined basis, customers can be in a negative inventory position of up to 8 Bcf in one month while remaining within the balancing tolerance band. This potential is not a new one, but it is one that Applicants seek to address in this TCAP period for purposes of enhancing system reliability and preserving core gas supply.

QUESTION IS-6:

Regarding Table 3 on page 13 of Chapter 1, please provide the analytical basis and justification for the "currently authorized" and "proposed" winter injection capability, summer injection capability, winter withdrawal capability and summer withdrawal capability.

RESPONSE IS-6:

Source document for currently authorized balancing requirements is the TCAP Phase 1 (A.14-12-017), Prepared Direct Testimony of Steve Watson, Section III (p. 4). See attached file.



Data for balancing function can be found in the attached files. For the attached excel file, see spreadsheet named "Apr13-Mar14 Backcasts.xlsx," tab "525 mmcfd wd backcast," and tab "345 MMcfd Inj Backcast."



Source document for the proposed balancing requirement allocations is Chapter 1 (Dandridge), p. 11. The proposed winter and summer injection of 345 MMcfd remains the same as currently authorized.

QUESTION IS-7:

On pages 14-15 of Chapter 1, SoCalGas describes a "new" reliability function for storage. In regard to that proposal, please:

- a. Provide the analytical basis for the determination that this new function is required.
- b. Provide the analytical basis used to derive the proposed 21 Bcf of storage inventory to be assigned to a reliability function.
- c. Identify how the storage capacity which SoCalGas now wants to assign to a "new" reliability function is being used to supply service currently.

RESPONSE IS-7:

- a. As discussed in Chapter 1 (Dandridge), p. 3 (lines 1-9), safety enhancements at the storage fields impact withdrawal capabilities. The effect is that higher inventories are required to maintain withdrawal rates. To maintain the proposed 1240 MMcfd of withdrawal, 21 Bcf is the minimum system-wide inventory required to produce this withdrawal rate. The 1240 MMcfd is the sum of 400 MMcfd for the Core and 840 MMcfd for balancing. The 840 MMcfd for balancing is greater than the sum of the current withdrawal allocations of 525 MMcfd for balancing and 206 MMcfd for unbundled, less the withdrawal for wholesale, and will help make up the difference with the proposed elimination of the unbundled program. The 840 MMcfd should result in a minimum number of OFOs. The 400 MMcfd for Core is approximately the difference between Core's average daily summer demand of 875 MMcfd and max average demand of 1300 MMcfd including Wholesale (see 2018 California Gas Report, Redacted Workpapers pg.14-16, forecast for 2020). For the winter, 1240 MMcfd contributes to the 1-in-35 peak day withdrawal requirements for Core plus balancing, along with the additional 19 Bcf that Core would maintain for a peak day mentioned in Chapter 1 (Dandridge), p. 8 (lines 11-13).
- b. Please see response to subpart a.
- c. Currently, the 21 Bcf of inventory is part of the total allocated inventory among the Core, Balancing, and the Unbundled Storage Program.

QUESTION IS-8:

With respect to the proposed "new" reliability function, did SoCalGas identify any particular events that this is designed to backstop, the probability of occurrence of such events and any analysis of alternative means of meeting customer needs? If so, please provide all such analyses. If not, please explain in detail why such analyses were not conducted.

RESPONSE IS-8:

There is no particular "event" that the proposed new reliability function is intended to backstop. Hence, no alternative means analysis was done.

QUESTION IS-9:

Appendix G to Chapter 8 titled "Storage Allocation by Function" presents SoCalGas' allocation of revenue requirement among injection, withdrawal and inventory functions of storage. Page G-3 identifies the basis for these allocations as reliance upon its "storage operations experts." Please describe in detail the process by which the allocations of each account to injection, withdrawal and inventory were determined. For example, was there one expert overall, one expert for each account, multiple experts making independent judgments and then collaborating to determine consensus, or some other approach? Please explain in detail and provide any supporting analytics that were used in determining the assignments.

RESPONSE IS-9:

The allocations of each account to injection, withdrawal, and inventory functions were developed by the company's Storage Operations group. Appendix G is the product of a collaborative effort among several employees within SoCalGas' Storage Operations, based on combined knowledge and experience of the storage fields, operations, processes, and equipment. Aside from Appendix G itself, there were no supporting analytics used or prepared.

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QUESTION IS-10:

Please explain how, in Chapter 4, SoCalGas modeled and forecasted the annual consumption for large cogeneration customers with generation capacity greater than 20 MW.

RESPONSE IS-10:

SoCalGas used a production cost model to estimate the expected burn of all large electric generators in the SoCalGas and SDG&E system including all cogenerators with a capacity greater than 20MW. Each generator is constrained by physical attributes like ramp-up time, efficiency, and total capacity. SoCalGas also takes into consideration other relevant factors like the likelihood of existing purchase agreements, expected maintenance cycles, forced shutdowns, regulatory changes, and, in the case of cogeneration customers, the thermal requirements of the host.

QUESTION IS-11:

Please provide a breakout of the volumes shown in Table 1 on page 5 of Chapter 4 for UEG customers, EWG customers and large cogeneration customers.

RESPONSE IS-11:

As discussed in advance with Indicated Shippers, please see table 4 of Response #14.

QUESTION IS-12:

Please provide a breakout of the volumes shown in Table 2 on page 5 of Chapter 4 for UEG customers, EWG customers and large cogeneration customers.

RESPONSE IS-12:

As discussed in advance with Indicated Shippers, please see table 6 of Response #14.

QUESTION IS-13:

Please reconcile the information for SoCalGas shown in Tables 1 and 2 on page 5 of Chapter 4 with the information presented in Chapter 5.

RESPONSE IS-13:

The below two tables show how the information for SoCalGas in Tables 1 and 2 on page 5 of Chapter 4 are summarized in the final consolidated tables.

Average Year Throughput

SCG EG (Unit: MDth)

	2020	2021	2022	3-Year Avg. 2020-2022
UEG/EWG/Lg Cogen	212,275	207,575	206,875	208,908
Other Cogen	48,902	48,996	48,710	48,870
Total	261,177	256,571	255,585	257,778

Peak Day Demand

SCG EG (Unit: MDth)

	2020	2021	2022	3-Year Avg. 2020-2022
UEG/EWG/Lg Cogen	702	716	696	705
Other Cogen	133	132	131	132
Total	834	848	827	837

QUESTION IS-14:

For Tables 3 through 7 in Chapter 5, please break out each line in the non-core categories to separately show the data for commercial and industrial distribution level service, commercial and industrial transmission level service; and for non-core electric generation into the categories of distribution level UEG, distribution level EWG, distribution level refinery cogeneration, distribution level non-refinery cogeneration, transmission level UEG, transmission level EWG, transmission level refinery cogeneration.

RESPONSE IS-14:

As discussed in advance with Indicated Shippers, requested data are provided in the attached Excel file.



QUESTION IS-15:

For Tables 3 through 7 in Chapter 5, please provide a breakout of EOR customers between distribution level and transmission level.

RESPONSE IS-15:

As discussed in advance with Indicated Shippers, please see EOR data in Response #14.

QUESTION IS-16:

Please provide, in native format with all formulas intact, the workpapers, models and other information supporting the development of customer costs in Table 1 of Chapter 9.

RESPONSE IS-16:

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QUESTION IS-17:

Please provide, in native format with all formulas intact, the workpapers, models and other information supporting the development of medium pressure distribution LRMC and high-pressure distribution LRMC in Table 2 of Chapter 9.

RESPONSE IS-17:

DATE RESPONDED: 10-8-18

QUESTION IS-18:

Please provide detailed workpapers, in native format with all formulas intact, developing the allocation of local transmission costs shown in Table 4 of Chapter 9.

RESPONSE IS-18:

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QUESTION IS-19:

Please provide detailed workpapers, in native format with all formulas intact, developing the allocation of storage costs shown in Table 4 of Chapter 9.

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RESPONSE IS-19:

QUESTION IS-20:

Referring to Table 6 on page 28 of Chapter 9 which compares the current base margin allocation with the proposed base margin allocation, please provide a complete description of all changes in classification, functionalization and allocation between the numbers in column (a) and the numbers in column (c).

RESPONSE IS-20:

SoCalGas believes the question is actually pertaining to Table 5, and that the question's use of the term "classification" means customer classes.

The SoCalGas functional cost categories, customer related costs, Medium and High Pressure Distribution, Transmission, and Storage have not changed between the proposed and present allocations. However, due to the updates to the cost studies and demand forecasts, the allocated costs for these functional categories changed across customer classes.

Changes in allocated functional costs are described below:

- Customer-related costs are described in Chapter 9 and the updated column (a) are summarized on pages 11 and 22.
- marginal unit costs for Medium Pressure Distribution are described in Chapter 9 and the updated column (a) are summarized on page 15 and 23.
- marginal unit costs for High Pressure Distribution are described in Chapter 9 and the updated column (a) are summarized on page 17 and 23.
- Transmission and Storage costs are in Chapter 8 are summarized on pages 13 17.
- changes between column (a) Proposed Allocation of Base Margin and column (c) Current Allocation of Base Margin are shown in the Chapter 12 workpapers, file: 2020 TCAP SCG Model, tab: Reconcile, lines 6 -17. In Table 5, Backbone Transmission Service (BTS) is shown as a separate item. In the workpapers, BTS is allocated among customer classes.

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QUESTION IS-21:

Please provide, in native format with all formulas intact, the models used to develop the rate designs shown in Chapter 12.

RESPONSE IS-21: