CUE DATA REQUEST
CUE-SCG-DR-03
SOCALGAS 2019 GRC – A.17-10-008
SOCALGAS RESPONSE
DATE RECEIVED: JANUARY 5, 2018
DATE RESPONDED: FEBRUARY 5, 2018

164. Please provide a copy of each data request received by SCG from any party other than CUE, together with SCG's responses to that data request, and any attachments to those responses.

SoCalGas Response 164:

DVDs are provided for this response, as well as the response to question 2 of CUE DR-02, which include the discovery responded to by SDG&E and SoCalGas as of January 24, 2018. Public DVDs include the question that was posed by the party propounding the discovery (e.g., intervenor), the public response and any public attachments. Confidential DVDs, indicated by confidentiality language on the label, include responses and attachments that are entirely or partially confidential, which can only be viewed by Reviewing Representatives who have executed the Protective Order's Non-Disclosure Certificate. Those confidential responses and attachments are ***Confidential and Protected Materials Pursuant to PUC Section 583, GO 66-D, and D.17-09-023.*** Parties' requests seeking all the discovery requests and responses to date are excluded.

CUE DATA REQUEST
CUE-SCG-DR-03
SOCALGAS 2019 GRC – A.17-10-008
SOCALGAS RESPONSE PARTIAL
DATE RECEIVED: JANUARY 5, 2018
DATE RESPONDED: JANUARY 30, 2018

165. Please identify and quantify the dollar change in each component (e.g., depreciation, rate base, ADIT, NOLs, return, post-test-year revenue requirements (see Ex. SCG-44, p. 8, fn. 18), etc.) of SDG&E's forecasted 2019 revenue requirement that will be different from the level in SCG's application due to the impact of the tax law changes passed and signed in December 2017. If possible, for each such change please identify the particular tax law change causing the revenue requirement change (e.g., expensing provisions retroactively effective in September 2017, future expensing provisions, change in corporate tax rate from 35% to 21%, etc.).

SoCalGas Response 165:

On December 22, 2017, the Tax Cuts and Jobs Act (the "Tax Act") was enacted into law. The Tax Act represents the first major overhaul of the federal tax code in over 30 years. At the January 10, 2018 prehearing conference for our Test Year 2019 General Rate Case ("GRC"), SoCalGas agreed to submit supplemental tax testimony with the Commission by April 6, 2018, which will reflect the Tax Act's impact. SoCalGas is in the process of analyzing the legislation in preparation of the supplemental tax testimony. Therefore, SoCalGas requests that questions related to the Tax Act be propounded after SoCalGas has served the supplemental tax testimony.

CUE DATA REQUEST
CUE-SCG-DR-03
SOCALGAS 2019 GRC – A.17-10-008
SOCALGAS RESPONSE
DATE RECEIVED: JANUARY 5, 2018
DATE RESPONDED: FEBRUARY 26, 2018

166. Throughout the SCG workpapers there are dozens of references to costs that are calculated on a "zero-based" methodology (E.g., Ex. SCG-4-CWP, pp. 4-6, 130-132, 156-158, 164-165, 167-169, 189-191, 209, 213, 216-218, 231-233; Ex. SCG-4-WP, pp. 14, 56, 58, 68, 142, 157, 160; Ex. SCG-5-WP, pp. 52, 72, 75, 77, 81, 205, 207, 211-212; Ex. SCG-14-CWP, pp. 4-6, 11, 13-15, 20, 22, 24, 27-29, 34, 36, 38, 40; Ex. SCG-14-WP, pp. 5-6, 10-11, 14-15, 19, 23, 25, 30, 32). In virtually none of those cases is there a description of the zero-based methodology, nor are any calculations shown (Ex. SCG-4-CWP, pp. 164-165 and Ex. SCG-4-WP, p. 68 are exceptions). For all such instances, please supply workpapers showing the actual methodology and calculations that resulted in the published dollar amounts.

SoCalGas Response 166:

SoCalGas utilized several forecasting methodologies, including average, trend, base year, and zero-based methods. Zero-based methods can include:

- An arithmetic method such as unit cost multiplied by expected volume
- Referencing a RFP response, an invoice, or other reference document
- Use of Subject Matter Expert judgment
- Reference to a like-kind project or activity performed elsewhere
- Reference to a similar project or work done in the past and updated for current conditions

Thus, zero-based methods can widely vary among witness areas depending on the activity involved. For many witnesses, any applicable calculations are shown in the workpapers, as noted below for each individual witness area. For some witnesses, however, a calculation is not necessarily available depending on the zero-based method used above, as arithmetic methods may have not appropriately nor accurately depicted forecasted needs.

Please see the responses from individual witness testimony volumes regarding explanations of their zero-based methods as follows:

Exhibit: SCG-04-CWP, SCG-04-WP
Witness: Ms. Gina Orozco-Mejia

Response:

Many of the page citations in this data request to Exhibit SCG-04-CWP and SCG-04-WP are to sections of the same workpaper group (SCG-4-CWP, pp. 4-6, 130-132, 156-158, 167-169, 189-191, 216-218, 231-233; SCG-4-WP, pp. 56, 157, 160), and to 'supplemental workpapers' (SCG-4-CWP, pp. 164-165, SCG-4-WP, pp. 58, 68) which already demonstrate the derivation of the forecast used in those sections.

SoCalGas Response 166:-Continued

Other pages cited in the data request question are to supplemental workpapers identifying the corresponding chapter of SoCalGas' RAMP Report[1] to which many of the requested activities apply (SCG-04-CWP pp. 209, 213, SCG-04-WP pp. 14, 142). For additional information on the derivation of RAMP cost estimates please see the RAMP Chapters identified on those supplemental workpapers.

Additional references for the derivation of individual capital budgets or O&M activities are:

BC 151 New Business – Please refer to supplemental workpaper on page 14-16 of Ex. SCG-04-CWP for calculation details on the zero-based methodology. Explanation on the usage of the zero-based methodology can be found on page 5 of Ex. SCG-04-CWP.

BC 163 Meters - Please refer to supplemental workpaper on page 164-165 of Ex. SCG-04-CWP for calculation details on the zero-based methodology. Explanation on the usage of the zero-based methodology can be found on page 157 of Ex. SCG-04-CWP.

BC 164 Regulators - Please refer to supplemental workpaper on page 175-176 of Ex. SCG-04-CWP for calculation details on the zero-based methodology. Explanation on the usage of the zero-based methodology can be found on page 168 of Ex. SCG-04-CWP.

BC 182 Remote Meter Reading - Please refer to supplemental workpaper on page 239 of Ex. SCG-04-CWP for calculation details on the zero-based methodology. Explanation on the usage of the zero-based methodology can be found on page 232 of Ex. SCG-04-CWP.

BC 264 Meter Guards - Please refer to supplemental workpaper on page 138 of Ex. SCG-04-CWP for calculation details on the zero-based methodology. Explanation on the usage of the zero-based methodology can be found on page 131 of Ex. SCG-04-CWP.

BC 280 Gas Energy Measurement Systems (GEMS) - Please refer to supplemental workpaper on page 197-198 of Ex. SCG-04-CWP for calculation details on the zero-based methodology. Explanation on the usage of the zero-based methodology can be found on page 190 of Ex. SCG-04-CWP.

BC 903 Field Capital Support - Please refer to supplemental workpaper on page 228 of Ex. SCG-04-CWP for calculation details on the zero-based methodology. Explanation on the usage of the zero-based methodology can be found on page 217 of Ex. SCG-04-CWP.

[1] I.16-10-015/I.16-10-016 Risk Assessment and Mitigation Phase Report of San Diego Gas & Electric Company and Southern California Gas Company, November 30, 2016. Please also refer to Exhibit SCG-02/SDG&E-02, Chapter 1 (Diana Day) for more details regarding the utilities' RAMP Report.

SoCalGas Response 166:-Continued

2GD000.003 Main Maintenance - Please refer to supplemental workpaper on page 68 of Ex. SCG-04-WP for calculation details on the zero-based methodology. Explanation on the usage of the zero-based methodology can be found on page 56 of Ex. SCG-04-WP.

2200-0431 Field Services Leadership & Operations Assessment - Please refer to supplemental workpaper on page 164 of Ex. SCG-04-WP for calculation details on the zero-based methodology. Explanation on the usage of the zero-based methodology can be found on page 157 and 159 of Ex. SCG-04-WP.

Exhibit: SCG-05-WP
Witness: Omar Rivera

Response:

The workpapers to Exhibit SCG-05 consist of support for the GRC requested funding as well as references provided for the corresponding chapters of SoCalGas' RAMP Report[2]. For a description of the derivation of cost estimates for Gas Contractor Controls (cited in the data request question as workpaper pages 75 and 77) please see the testimony Exhibit SCG-05-R at pages 45-46. For a description of the derivation of costs for Records Management (cited in the data request question as workpaper pages 205 and 207) please see the testimony Exhibit SCG-05-R at page 68.

The remaining pages cited in the data request question are to supplemental workpapers identifying the corresponding chapter of SoCalGas' RAMP Report to which many of the requested activities apply. For additional information on the derivation of RAMP cost estimates please see the RAMP Chapters identified on those supplemental workpapers.

Exhibit: SCG-06-WP
Witness: Beth Musich

Response:

Use of the label "Zero-Based" was only applied to the NSE (non-standard escalation) category of expense throughout the entirety of associated workpapers.
As reflected in the "Summary of Results" tables within the workpapers, Zero recorded expenses were recorded in NSE category of expense in any of the historical year periods (2012 – 2016), and no costs have been forecast in the NSE category in any of the "adjusted-Forecast/Test Year 2019 GRC period.

Use of the zero-based designation for the NSE category of expense, for this witness's area, provided same derivation of cost as would have resulted applying any other generally acceptable forecasting methodologies.

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[2] I.16-10-015/I.16-10-016 Risk Assessment and Mitigation Phase Report of San Diego Gas & Electric Company and Southern California Gas Company, November 30, 2016. Please also refer to Exhibit SCG-02/SDG&E-02, Chapter 1 (Diana Day) for more details regarding the utilities' RAMP Report

SoCalGas Response 166:-Continued

Exhibit: SCG-07-CWP
Witness: Elizabeth Musich / Michael Bermel

Response:

The SCG-07-CWP workpapers for Auxiliary Equipment, Relocation Freeway, Pipeline Replacements, and Compressor Stations, as well as the Risk Assessment Mitigation Phase workpapers 308A, and 309A, all used a zero-based forecast methodology because historical spend was not fully reflective of future cost and, moreover, the projects were defined and budgeted. Cost estimates were prepared by experienced pipeline construction management personnel with reference to recent pipeline construction projects of similar scope, pipe size and pressure, and accounting for construction environment. Please refer SCG-07-CWP 312, SCG-07-CWP 315, SCG-07-CWP 309, SCG-07-CWP 313, SCG-308A and SCG-309A.

Exhibit: SCG-08-CWP
Witness: Michael A. Bermel

Response:

The forecasted cost on SCG-08-CWP workpapers for Distribution Operations Control Center and Technology Management, DOCC, is zero-based and was developed using a combination of historical costs for SCADA and field asset installation comparable to those proposed, Company labor rates associated with Company employees planned to design/commission, and confirmed licensing and system expansion costs. Formal equipment quotations were also used to develop the DOCC capital cost estimate. Please refer to SCG-08-CWP and Supplemental Workpapers for Workpaper Group 003430.

Exhibit: SCG-09
Witness: Deanna R. Haines

Response:

1. Budget Code 714 historical costs were adjusted and included in workpaper group BC730 contained in Exhibit SCG-09-WP_ENG on pages 13 to 19. After those costs were transferred, a five-year average was selected as the forecast method.
2. Budget 342 historical costs were adjusted and removed from Deanna R. Haines' witness area. Budget 342 is used for Line 85 replacement and is being sponsored by PSEP (Exhibit SCG-15).

Exhibit: SCG-10-WP
Witness: Neil P. Navin

Response:

The forecasted cost for Underground Storage – RSIMP is zero-based because of limited historical data available and limited relevance of historical data due to proposed and emerging regulations.

SoCalGas Response 166:-Continued
This is further described in Ex. No. SCG-10 Revised Direct Testimony of Neil Navin – Underground Storage page NPN-26. For example, the SIMP O&M forecasting assumes an acceptance of DOGGR 14 CCR 1726 proposed two-year inspection cycle of wells. Compliance with this interval benefits from a year-specific level of forecasting. Please refer to Exh. No. SCG-10-R, Section III.D, page NPN-28 for an overall description of the zero-based forecast methodology; workpaper 2US002.000 in Exh. No. SCG-10-WP-R, pages 32 to 38 (of 57) for the associated workpapers; and pages 40 to 48 (of 57), for the associated supplemental workpapers which further detail the zero-based calculation methodology.

Additionally, please also refer to attached file "CUE SCG DR03 Q166 Exhibit SCG-10-file01.xlsx", which provides a table to further clarify the organization and calculation of costs by activity description level relative to the overall zero-based adjustment total summarized in Exhibit No. SCG-10-WP-R, workpaper 2US002.000 (page 32 of 57).

Exhibit: SCG-10-CWP
Witness: Neil P. Navin
Response:

The capital expenditures estimated for Storage operations was derived using a zero-based forecast methodology. They are organized by Categories of Management (please refer to Exh. No. SCG-10-R, Section V.A, page NPN-30 to NPN-31 for a summary of the forecast and descriptions). Please refer to Exh. No. SCG-10-R, Section V.B to Section V.G for further forecast description summary and Exh. No. SCG-10-CWP-R pages 1 to 184 for project level details.

Exhibit: SCG-13-WP
Witness: Devin Zornizer

Response:

Use of the label "zero-based" was only applied to the NSE (non-standard escalation) category of expense throughout the entirety of associated workpapers.
As reflected in the "Summary of Results" tables within the workpapers, no expenses were recorded in NSE category of expense in any of the historical year periods (2012 – 2016), and no costs have been forecast in the NSE category in any of the "adjusted-Forecast/Test Year 2019 GRC period.

Use of the zero-based designation for the NSE category of expense, for this witness's area, provided same derivation of cost as would have resulted applying any other generally acceptable forecasting methodologies.

SoCalGas Response 166:-Continued
Exhibit: SCG-14-CWP, SCG-14-WP
Witness: Maria Martinez

Response:

Exhibit SCG-14, pg. MTM-30, explains why the use of zero based forecasting was used for TIMP and pg. MTM-31, explains why the use of zero based forecasting was used for DIMP. For TIMP forecasted cost is based upon the average costs incurred during 2016 for the four components to assess a pipeline: retrofit of the pipeline and capital replacement, installation of launcher and receiver facilities, in-line inspection, and excavations & remediation. The average cost is then applied to the number of assessments for the year to arrive at total costs. For DIMP forecasted cost is based on 2016 historic data for the average cost of replacement per foot for both steel and plastic. This average cost is then applied to the number of forecasted miles of replacement for the year to arrive at total costs.

Exhibit: SCG-15-WP
Witness: Rick Phillips

Response:

Please see the Supplemental Workpapers, SCG-15-WP-S, for details on the derivation of the zero-based forecasts.

Exhibit: SCG-17-WP-R
Witness: Rene Garcia

Response:

Please refer to exhibit SCG-17-WP-R, pages 5-7 of 48, for an explanation for a zero-based forecast methodology for the Advanced Meter Operations group. For the calculations, please refer to Supplemental Workpapers for Workpaper 2AM002.000 starting on page 12 of 48 in exhibit SCG-17-WP-R.

Exhibit: SCG-17-CWP
Witness: Rene Garcia

Response:

Please refer to exhibit SCG-17-CWP workpapers 00811A, 00811B, 00811C, 00811D, 00811E, 00811F, 00811G for explanation for a zero-based forecast methodology.

SoCalGas AMI is showing 2018 capital costs in SCG-17-R for rate base purposes only. Costs through 2018 are AMI implementation-related and are recorded in the Advanced Metering Infrastructure Balancing Account (AMIBA), as previously authorized in the AMI Decision (D.) 10-04-027 and 2016 GRC Decision (D.) 16-06-054. Hence, these capital costs are not being requested in this GRC. Please refer to SCG-17-R, page RFG-iii (Summary of Requests) for additional details.

SoCalGas Response 166:-Continued

Exhibit: SCG-18-WP
Witness: Gwen Marelli

Response:

A zero-based methodology was used for the workpapers listed below. The forecast explanations and supplemental workpapers showing the cost calculations are provided on the pages listed from Exhibit SCG-18-WP unless otherwise specified below:

- 2FC001.000 - Customer Services Field – Operations: Explanation is on page 5 of 174. The supplemental workpaper is on pages 17 – 53 of 174.
- 2FC002.000 - Customer Services Field – Supervision: Explanation is on page 71 of 174. The supplemental workpaper is on page 82 of 174.
- 2FC005.000 - MSA Inspection Program: Explanation is on page 105 of 174. The supplemental workpaper is on pages 114 - 128 of 174.
- 2FC006.000 - Meter Reading - Operations: Explanation is on page 131 of 174. The supplemental workpaper is on pages 139 - 141 of 174.
- 2FC007.000 - Meter Reading – Clerical: Explanation is on page 145 of 174. Also, please refer to Exhibit SCG-18-R, Section III.C.2, items c, d, and e, pages GRM-48 to 49.
- 2FC008.000 - Meter Reading – Supervision & Training: Explanation is page 150 of 174. Also, please refer to Exhibit SCG-18-R, Section III.C.3.e, page GRM-50.
- 2FC009.000 – Meter Reading – Support: Explanation is on page 156 of 174. Also, please refer to Exhibit SCG-18-R, Section III.C.4.e, pages GRM-52 to 53.

Two workpapers were mislabeled and a zero-based methodology was not used but the explanation of the forecast was also provided in Exhibit SCG-WP:

- 2FC003.000 Customer Services Field - Dispatch; Explanation is on page 85 of 174. Also, please refer to Exhibit SCG-18-R, Section III.B.3.b, pages GRM-32 and 33.
- 2FC004.000 Customer Services Field - Support: Explanation is on page 91 of 174. Also, please refer to Exhibit SCG-18-R, Section III.B.4.b pages GRM-35 and 36.

Exhibit: SCG-21
Witness: Lisa M. Larroque Alexander

Response:

A zero-based forecast for the refundable O&M RD&D program was developed from a forward-looking assessment of specific technology needs described in the prepared direct testimony of Lisa Alexander Exhibit SCG-21, including Appendix B, "Technology Needs Assessment Summary." Since many of the technologies of interest to the RD&D program are pre-commercial and public cost data is not available, individual technology budget requirements were estimated by subject matter experts based on their current assessment of the state of the art and previous experience developing research projects as summarized in Table LLA-9 on page LLA-15

SoCalGas Response 166:-Continued

Exhibit: SCG-22
Witness: Denita Willoughby

Response:

Workpaper 2SS008.000 forecasts no expense ($0). Although shown as having used a zero-base method, the forecast basis was $0 and there are no forecast adjustments, as SoCalGas anticipates no O&M expense in this area.

Exhibit: SCG-23-CWP
Witness: Carmen L. Herrera

Response:

Exhibit SCG-23-CWP utilized a zero-based forecast methodology prepared by experienced facility construction management staff utilizing recent completed projects and knowledge of individual scope of work. Please see the direct testimony of Carmen L. Herrera, SCG-23, beginning on page CLH-39 under the "Forecast Method" heading for individual workpaper forecasting methodology. Additional supplemental documentation with calculations and estimates for large projects is provided in Confidential Version Supplemental Workpapers to Prepared Direct Testimony of Carmen Herrera, SCG-23 pages 2 – 7.

Exhibit SCG-23-WP workpapers 2RF003.001 – 2RF003-004 utilized a zero-based forecast based on vehicle replacement planning, compliance requirements, and incremental vehicles for business needs. The methodology is documented in the individual workpapers with supplemental calculations provided in pages 12 – 14.

Exhibit: SCG-24-WP
Witness: Dale Tattersall

Response:

This response contains Confidential and Protected Materials Pursuant to PUC Section 583, GO 66-D, and D.17-09-023.

Please refer to the Excel workbook "CUE SCG DR03 Q166 SCG 2017-2019 Estimated Rents CONFIDENTIAL.xlsx" for the details of the zero-based forecast for the NSS SCG Branch Offices, GCT Rents and SCG Telecom Tower Rents to be provided shortly. A zero-based forecast methodology was used to more accurately capture the specific year-over-year contractual rent increases for each location.

SoCalGas Response 166:-Continued
Exhibit: SCG-25-R
Witness: Darrell Johnson

Response:

Exhibit SCG-25-WP-R utilized a "zero-based" forecasting methodology for workpaper descriptions:
1) 2EV000.000 – Environmental
2) 2EV001.001 – RNERBA-Subpart W
3) 2EV001.002 – RNERBA-AB32 Fees
4) 2EV001.003 – RNERBA-LDAR
5)2EV001.004 – RNERBA-MS4
6) 2200-2012 – SCG Environmental Service Director
7) 2200-2176 – SCG Environmental Program
8) 2200-2554 – Tech Supp-Air Qual.

Environmental Services identified each activity necessary to complete Environmental Services work and created a cost forecast for each of the identified activities. The cost forecast as well as the basis for each forecast can be found in the workpapers and supplemental workpapers in Ex. SCG-25-WP-R, pp. 5-33, 87-137.

Exhibit: SCG-26-CWP
Witness: Chris Olmsted

Response:

The forecast methodology is discussed in the testimony of SoCalGas IT witness Mr. Olmsted (Ex. SCG-26). Please refer to pages Ex. SCG-26 pages CRO-19-20 and individual capital project workpapers in Exhibit SCG-26-CWP for details.

Exhibit: SCG-26-WP
Witness: Chris Olmsted

Response:

Use of the label "zero-based" was only applied to the NSE (non-standard escalation) category of expense throughout the entirety of associated workpapers.
As reflected in the "Summary of Results" tables within the workpapers, Zero recorded expenses were recorded in NSE category of expense in any of the historical year periods (2012 – 2016), and no costs have been forecast in the NSE category in any of the "adjusted-Forecast/Test Year 2019 GRC period.

Use of the zero-based designation for the NSE category of expense, for this witness's area, provided the same derivation of cost as would have resulted applying any other generally acceptable forecasting methodologies.

SoCalGas Response 166:-Continued
Exhibit: SCG-27-CWP
Witness: Gavin Worden

Response:

The forecast methodology is discussed in the testimony of SoCalGas IT witness Mr. Gavin Worden (Ex. SCG-27-R) throughout the testimony associated with each project under the heading 'Forecast Methodology', first appearing at page GW-31.

Exhibit: SCG-30-WP
Witness: Debbie Robinson

Response:

Each of the workpapers using a zero-base forecast methodology in Exhibit SCG-30-WP are derived from sources such as headcounts, current and future insurance premiums and self-insured equivalents. Each workpaper group forecast in this exhibit contains one or more 'supplemental workpapers' demonstrating that forecast derivation, for example workpaper group 2CP000.000 COMPENSATION - VARIABLE PAY (GRC USE ONLY) in Exhibit SCG-30-WP at page 5 is followed by detailed supplemental workpapers beginning at page 11. This continues throughout this workpaper volume.

Exhibit: SCG-31-WP
Witness: Debbie Robinson

Response:

Each of the workpapers using a zero-base forecast methodology in Exhibit SCG-31-WP are derived from values provided by the Company's certified actuary Willis Towers Watson. Each workpaper group forecast in this exhibit contains one or more 'supplemental workpapers' demonstrating that forecast derivation, for example workpaper group 2PN000.000 - EMPLOYEE PENSION in Exhibit SCG-31-WP at page 4 is followed by detailed supplemental workpapers beginning at page 9. This continues throughout this workpaper volume.

Exhibit: SCG-32-WP
Witness: Mary Gevorkian

Response:

Exhibit SCG-32-WP utilized a zero-based forecast methodology for the Workers' Compensation and Long-Term Disability forecasts contained in workpaper 2HR006.001. For the detailed calculations, please refer to supporting the Supplemental Workpapers, within that exhibit, that can be found on page 48 of 101.

SoCalGas Response 166:-Continued

Exhibit: SCG-33
Witness: Stacey Lee

Response:

Please refer to exhibit SCG-33, page SL-14 for details of the Incident Support and Analysis department and refer to exhibit SCG-33-WP, page 26 of 148 for forecasted dollars. Please refer to ORA Data Request ORA-SCG-010-FH2, response 1.b on how the requested dollar of $1.1 million was derived (available at: https://www.socalgas.com/regulatory/A17-10-008.shtml).

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CUE-SCG-DR-03
SOCALGAS 2019 GRC – A.17-10-008
SOCALGAS RESPONSE
DATE RECEIVED: JANUARY 5, 2018
DATE RESPONDED: FEBRUARY 12, 2018

167. In SCG's Application, Appendix A, pp. 19, 20, 22, 27, 32, 33, 38, 43, 44, 47, and 48, please provide corresponding tables with 2017 data rather than the 2016 data shown on in the tables on those pages. If not available, please indicate when 2017 data will be available, and commit to providing it at that time.

SoCalGas Response 167:

In D.16-06-054, the Commission ordered SDG&E and SoCalGas to file interim Spending Accountability Reports limited to the years of 2014, 2015, and 2016 (*see* Ordering Paragraph 11) "[t]o gain some familiarity and understanding with the reporting requirements imposed by D.14-12-025, and to obtain data and metrics on safety" (D.16-06-054 at Conclusions of Law 4). D.16-06-054 also discusses future accountability reporting on page 41: "Subsequent reporting requirements beyond what is being required above will be supplanted by the direction provided in D.14-12-025, a decision in either or both the S-MAP and RAMP proceedings, or in the next GRC proceedings of the Applicants." Therefore, SDG&E and SoCalGas have not performed the requested analysis, and it is neither in the scope of this proceeding nor consistent with what was ordered by the Commission. Moreover, the requested analysis would be an extraordinary effort to perform. SDG&E and SoCalGas thus object to this request under Rule 10.1 of the Commission's Rules of Practice and Procedure, on the grounds that the burden and expense of this request clearly outweigh the likelihood that the information sought will lead to the discovery of admissible evidence.

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CUE-SCG-DR-03
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SOCALGAS RESPONSE
DATE RECEIVED: JANUARY 5, 2018
DATE RESPONDED: FEBRUARY 6, 2018

168. In SCG's Application, Appendix A, pp. 37 and 38 show 2014-2016 early-vintage Aldyl-A replacements that total 40 miles, versus planned replacements for those years of 97 miles. Please:

a. Define what installation years are considered "early-vintage" years for steel.

b. Provide the corresponding actual and planned miles of early-vintage steel replacements for 2017.

c. Provide SCG's current plans for early-vintage steel replacement miles for each of the years 2018-22, inclusive, through the end of the current GRC cycle.

d. Explain how many miles, if any, of replacements SCG is planning to perform catch up for the 57 miles of planned-but-not-done early vintage steel replacements in 2014-2016, and when those catch-up replacements will be done.

SoCalGas Response 168:

a. SoCalGas presumes the question intends to address the 40 miles of 'early vintage steel' rather than the 13 miles of 'early vintage Aldyl-A' found at that Appendix A location. Early-vintage years for steel are pre-1960.

b.

DIMP Capital 2017	Actual	Planned/Requested in 2016 GRC
DREAMS – early vintage steel replacement	30 miles	37 miles

c.
SoCalGas 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism.

SoCalGas Response 168 Continued:

	2018*	2019-2022*
DREAMS – early vintage steel replacement	22 miles	29 miles

*projection

d. SoCalGas objects to this request on the grounds that it is vague and ambiguous, particularly with respect to the phrase "catch-up replacements." Subject to and without waiving the foregoing objection, SoCalGas responds as follows: SoCalGas will not be doing "catch-up" replacements to match the level of "planned" activity levels. As explained in Appendix A, pages 36-37, the metrics stated as "planned" activity levels were assumed levels of work during TY 2012 and TY 2016 GRCs. As the program has matured, the scope of planned activities changed over time. Originally, it was planned for vintage pipe replacement to be at 2-to-1 ratio (steel versus plastic), but it switched to a 1-to-2 ratio with more emphasis on vintage plastic pipe replacement to adapt to program findings to adequately mitigate the risk being addressed.

CUE DATA REQUEST
CUE-SCG-DR-03
SOCALGAS 2019 GRC – A.17-10-008
SOCALGAS RESPONSE
DATE RECEIVED: JANUARY 5, 2018
DATE RESPONDED: FEBRUARY 6, 2018

169. In SCG's Application, Appendix A, pp. 37 and 38 show 2014-2016 early-vintage Steel replacements that total 13 miles, versus planned replacements for those years of 48 miles. Please:

a. Define what installation years are considered "early-vintage" years for Aldyl-A.

b. Provide the corresponding actual and planned miles of early-vintage Aldyl-A replacements for 2017.

c. Provide SCG's current plans for early-vintage Aldyl-A replacement miles for each of the years 2018-22, inclusive, through the end of the current GRC cycle.

d. Explain how many miles, if any, of replacements SCG is planning to perform catch up for the 35 miles of planned-but-not-done early vintage Aldyl-A replacements in 2014-2016, and when those catch-up replacements will be done.

SoCalGas Response 169:

a. SoCalGas presumes the question intends to address the 13 miles of 'early vintage Aldyl-A' rather than the 40 miles of 'early vintage steel' found at that Appendix A location. Early-vintage years for Aldyl-A is pre-1986.

b.

DIMP Capital 2017	Actual	Planned/Requested in 2016 GRC
DREAMS – early vintage Aldyl-A replacement	33 miles	18 miles

c.
SoCalGas 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism.

SoCalGas Response 169 Continued:

	2018*	2019-2022*
DREAMS – early vintage Aldyl-A replacement	43 miles	78 miles

*projection

d. See response to Question 168.d.

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170. In SCG's Application, Appendix A, p. 44 shows 2016 in-line inspections (ILI) that total 333 miles, versus planned ILI for that year of 615 miles. Please:

a. Provide the corresponding actual and planned miles of ILI for 2017.

b. Provide SCG's current plans for ILI miles for each of the years 2018-22, inclusive, through the end of the current GRC cycle.

c. Explain how many miles, if any, of ILI SCG is planning to perform catch up for the 282 miles of planned-but-not-done ILI in 2016, and when those catch-up ILIs will be done.

SoCalGas Response 170:

a. The planned miles of ILI for 2017 are approximately 230 miles. SoCalGas is in the process of reconciling 2017 assessment mileage. The actual miles of 2017 ILI will be available on March 15, 2018 when SoCal submits its DOT Report.

	Actual 2017	**Planned/Requested in 2016 GRC**
Assessment: In-Line Inspection	230 miles	615 miles

b.

SoCalGas 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism.

	2018*	**2019-2022***
Assessment: In-Line Inspection	107 miles	683 miles

*projection

c. SoCalGas objects to this request on the grounds that it is vague and ambiguous, particularly with respect to the phrase "catch-up ILIs." Subject to and without waiving the foregoing objection, SoCalGas responds as follows: SoCalGas will not be doing "catch-up" ILI inspections to match the level of "planned" activity levels. As explained in Appendix A, pages 42-44, the metrics stated as "planned" activity levels were assumed

SoCalGas Response 170 Continued:

levels of work during TY 2012 and TY 2016 GRCs. To meet deadlines for TIMP assessments, schedules may be modified each year to account for resources, inspection tools, and system availability. It should be noted that TIMP assessments were completed on time, meeting regulatory deadlines. It is not useful to compare the planned activity level in one year alone to actual levels, to measure performance for a program with a long-term assessment cycle, until all three years of the GRC cycle are available.

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171. Ex. SCG-1, p. 2:10-16, discusses impacts on the SCG system of SB350. Please provide the data showing that:

a. "Large quick-start generators initiate a very different load pattern on [SCG's] system"

b. "Large quick-start generators...caus[e] sudden and dramatic increases in demand over a very short period of time"

c. "Large quick-start generators ...link the reliability of natural gas service and the reliability of the electrical grid to a far greater extent than in the past."

SoCalGas Response 171:

Given the purpose for which these policy statements are offered, SoCalGas objects to this request as overly broad, unduly burdensome, and exceeding the scope of permissible discovery under Rule 10.1, of the Commission's Rules of Practice and Procedure. Subject to and without waiving the foregoing objections, SoCalGas provides the following examples of excerpts from publicly available documents that support the policy statements in Ex. SCG-1, p. 2:10-16:

Information provided by CAISO:
http://www.caiso.com/Documents/FlexibleResourcesHelpRenewables_FastFacts.pdf

"Historically, the ISO directed conventional, controllable power plant units to move up or down with the instantaneous or variable demand. With the growing penetration of renewables on the grid, there are higher levels of non-controllable, variable generation resources. Because of that, the ISO must direct controllable resources to match both variable demand and variable supply." CAISO further states that "[t]o ensure reliability under changing grid conditions, the ISO needs resources with ramping flexibility and the ability to start and stop multiple times per day. To ensure supply and demand match at all times, controllable resources will need the flexibility to change output levels and start and stop as dictated by real-time grid conditions."

Long-Term Viability of Underground Natural Gas Storage in California report developed by the California Council on Science and Technology.
http://ccst.us/publications/2017/Full%20Technical%20Report.pdf

SoCalGas Response 171:-CONTINUED

pp. 527-530: "Demand for gas will change because California has been adding additional intermittent renewables to the grid that will reduce the aggregate need for burning gas in power plants. However, the remaining use of gas may be "peakier," or more variable because gas-fired plants are increasingly called upon to meet the sudden increases in net electricity demand that occur, for example as people get home in the afternoon and begin to consume electricity just as solar production begins to wane. The gas system was not configured to support large increases of sudden use in the afternoon. Currently, the system accommodates large increases either serendipitously, or because storage has been available and the utility has sufficient control to allow it to make up the imbalance created on its system when the generator fires up."

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172. Ex. SCG-1, p. 12:15-17, and also Ex. SCG-4, p. 7:25-27, describe four reasons (quoted in subparts b, d, e, and f, below) why SCG expects to be "addressing more leaks."

a. For SCG as a whole, for each year from 2012-17 (historical data) and for each year from 2018-22 (through the end of the current GRC cycle), please supply:

i. Number of leaks found that year

ii. Number of leaks repaired that year

iii. Start-of-year backlog of known-but-not-yet-repaired leaks from previous years

b. With regard to "accelerated leak survey cycles," for each type of leak survey performed by SCG on a cyclical basis (e.g., the four types of cyclical surveys described in Ex. SCG-4, pp. 36:23-37:7) please provide:

i. A description of that type of survey

ii. The year SCG began performing that type of survey

iii. The cycle length for that type of survey as of 2012

iv. The date of each change in survey cycle length for that type of survey, and the new survey cycle length

v. The number of leaks detected annually by that type of survey for each year from 2012-2017 (historical data) and 2018-2022 (forecast data)

c. To the extent of the sum of the number of leaks detected by surveys (as shown by summing the answers to part b.v of this question) and the total number of leaks detected by SCG (as shown by the answers to part a.i of this question) do not match for any particular year, please provide a quantitative reconciliation explaining the difference between the two numbers for that year.

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SoCalGas Question Continued 172:

d. With regard to "new or more stringent regulatory requirements," please provide:

i. A description of each such requirement that SCG expects to increase leak detection or leak repair work,

ii. The effective date of that regulatory requirement

iii. SCG's best estimate of the quantitative effect that regulatory requirement has had or will have on the number of leaks detected and/or repaired.

e. With respect to "changes in work practices," please provide:

i. A description of each such change in work practice(s) that SCG expects to increase leak detection or leak repair work,

ii. The effective date of that change in work practice(s)

iii. SCG's best estimate of the quantitative effect that change in work practice(s) has had or will have on the number of leaks detected and/or repaired.

f. With respect to "more sensitive detection equipment," please provide:

i. A description of each type of "more sensitive detection equipment" that SCG expects to increase leak detection or leak repair work,

ii. The annual level of use of each type of "more sensitive detection equipment" since its initial introduction into the SCG system.

iii. SCG's best estimate of the quantitative effect that use of each type of "more sensitive detection equipment" has had or will have on the number of leaks
detected and/or repaired.

iv. SCG's best estimate of the combined quantitative effect that use of all type of "more sensitive detection equipment" has collectively had or will have on
the number of leaks detected and/or repaired.

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SoCalGas Response 172:

SoCalGas objects to all portions of this question requesting 2020-2022 forecasts 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism.

a. The data provided below consists of the historical data. SoCalGas has forecasted Gas Distribution expenses which are presented in Ex SCG-04-WP and the direct revised testimony of Gina Orozco-Mejia Ex SCG-04-R. SoCalGas used the historical (2012-2016) five-year expense trend plus incremental to forecast the amount of expenditures needed to address the growing number of leaks in the system for 2017-2019.

i. Please see the table below regarding the number of leaks found from 2012-2017:

	2012	2013	2014	2015	2016	2017
# of Leaks	12,713	14,782	17,149	17,293	15,911	18,170

ii. Please see the table below regarding the number of leaks repaired from 2012-2017:

	2012	2013	2014	2015	2016	2017
# of Leaks Repaired	13,080	13,957	17,291	16,094	15,053	18,067

iii. Please see the table below regarding the number of start-of-year leak indications (i.e., pending leaks) from 2012-2017:

	2012	2013	2014	2015	2016	2017
# of Leak Indications in Inventory	8,280	7,913	8,738	8,596	9,795	10,653

b.

i. Please refer to the revised testimony of Gina Orozco-Mejia Ex. SCG-04-R page GOM-36:20 through 37:18 for a description of the leak surveys cycles that SoCalGas performs. In addition, page GOM-38:27-29 discusses a new General Order (GO) 112-F requirement for bi-annual leak survey of DOT-defined transmission lines.

SoCalGas Response Continued 172:

ii. SoCalGas follows the requirements established by federal (49 C.F.R. § 192.723 - Distribution systems: Leakage surveys) and state (GO 112-F) regulations. The annual, three-year, and five-year leak survey requirements have been in effect since the implementation of 49 CFR, Part 192 in the early 1970s. California's GO 112-F was updated with new requirements for bi-annual leak survey of DOT-defined transmission lines effective January 2017.

iii. The cycle length used for the annual, three-year, and five-year leak survey as of 2012 is outlined in Title 49 Part 192 Subpart M (§192.723). In 2012, the leak survey for DOT-defined transmission lines was annual; and pre-1986 plastic pipe was surveyed, either annually if in a business district, or every five years if outside a business district.

iv. Please see responses to Questions 172.b.i and 172.b.ii above.

v. SoCalGas does not track leaks detected to this level of granularity. All leak survey conducted by Gas Distribution is recorded in the Leak Survey cost category, regardless of pipe category or survey cycle.

c. SoCalGas does not track leaks by survey cycle, therefore the information requested is not available. See response to Question 172.b.v above.

d.

i. GO 112-F, which was revised and implemented January 2017, now requires that all DOT-defined transmission lines be surveyed on a bi-annual (6-month) cycle. In addition to increasing the amount of pipe that must be leak surveyed, this change will also increase leak detection and repairs.

ii. GO 112-F went into effect on January 1, 2017.

iii. SoCalGas forecasted an increase of 55 leaks detected/repaired related to increasing the leak survey of high-pressure pipe from annual to bi-annual.

e.

i. Changes to the language in GO 112-F impacted the coding of leaks and the time employees spend investigating leak indications. Please see the descriptions below.

- Prior to the implementation of GO 112-F, leak indications less than 2.5% gas associated with valve casings and meter boxes were not coded. Leak Survey technicians are now required to investigate all indications detected in gas associated with valve casings and meter boxes.

SoCalGas Response Continued 172:

- Any reading of 80% of LEL (Lower Explosive Limit) or greater in small substructures not associated with gas facilities where gas could potentially migrate to the outside wall of a building must be investigated immediately.
- Prior to GO 112-F, an indication greater than 3% gas required an immediate response. The added verbiage of "[a]ny reading at the outside wall of a building or where the gas could potentially migrate to the outside wall of a building," has led to an increase in leak orders requiring an immediate response for lower levels of gas.
- Any reading of 40% LEL or greater under a sidewalk in a wall-to-wall paved area that does not qualify as a Code 1 leak and where gas could potentially migrate to the outside wall of a building is defined as a "Grade 2" leak. Prior to GO 112-F, an indication detected within 5 feet if unpaved and 10 feet if paved were considered Code (Grade) 2 leaks. Leaks detected outside of the defined proximity were coded as Code 3 leaks. The change in language requires additional investigation to determine if there is a potential for gas to migrate.

ii. January 1, 2017.

iii. SoCalGas does not have the incremental number of leaks indications associated specifically with these changes in work practices; however, SoCalGas has observed the following changes since the implementation of GO 112-F: a 14.2% increase of leaks found and a 20% increase in leaks repaired in 2017 compared to 2016.

f.

i. In late 2016, SoCalGas replaced the MSA Gascope CGI methane detection equipment with the GMI Gasurveyor CGI system-wide. The sensitivity range of the MSA Gascope was 1% LEL (5,000 ppm) through 100% Volume Gas. The GMI Gasurveyor has a sensitivity resolution range of 1 ppm through 100% Volume Gas. This greater sensitivity has resulted in the identification of more leak indications.

ii. The equipment is used on a daily basis.

iii. SoCalGas does not have the incremental number of leaks indications associated specifically with the replacement of the methane detectors; however, SoCalGas has observed the following changes in the table below since the implementation of this new equipment:

SoCalGas Response Continued 172:

SoCalGas Leaks	2016	2017	% Increase
Leaks Found	15,911	18,170	14.2%
Leaks Resolved	15,053	18,067	20.0%

iv. Please see the response to Question 172f.iii above.

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173. Ex. SCG-4, pp. 4:21-5:5, describes issues SCG's Gas Distribution organization faces in maintaining a "Trained and Qualified Workforce." Workforce Planning is also discussed in Ex. SCG-5, pp. 18-19. Please provide, in Excel format, a spreadsheet showing, as of the end of each year from 2012-2017 (actuals) and 2018-2022 (forecast):

a. The number of Gas Distribution employees under 50 and the number of gas distribution employees of each age 50 and above (i.e., number aged under 50, number aged 50, number aged 51, number aged 52, etc.)

b. The cumulative years of work experience at SCG of each age group (e.g., if there were 40 employees aged 52 at the end of a given year, with an average of 20 years working for SCG, that year's entry for work experience for 52-year-olds would show 40 x 20 = 800 years of work experience.)

c. The number of workers eligible to retire, whether due to age or length of employment at SCG, in each age group (e.g., if there were 40 employees aged 52 at the end of a given year, and 5 of them were eligible to retire that year, that year's entry for retirement eligibility would be 5).

SoCalGas Response 173:
SoCalGas objects to all portions of this question requesting 2020-2022 forecasts 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism.

a. Please see the table below regarding the number of SoCalGas Gas Distribution employees over and under the age of 50.

Age_Group	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017
Under 50	960	993	1,101	1,209	1,326	1,364
50	51	46	33	22	23	35
51	69	49	46	33	23	24
52	55	61	43	50	32	23
53	63	55	53	46	49	33
54	70	60	55	60	51	51
55	75	61	56	53	57	46
56	80	68	51	53	51	48
57	61	78	51	46	48	45

58	58	49	72	49	42	43
59	46	45	44	63	40	38
60	43	34	36	34	57	29
61	34	34	29	25	33	37
62	20	27	24	17	25	22
63	16	13	18	21	12	7
64	9	13	9	13	19	9
65	6	8	8	9	10	15
66	1	3	8	7	6	5
67	2	1	3	4	5	2
68	2	1	1	2	3	3
69	3	1		1	2	2
70	1	3	1		1	
71		1	1	1		

b. Please see the table below displaying the number of years of work experience for the current SoCalGas organization of Gas Distribution employees for years 2012-2017.

Age_Group	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017
Under 50	8,411	8,204	8,638	9,518	10,525	11,742
50	1,238	991	651	508	548	502
51	1,598	1,214	1,034	670	571	610
52	1,351	1,476	1,101	1,155	710	581
53	1,725	1,458	1,338	1,203	1,186	758
54	2,016	1,665	1,476	1,549	1,356	1,276
55	2,168	1,776	1,601	1,470	1,570	1,278
56	2,335	2,037	1,536	1,470	1,436	1,287
57	1,867	2,312	1,507	1,373	1,352	1,294
58	1,737	1,562	2,167	1,398	1,244	1,271
59	1,418	1,363	1,450	1,975	1,129	1,177
60	1,340	1,099	1,086	1,132	1,820	725
61	1,031	1,123	967	770	1,097	1,138
62	594	835	712	548	768	718
63	462	385	550	591	398	215
64	300	392	277	353	547	333
65	224	217	254	251	315	417
66	23	133	213	231	155	137
67	50	24	136	99	193	53
68	84	29	25	92	56	124
69	90	47		26	94	24
70	43	93	48		27	
71		44	48	49		

c. Please see the table below that represents the number of Gas Distribution employees eligible to retire.

Age_Group	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017

Under 50	0	0	0	0	0	0
50	0	0	0	0	0	0
51	0	0	0	0	0	0
52	0	0	0	0	0	0
53	0	0	0	0	0	0
54	0	0	0	0	0	0
55	71	60	52	50	56	46
56	76	67	50	50	48	46
57	60	75	48	46	45	42
58	54	49	68	44	41	41
59	44	43	44	62	35	37
60	42	33	33	34	55	22
61	32	34	28	23	32	35
62	20	27	22	17	24	21
63	15	13	18	18	12	6
64	9	12	9	12	17	9
65	6	7	8	9	9	14
66	1	3	7	7	6	4
67	2	1	3	4	5	2
68	2	1	1	2	3	3
69	3	1		1	2	2
70	1	3	1		1	
71		1	1	1		

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174. Please provide any memos, studies or other documents which have been presented to SCG management addressing the challenges to SCG posed by "employee movement as a result of promotions and transfers."

SoCalGas Response 174:

SoCalGas objects to this request as overly broad, unduly burdensome, and vague and ambiguous with respect to the timeframe at issue, and exceeding the scope of permissible discovery under Rule 10.1, of the Commission's Rules of Practice and Procedure. Subject to and without waiving the foregoing objection, SoCalGas responds as follows:

As stated in SoCalGas' RAMP Report, Chapter 7, page SCG 7-7, increased attrition has led to promotion and mobility rates (14% and 28% respectively) trending close to 50% higher in relation to other utilities nationwide. Also indicated on page SCG 7-7, based on the Bureau of Labor statistics, employees age 20-24 years tend to transition within and across organizations. Each employee transfer or promotion at SoCalGas triggers subsequent movements within the company, which is why SoCalGas has a continuing need to expand workforce planning, knowledge management, and learning and development efforts.

Although, SoCalGas has not completed a formal study in this area, it runs ad hoc queries of its data system as requested by management to review workforce status. The attached document ("CUE-03-DR-Q_174-175") provides current data regarding employees that will be eligible for retirement over the next five years.

Using this type of data, SoCalGas may also present graphical representations of its workforce status such as the attached presentation "CUE-03-DR-Q_174-175_Chart" shared with the director and executive level team in the year 2015.

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175. Please provide any memos, studies or other documents which have been presented to SCG management addressing the challenges to SCG posed by retirements.

SoCalGas Response 175:

SoCalGas objects to this request as overly broad, unduly burdensome, and vague and ambiguous with respect to the timeframe at issue, and exceeding the scope of permissible discovery under Rule 10.1, of the Commission's Rules of Practice and Procedure. Subject to and without waiving the foregoing objection, SoCalGas responds as follows:

As stated in RAMP Chapter 7, page SCG 7-6 at SoCalGas, a growing number of employees are eligible to retire across the company between 2015 and 2025. In fact, SoCalGas currently surpasses the utility industry median for retirement eligibility for all employees, especially managers. As illustrated by the results of a utility benchmarking survey, 36% of employees and 58% of managers will be eligible for retirement in the next five years, which is why SoCalGas has a continuing need to expand workforce planning, knowledge management, and learning and development efforts.

Although, SoCalGas has not completed a formal study in this area, it runs ad hoc queries of its data system as requested by management to review workforce status. The attached document ("CUE-03-DR-Q_174-175") provides current data regarding employees that will be eligible for retirement over the next five years.

Using this type of data, SoCalGas may also present graphical representations of its workforce status such as the attached presentation "CUE-03-DR-Q_174-175_Chart" shared with the director and executive level team in the year 2015.

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176. Ex. SDGE-04, p. 3, says that SDG&E has approximately "385 distribution employees" who are responsible for "maintaining safe and reliable operation of the gas distribution system."

a. Is there a corresponding number for SCG in its GRC filing? If so, Please identify where it can be found.

b. For year end 2012-2017, inclusive, please provide:

i. The number of SCG employees who "are responsible for maintaining safe and reliable operation of the gas distribution system"

ii. The number of customers on the SCG gas distribution system.

iii. The ratio of customers per SCG employee for the SCG gas distribution system

c. On a forecast basis, for year end 2018-2022 (i.e., through the proposed GRC period), please provide SCG's forecast of:

i. The number of SCG employees "responsible for maintaining safe and reliable operation of the gas distribution system"

ii. The number of customers on the SCG gas distribution system.

iii. The ratio of customers per SCG employee for the SCG gas distribution system

SoCalGas Response 176:

a. Please refer to the revised testimony of Gina Orozco-Mejia Ex. SCG-04-R on page GOM-4, line 1 for number of distribution employees.
b. Please see the table below for the requested values and ratios.
   i. The value provided in the table below represents the number of SoCalGas Gas Distribution employees. This does not include the organizations that support the Gas Distribution organization.
   ii. The number of customers on the SoCalGas Gas Distribution system is represented by the total of historical active meters from 2012-2016 provided from the testimony of Rose-Marie Payan Ex. SCG-39. The value for 2017 is the forecasted number from Ex. SCG-39.

SoCalGas Response Continued 176:

	Actuals					
	2012	2013	2014	2015	2016	2017
(i) Number of SoCalGas Gas Distribution Employees	1,725	1,704	1,743	1,818	1,915	1,881
(ii) Number of Active Meters	5,576,355	5,606,113	5,639,161	5,667,128	5,700,917	5,743,853
(iii)Active meters/SoCal Gas Distribution Employee	3,233	3,290	3,235	3,117	2,977	3,054

c. SoCalGas objects to all portions of this question requesting 2020-2022 forecasts 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: This data is not available. SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism. SoCalGas has forecasted Gas Distribution Operations and Maintenance (O&M) expenses for 2017-2019 necessary to support the TY 2019 GRC filing, as presented in Ex SCG-04-WP and the direct revised testimony of Gina Orozco-Mejia Ex. SCG-04-R.

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DATE RESPONDED: FEBRUARY 5, 2018

177. Ex. SCG-4, p. 5:8-9 says that a "significant portion of the pipeline infrastructure has been in service for more than 50 years."

a. As of year end for the years 2012-17, inclusive, what percentage of the SCG pipeline infrastructure had been in service for over 50 years? Please provide any workpapers underlying the calculation of the response to this question.

b. As of year end for the years 2018-2022, inclusive, what percentage of the pipeline infrastructure does SDG&E forecast will have been in service over 50 years? Please provide any workpapers underlying the calculation of the response to this question.

SoCalGas Response 177:

For purposes of this response we will define the pipeline infrastructure as the total miles of pipeline mains and services. The table below contains the percentage of SoCalGas pipeline infrastructure at year end from 2012 -2016 that has been in service over 50 years. The DOT report for 2017 will not be available until the end of first quarter of 2018.

a.

	2012	2013	2014	2015	2016
Percentage 50 years or older	12%	14%	17%	17%	18%

b. SoCalGas 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism. SoCalGas does not forecast the age of pipeline infrastructure into the future.

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178. Ex. SCG-4, p. 5:9-11, indicates that even good maintenance practices cannot extend pipeline infrastructure lives indefinitely.

a. Please identify each category of equipment SCG considers part of "pipeline infrastructure."

b. For each category of equipment SCG includes as "pipeline infrastructure," and for "pipeline infrastructure" as a whole, what is SCG's expectation for:

i. The average age at which it should be proactively replaced because of failure risk

ii. The maximum age at which it should be proactively replaced because of failure risk

iii. The average age at which it will need to be reactively replaced due to in-service failure if not previously proactively replaced?

iv. The maximum average age at which it will need to be reactively replaced due to in-service failure if not previously proactively replaced?

SoCalGas Response 178:

a. For purposes of this response, the principal pipeline infrastructure of SoCalGas' gas distribution system consists of mains and services. Additionally, there are regulator stations, cathodic protection application and inspection equipment, pipeline odorization equipment, valves and fittings, equipment vaults, pipeline pressure monitoring equipment, and pipeline measurement equipment, including all meter set assemblies.

b. SoCalGas does not forecast age or average age to failure of its infrastructure.

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179. Ex. SCG-4, p. 5:11-12 indicates that maintenance cost increases with pipeline infrastructure age. Please provide:

a. As of the end of each year from 2012-17, inclusive, the average age of SCG's pipeline infrastructure.

b. For each year from 2012-2017, the maintenance expenditures for pipeline infrastructure.

c. SCG's forecast of the average age of its pipeline infrastructure as of the end of each year from 2018-2022, inclusive.

d. SCG's forecast of its annual expenditures for maintenance of its pipeline infrastructure for each year from 2018-22, inclusive.

e. SCG's best estimate(s) of the elasticity it describes in its testimony. In other words, what is the percentage increase in maintenance costs per percent increase in pipeline infrastructure age?

SoCalGas Response 179:

SoCalGas objects to all portions of this question requesting 2020-2022 forecasts 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism.

a. SoCalGas objects to this request under Rule 10.1 of the Commission's Rules of Practice and Procedure on the grounds that the burden, expense and intrusiveness of this request clearly outweigh the likelihood that the information sought will lead to the discovery of admissible evidence. Subject to and without waiving the foregoing objection, SoCalGas responds as follows: The "average age" of the infrastructure for a specific year from 2012 through 2017 is not information that can be derived, as the data is not readily available or is in a format that does not allow an accurate assessment. As a substitute for this request, the following information is offered:

SoCalGas Response Continued 179:

For purposes of this response, SoCalGas will define the pipeline infrastructure as the total miles of pipeline mains and services. Referring to the table below, which is pipeline data by decade of installation (age) and available in the "Annual Report for Calendar Year 2016 Gas Distribution System" filed annually with the DOT, the sum of miles of mains and services (pipeline infrastructure) are shown. This table will therefore present the age of the active infrastructure in decades along with the portion of the infrastructure at that age.

As an example, calculation to find the "average age" of the infrastructure in the 1980 to 1989 decade, use the average of 1985. 2016-1985 = 31 years. And to calculate the portion of the infrastructure at that age = 21,493/99,872 = 21.5% of the infrastructure is 31 years old.

Miles of Gas Mains and Services by Decade of Installation [1]- (End of Year 2016)

	UNKNOWN	PRE- 1940	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	2010-2019	TOTAL
Miles of Main	-	2,354	2,942	8,263	7,065	7,102	9,576	5,513	6,327	1,214	50,356
Miles of Services [2]	-	650	1,394	6,699	6,568	7,825	11,917	5,867	6,651	1,946	49,516
Total Services and Mains	-	3,004	4,336	14,962	13,633	14,927	21,493	11,380	12,978	3,160	99,872

Notes
1/Data Source - Annual Report for Calendar Year 2016-Gas Distribution System SCG, DOT Report OMB NO: 2137-0629
2/Miles calculated using the verage service length - 59 feet from the 2016 DOT Report

b. Historical Operations and Maintenance (O&M) expense for the period 2012 through 2016 can be found in workgroups 2GD000.000 through 2GD004.000 of Exhibit SCG-04-WP. This contains historical data for the complete set of the gas distribution workpapers. With the breakdown in O&M historical expense in these 10 groups, specific expenses of interest can be found by group. Financial data for year-end 2017 is not yet available

c. SoCalGas does not forecast the average age of its pipeline infrastructure.

d. Forecasted Operations and Maintenance (O&M) expense for the period 2017 through 2019 can be found in workgroups 2GD000.000 through 2GD004.000 of Exhibit SCG-04-WP. This contains the forecasts for the complete set of the gas distribution workpapers. With the breakdown in O&M expense forecasts in these 10 groups, specific forecasts of interest can be found by group. SoCalGas did not explicitly forecast expenses for maintenance of pipeline infrastructure beyond TY 2019. Please see the testimony of Jawaad Malik Exhibit SCG-44, which describes SoCalGas' proposal to provide an appropriate level of authorized revenues in 2020, 2021, and 2022.

e. SoCalGas does not forecast the percentage increase in maintenance costs per percent increase in pipeline infrastructure age.

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180. Ex. SDGE-4, p. 7:23-24, and also Ex. SCG-4, p. 37:2-4, says that "SoCalGas is proposing to accelerate the 5-year leak cycle to a 3-year cycle."

a. Is it correct that SCG is planning such an acceleration?

b. Please confirm that SCG's testimony does not contain any costs associated with accelerating the leak inspection cycle from 5 years to 3 years.

c. Please indicate where, if it all, costs for leak repairs associated with shortening leak inspection cycles can be found in the GRC testimony and/or workpapers.

d. Please explain why costs associated with changing the inspection cycle for Aldyl-A pipe from 5 years to 1 year are included in this GRC but costs associated with changing the general inspection cycle from 5 years to 3 years are not.

e. Please confirm that SCG has not sought funding for an acceleration of leak survey cycles from 5 years to 3 years in any proceedings outside of this GRC. If it has, please identify the proceeding, the document, the dollars sought, and whether those dollars cover just increased survey costs or also associated leak repair costs due to increased surveys.

SoCalGas Response 180:

a. No. Please see the revised testimony of Gina Orozco-Mejia EX. SCG-04-R, page GOM-37, lines 2-8.

b. SoCalGas' testimony does not contain any costs associated with accelerating from a 5-year to 3-year leak survey cycle.

c. In reference to the cited text provided by the CUE, SoCalGas does not have any leak repairs associated with shortening leak inspections cycles from 5-year to 3-year leak survey cycles within this GRC testimony or workpapers.

d. The cost associated with changing the leak survey cycle for Aldyl-A pipe from 5-years to annual is a RAMP mitigation measure for pre-1986 plastic pipe that can experience brittleness, increasing the risk for leakage. The purpose of this incremental increase is to reduce the risk related to leakage on vintage plastic pipe. The costs associated with potentially changing the general leak survey cycle from 5-year to 3-year are not included in this GRC because this is a proposed best practice developed to comply with the requirements of SB 1371, associated with decreasing methane emissions.

SoCalGas Response Continued 180:

e. The costs associated with changing the leak survey cycle for Aldyl-A pipe from a 5-year to annual cycle are included in this GRC. Costs associated with changing the system-wide leak survey cycle from 5 years to 3 years are not included in this GRC, nor any proceedings outside of this GRC. See response to Question 180.a above.

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181. Ex. SCG-4, p. 19:1-13, and also Ex. SDGE-4, p. 17:8-19 and Ex. SCG-5, p. 29:1-14, discuss Locate and Mark work by SCG, and also reference the impact of SB 661 on SoCalGas.

a. For each of the years 2012-17, inclusive, how many USA notifications did SCG receive annually?

b. For each of the years 2018-22, inclusive, how many USA notifications does SCG anticipate receiving annually?

c. For each of the years 2018-22, inclusive, how many incremental USA notifications does SCG anticipate receiving annually

i. Due to SB 611 effects?

ii. Due to increases in economic activity causing "an already increasing ticket volume", even if there were no SB 611?

SoCalGas Response 181:

a. Please refer to SoCalGas workpapers SCG-04-WP, page 18, Supplemental 008 for the count of total Underground Service Alert (USA) tickets SoCalGas received annually for the years 2012 through 2017.

	2012	2013	2014	2015	2016	2017
Total USA Tickets	420,382	451,384	502,122	527,802	521,105	660,494

b. SoCalGas objects to all portions of this question requesting 2020-2022 forecasts 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism. SoCalGas forecasted located and mark base costs for the years 2017 through TY 2019 based on the historical linear trend of costs observed during the five-year period 2012 through 2016. SoCalGas forecasted the number of tickets anticipated from USA South (one of the two USA agencies supporting SoCalGas), for the years 2017 through 2019, in order to forecast incremental service fees. See workpapers SCG-04-WP, page 19, Supplemental 009.

SoCalGas Response Continued 181:

c. See response to Question 181.b above.

i. SoCalGas interprets that CUE intended to reference SB 661, rather than SB 611 and responds accordingly. SoCalGas' reference to SB 661(the Dig Safe Act of 2016), was used to support the linear trend SoCalGas anticipates during the GRC period. An increase in USA tickets is anticipated from new requirements such as marking the presence of known abandoned lines and the establishment of a Board authorized to take action against those parties, who violate the excavation law. SoCalGas did not forecast the number of incremental tickets associated with SB 661.

ii. SoCalGas' reference to increasing economic activity was used to support the linear cost trend SoCalGas anticipates during the GRC period. As discussed in the revised testimony of Gina Orozco-Mejia Ex. SCG-04-R, page GOM-34, "the locate and mark activity is driven by general construction activity in public and private rights-of-way and customer growth, which generally fluctuate with economic conditions. Gas Distribution selected non-farm employment growth, as reported by IHS Global Insight, as a directional indicator for general economic conditions and potential economic growth, which generally drive construction activities." SoCalGas did not forecast the number of incremental USA tickets associated with increasing economic activity.

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182. Ex. SCG-4, p. 34:6-22 explains that SCG expects Locate and Mark costs to increase 1.811 million from 2016 to 2019, based on the 2012-16 linear trend.

a. Please confirm that the 2012-2016 linear trend does not include any impacts of SB661, which was not enacted until 2016.

b. Please provide SCG's estimate of the impacts of SB 661 onits Locate and Mark costs above and beyond those already incorporated in its forecast.

SoCalGas Response 182:

a. The 2012-2016 linear trend does not include any impacts of SB 661. As discussed in the response to Question 181.c above, SoCalGas forecasted located and mark base costs for the years 2017 through TY 2019 based on the historical linear trend observed during the five-year period 2012 through 2016. SoCalGas' reference to SB 661 (the Dig Safe Act of 2016), was used to support the linear trend SoCalGas anticipates during the GRC period.

b. Please see response to Question 181.c.i above.

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183. Ex. SCG-4, p. 35:1-11, discusses increased costs due to USA ticket price increases

a. For USA South, please provide the actual number of distribution tickets in each of the years 2012-17, inclusive, and explain any differences from the data shown in section A of Ex. SCG-4-WP, p. 19.

b. For USA South, please provide the forecasted number of distribution tickets in each of the years 2018 and 2019, and explain any differences from the data shown in section B of Ex. SCG-4-WP, p. 19.

c. For USA South, please provide the total (not incremental as shown in section C of Ex. SCG-4-WP, p. 19) cost per ticket for each year from 2012-2019, inclusive.

d. For USA North, please provide the actual number of distribution tickets in each of the years 2012-17, inclusive.

e. For USA North, please provide the forecasted number of distribution tickets in each of the years 2018 and 2019

f. For USA North, please provide the total cost per ticket for each year from 2012-2019, inclusive.

g. To the extent the sum of USA South tickets in the response to subpart a of this question and USA North tickets in the response to subpart d of this question does not match the total number of SCG distribution tickets shown in Ex. SCG-4-WP, p. 18, please provide a quantitative reconciliation of the difference(s).

SoCalGas Response 183:

a. The number of USA South distribution tickets for SoCalGas are provided in the table below. These numbers consist of each ticket sent to SoCalGas from USA South which includes new USA tickets along with remarking tickets, already expired renewal tickets, additional information needed tickets, no show tickets, and update tickets. The numbers in section (a) from SCG-04-WP page 19 provide the number of new USA South tickets only.

Total SoCalGas Distribution USA South Tickets						
	2012	2013	2014	2015	2016	2017
USA South Tickets	420,382	451,384	502,122	527,802	521,105	550,680

SoCalGas Response Continued 183:

b. Please refer to SCG-04-WP page 19, column B for forecasted new USA South tickets.

c. From 2012- July 2017, the cost for each new ticket from USA South was $1.50; from July 2017 and forward, the cost per ticket has increased to $1.65. The costs shown below represents the cost of the ticket only. The table below shows the historical new USA South tickets from section (a) of SCG-04-WP on page 19. The 2017 -TY 2019 values are from column B of SCG-04-WP.

In nominal dollars	2012	2013	2014	2015	2016	2017	2018	TY2019
Total NEW USA South tickets	254,874	276,364	301,172	315,195	306,464	364,063	384,025	400,222
Total Cost of NEW Tickets	$ 382,311	$ 414,546	$ 451,758	$ 472,793	$ 459,696	$ 573,399	$ 633,641	$ 660,366

d. The number of USA North distribution tickets for SoCalGas are provided in the table below. These numbers consist of each ticket sent to SoCalGas from USA North, which includes new USA tickets along with remarking tickets, already expired renewal tickets, additional information needed tickets, no show tickets, and update tickets.

Total SoCalGas Distribution USA Tickets						
	2012	2013	2014	2015	2016	2017
USA North Tickets	113,792	126,131	138,555	123,056	106,011	109,814

e. As discussed above, SoCalGas forecasted located and mark base costs for the years 2017 through TY 2019 based on the historical linear trend observed during the five-year period 2012 through 2016. SoCalGas did not forecast the number of USA tickets expected for the years 2017 through 2019 for USA North.

f. USA North rates are based on a tier contracted fee structure based on the number of miles of SoCalGas' mains and services within the USA North territory; therefore, a cost per ticket is not available for USA North tickets.

g. The sum of subparts 183.a and 183.d totals match to the numbers provided in Ex. SCG-04-WP page 18.

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184. Ex. SCG-4, pp. 38:27-39:4, indicates that revisions to GO 112-F "went into effect in 2017" and will apply to all 3700 miles of "supply lines" by 2019, but only 690 miles in each of 2017 and 2018. Please explain

a. why changes effective in 2017 are not fully implemented until 2019, and

b. why implementation remains under 20% (690/3700) through the end of 2018.

SoCalGas Response 184:

a. SoCalGas changed its leak survey requirements to align with the revision prescribed by GO112-F. The revised requirements became effective in January 2017. For SoCalGas' Gas Distribution, this meant that all DOT-defined transmission pipe segments (690 miles) moved to a six-month survey from an annual survey. SoCalGas proposes to apply the bi-annual leak survey requirement beyond GO 112-F's scope to all high-pressure lines (supply lines) (3,700 miles) managed by Gas Distribution by TY 2019.

b. The 690 miles reference is regarding the DOT-defined transmission line segments that moved to a bi-annual leak survey cycle to comply with a new requirement of GO 112-F. SoCalGas plans to ramp up its resources and implement bi-annual leak survey for all its gas distribution high-pressure lines (supply lines) in 2019 to align with its RAMP mitigations as referenced in Ex. SCG-04-R, page 39 lines 6-10. SoCalGas has approximately 3,700 miles of gas distribution high-pressure pipe.

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185. Ex. SCG-4, p. 42:23-28, indicates that continued aging of pipeline system components will require "additional operations and maintenance work," and based on the 2012-2016 linear trend SCG estimates that additional work will cost an incremental $1.474 million in 2019 (over 2016 costs) for regulator stations and MSAs.

a. Please provide an age distribution table, in Excel format, showing, for each year up to and including 2017:

i. The number of regulator stations in service at the end of 2017 that were installed that year

ii. The number of medium and large customer MSAs in service at the end of 2017 that were installed that year

b. To the extent that the annual numbers provided in response to part (a) of this question do not sum to "approximately 1975 regulator stations and approximately 102,000 medium and large customer MSAs" (Ex. SCG-04, p. 41:5-6), please provide a quantitative reconciliation of the mismatch.

c. How many regulator stations does SCG plan to replace in each if the years 2018-22?

d. How many medium and large customer MSAs does SCG plan to replace in each of the years 2018-2022?

e. What is SCG's expectation of the average service life for a regulator station?

f. What is SCG's expectation for the average service life of a medium or large customer MSA?

g. How many regulator stations did SCG replace in each of the years 2012-2017, inclusive?

h. How many medium and large customer MSAs did SCG replace in each of the years 2012-2017, inclusive?

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SoCalGas Response 185:

a.

i. Please see the response for Question 196.

ii. Please see the table below number of medium and large customer MSAs in service at the end of 2017 that were installed that year.

Year	Count of MSA
1940	2
1941	2
1943	6
1944	2
1945	1
1946	8
1947	8
1948	21
1949	30
1950	56
1951	51
1952	51
1953	58
1954	79
1955	101
1956	98
1957	97
1958	139
1959	161
1960	12424
1961	1330
1962	488
1963	367
1964	1077
1965	1630
1966	864
1967	461
1968	544
1969	527
1970	773

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1971	672
1972	725
1973	932
1974	904
1975	855
1976	863
1977	941
1978	943
1979	1146
1980	1120
1981	992
1982	1000
1983	902
1984	1014
1985	1232
1986	1315
1987	1264
1988	1366
1989	1726
1990	1651
1991	1614
1992	1461
1993	1279
1994	1246
1995	1996
1996	2361
1997	2361
1998	1878
1999	2020
2000	2397
2001	2171
2002	2115
2003	2291
2004	2532
2005	2915
2006	3048
2007	2807
2008	2641

2009	2033
2010	1552
2011	1509
2012	1780
2013	2047
2014	2464
2015	2641
2016	3165
2017	2775
2018	219
Grand Total	**102,337**

SoCalGas used the 2016 base plus incremental forecast to capture the expenditures for this work category.

b. The numbers provided for a.i match the reference in Ex. SCG-04-R, page 41 lines 7-8. Please see the table above for the updated number of medium and large MSAs for SoCalGas.

c. SoCalGas objects to all portions of this question requesting 2020-2022 forecasts 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism. As discussed in Ex. SCG-04-R, page 109-111, under the Capital work category Regulator Stations, SoCalGas used the 2016 base plus incremental forecast to capture the expenditures for the Regulator Stations work category. SoCalGas did not forecast the number of regulator stations within its base methodology. SoCalGas forecasted the incremental amount (above its base forecast) of 10 replacements in 2018 and 18 in 2019.

d. SoCalGas objects to all portions of this question requesting 2020-2022 forecasts 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019.

SoCalGas Response Continued 185:

SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism. SoCalGas did not forecast the number of MSAs it plans to replace in 2018 and 2019. SoCalGas has forecasted Gas Distribution expenses necessary to support the GRC filing, as presented in Ex. SCG-04-WP and the direct revised testimony of Gina Orozco-Mejia Ex. SCG-04-R. SoCalGas did not forecast the additional requested parameters and therefore they are not available.

e. As stated in the revised testimony of Gina Orozco Mejia, Ex. SCG-04-R, page GOM 111, line 2 "The average life expectancy of a regulator station is approximately 35 years. While SoCalGas' operating and maintenance practices allow stations to exceed their useful lives, it is prudent to continue to replace these aged facilities prior to failure."

f. SoCalGas did not forecast the average service life of a medium or large customer MSA.

g. Regulator Stations are replaced under the capital workpaper category Regulator Stations and are not forecasted within the (O&M) Measurement and Regulation expenses. Please see the table below regarding the number of regulator stations replaced from 2012 through 2017 under BC 265.

	2012	2013	2014	2015	2016	2017
Total Replacements	20	19	12	17	15	9

h. SoCalGas does not track the number of medium and large customer MSAs replaced. Please see page 164 of SCG-04-CWP for the historical number of meters replaced between 2012-2016. The 2017 numbers will not be available until after March 2018.

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186. Ex. SCG-4, p. 43:5-21, forecasts incremental costs to replace modules in1.92% per year of the 96,500 AMI modules maintained by Gas Distribution, and says costs for the other 5.9 million AMI meters can be found in Ex. SCG-18.

a. On what page(s) in Ex. SCG-18 or its workpapers are the AMI module replacement costs found?

b. Does Ex. SCG-18 also assume a 1.92%/year replacement rate for AMI modules? If not, why not?

c. What is the average service life for SCG's 6 million AMI modules assumed, explicitly or implicitly, in SCG's depreciation proposals?

SoCalGas Response 186:

a. AMI module replacement costs are addressed in testimony Ex. SCG-18, page GRM-25 and in workpapers Ex. SCG-18-WP, pages 47-51.

b. No. Due to the variation in module types, a different module replacement rate is assumed for modules replaced by Customer Services Field (Ex. SCG-18).

c. Per Exhibit SCG-36-R (Revised Direct Testimony of Flora Ngai), the average service life for SoCalGas' AMI modules is 20 years. See Exhibit SCG-36-R at page 20 lines 1-9 for more information.

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187. Ex. SCG-4, p. 43:25-27, estimates that SCG will need to replace 3000 MTU batteries annually at a cost of $4 each.

a. How many MTU batteries are there on the SCG system?

b. What is the expected life of MTU batteries?

c. Please supply the analysis underlying SCG's forecast of 3000 battery replacements per year.

SoCalGas Response 187:

SoCalGas clarifies that Ex. SCG-04-R, p.43: 28-31 estimates the replacement of 3000 MTU batteries annually at a cost of $40 each.

a. The majority of the 6 million MTUs have two non-replaceable batteries; therefore, there are approximately 12 million MTU non-replaceable batteries in the SoCalGas system. Only the approximately 3,000 MTUs attached to either an electronic pressure monitor (EPM) or to a meter with an electronic volume corrector (EVC) have a single, field-replaceable battery that will require an annual battery change.

b. The expected battery life of the approximately 3,000 MTUs is 2 years.

c. By TY 2019, there will be approximately 3,000 EPM or EVC-related MTUs deployed. Although the expected life of the MTU batteries is 2 years, battery replacements will align with the yearly maintenance schedule in place for EPMs and EVCs. This will eliminate the need for a second, unplanned battery replacement-only field visit if the actual battery life is less than 2 years.

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188. Ex. SCG-4, p. 49:12-14, says that Main Maintenance O&M work "is designed ... to extend the life of distribution main pipelines and related infrastructure." Please quantify the extension - from what expected average service life for Mains to what greater expected average service life of Mains?

SoCalGas Response 188:

SoCalGas did not forecast the greater expected average service life of mains due to the maintenance it applies to its distribution main pipelines and related infrastructure. This information is not available, as SoCalGas does not keep track of this data. The statement in the revised testimony of Gina Orozco-Mejia Ex. SCG-04-R, page GOM-49, lines 18-20, refers to the need for continuous maintenance of main pipe and related infrastructure. These are mechanical facilities where as they age and are exposed to risks such as corrosion and damage, SoCalGas must proactively maintain them to prevent failure, loss of gas service, and potential safety impacts to employees and the public. Therefore, prudent operating and maintenance practices will allow the pipe to remain in service, thus extending the average service life of this infrastructure.

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189. Ex. SCG-4, pp. 52:27-54:4, discusses Leak Repairs.

a. Is it correct that SB 1371 work is focused on Grade 3 leaks and this section of SCG's testimony addresses repairs to Grade 1 and 2 leaks, so that there is no overlap between the two sets of leak repair costs? If not, please explain.

b. To clarify SCG's discussion of backlogged leak repairs, and the additional data regarding leak repair quantities in Ex. SCG-04, p. 85:21-24) please provide a table showing the following data for each year from 2012-17, inclusive (actuals) and 2018-22, inclusive (forecast):

i. Start of year backlog of known-but-not-yet repaired leaks, by Grade
ii. Number of those already-known leaks repaired during the year, by Grade

iii. New leaks detected that year, by Grade

iv. Number of those newly detected leaks repaired during that same year that they were detected

v. If disaggregated data requested in subparts (ii) and (iv) is not available, please provide the total number of leaks repaired during the year, by Grade

vi. Average cost per leak repaired, by grade if available and otherwise in aggregate, for that year

c. Please confirm that the forecast data provided in response to subpart (b) of this question accounts for changes in leak find rates expected to occur due to changes in leak inspection cycles.

d. Please describe any planned changes in leak detection technologies, and their expected impacts on the leak detection rates and leak repair rates provided in the responses to subpart (b) of this question.

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SoCalGas Response 189:

a. In general, the best practices addressed by SB 1371 focus on methane emission reductions, while the GRC request for Gas Distribution focuses on SoCalGas' funding forecast required to operate and maintain its natural gas distribution system and construct new gas distribution facilities. There is no overlap between the best practices proposed as part of SB 1371 and the funding request for Gas Distribution in the TY 2019 GRC. SB 1371 Rulemaking 15-01-008, is a separate proceeding being handled outside of the GRC proceeding. The request in the GRC includes leak repairs for all code types found during the routine work as well as the incremental work addressing the leak inventory. SB 1371 includes incremental leaks associated with the proposed best practices and could be leaks of any code. This work is not included in the GRC request.

b.

i. Please see the table below regarding the inventory of known-but-not-yet repaired leaks by grade for 2012 through 2017.

Grade of Leak	2012	2013	2014	2015	2016	2017
Code 1	160	144	244	281	284	211
Code 2	988	482	497	543	539	586
Code 3	7,132	7,287	7,997	7,604	8,764	9,777
AG Hazardous	-	-	-	35	51	22
AG Non-Hazardous	-	-	-	133	157	57
Total	8,280	7,913	8,738	8,596	9,795	10,653

ii. Please see the table below regarding the number of already-known leaks repaired by grade for the years of 2012 through 2017.

Grade of Leak	2012	2013	2014	2015	2016	2017
Code 1	143	139	235	262	271	185
Code 2	975	473	493	526	530	551
Code 3	2,235	2,436	3,737	2,388	2,490	4,189
AG Hazardous	-	-	-	29	49	21
AG Non-Hazardous	-	-	-	129	157	55
Total	3,353	3,048	4,465	3,334	3,497	5,001

iii. Please see the table below regarding the number of new leaks detected by grade for 2012 through 2017.

Grade of Leak	2012	2013	2014	2015	2016	2017
Code 1	6,698	6,839	6,499	5,842	5,790	6,908
Code 2	2,925	3,263	2,224	1,309	1,266	1,583
Code 3	3,090	4,680	5,318	4,750	4,497	4,836

AG Hazardous	-	-	1,010	1,772	1,591	1,419
AG Non-Hazardous	-	-	2,098	3,620	2,767	3,424
Total	12,713	14,782	17,149	17,293	15,911	18,170

iv. Please see the table below regarding the number of newly detected leaks repaired within the same year of detection during 2012 through 2017.

2012	2013	2014	2015	2016	2017
9,727	10,909	12,826	12,760	11,556	13,066

v. Please see the table below for the total number or leaks repaired during 2012 through 2017 by grade.

Grade of Leak	2012	2013	2014	2015	2016	2017
Code 1	6,714	6,739	6,462	5,839	5,863	6,604
Code 2	3,431	3,248	2,178	1,313	1,219	1,308
Code 3	2,935	3,970	5,711	3,590	3,484	5,495
AG Hazardous	-	-	975	1,756	1,620	1,423
AG Non-Hazardous	-	-	1,965	3,596	2,867	3,237
Total	13,080	13,957	17,291	16,094	15,053	18,067

vi. Please see the table below.

Average Unit Cost	2012	2013	2014	2015	2016	2017
Leak Repair - Main	$1,998	$1,885	$ 2,031	$ 2,531	$ 2,634	$ 2,703
Leak Repair - Service	$ 615	$ 554	$ 541	$ 593	$ 658	$ 826

c. SoCalGas objects to all portions of this question requesting 2020-2022 forecasts 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism. SoCalGas used the historical (2012-2016) five-year expense trend plus incremental to forecast the amount of expenditures needed to address the growing number of leaks in the system for 2017-2019.

SoCalGas Response Continued 189:

d. SoCalGas objects to this request as overly broad, unduly burdensome, vague and ambiguous with respect to the phrase "planned changes in leak detection technologies," and exceeding the scope of permissible discovery under Rule 10.1, of the Commission's Rules of Practice and Procedure. SoCalGas further objects to the request in that it seeks information that may be outside the scope of this proceeding, as changes in leak detection technologies, and their expected impacts on the leak detection rates and leak repair rates are part of the scope of the SB 1371 Rulemaking 15-01-008. Subject to and without waiving the foregoing objection, SoCalGas responds as follows:

SoCalGas has no plans to change the current leak detection technologies at this time; however, on an ongoing basis, SoCalGas conducts testing of available technologies.

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190. Ex. SCG-4, p. 56:19-21, says that Service Maintenance O&M work "is designed ... to extend the life of the service pipeline system." Please quantify the extension - from what expected average service life for the service pipeline system to what greater expected average service life for the service pipeline system?

SoCalGas Response 190:

SoCalGas did not forecast the greater expected average service life of services due to the maintenance it applies to its distribution service pipe system and related infrastructure. This information is not available, as SoCalGas does not keep track of this data. The statement in the revised testimony of Gina Orozco-Mejia, Ex. SCG-04-R, page GOM-56, lines 27-28, refers to the need for continuous maintenance of service pipe and related infrastructure. These are mechanical facilities where as they age and are exposed to risks such as corrosion and damage, SoCalGas must proactively maintain them to prevent failure, loss of gas service, and potential safety impacts to employees and the public. Therefore, prudent operating and maintenance practices will allow the pipe to remain in services, thus extending the average service life of this infrastructure.

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191. Ex. SCG-4, p. 59:14-16, and Also Ex. SCG-4-WP, pp. 72 and 80, contain a projected increase in MSA Maintenance Activities of more than 5-fold from 2017 to 2019, from 1500 orders in 2017 to 8500 orders in 2019.

a. Please provide the actual number of orders in each of the years 2012-2017, inclusive.

b. Please explain whether this large increase represents working off a backlog, and if so describe how the backlog came to be, how large it is, and how long SCG expects to take to eliminate it.

c. If the increase from 2017 to 2019 does not represent a backlog of old work, but is new work, please explain the cause(s) of the large increase, and indicate how long they are expected to continue.

d. Please provide all workpapers underlying the forecasted increase in orders from 1500 to 8500 between 2017 and 2019.

SoCalGas Response 191:

a. Please see below the number of orders completed relating to MSA Maintenance Activities.

MSA Maintenance Orders (2012 - 2017)						
Year	2012	2013	2014	2015	2016	2017
Orders	20,724	21,238	22,913	20,149	20,078	18,955

b. Yes, the increase in work represents working an existing inventory of orders. At the time of the forecast, there were approximately 26,000 meter MSA maintenance orders. Pursuant to CFR § 192.481, the DOT requires that each MSA be inspected every three (3) years for atmospheric corrosion. Although meter readers have historically performed this function, with the replacement of AMI, a new group, the CS-F MSA Inspection Organization, was formed in base year 2016. The CS-F MSA Inspection Organization performs physical, on-site inspections for each MSA, in compliance with DOT's mandatory MSA inspections for atmospheric corrosion and to identify conditions that may require remediation by CS-F and Distribution field employees. As discussed in Ex. SCG-04-R, page 59, lines 20-22, SoCalGas will increase the rate of MSA maintenance

SoCalGas Response Continued 191:

orders to reduce the number of remaining inventory that is outstanding. SoCalGas plans to work on said orders until the orders are complete. SoCalGas did not forecast how long this effort will take. However, as MSA inspection work continues, it is reasonable to expect that MSA follow-up orders will increase as well.

c. Please see response to Question 191.b above.

d. Please refer to Workpaper Ex. SCG-04-WP, page 80, for the detail regarding the forecasted increase.

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192. Ex. SCG-4, p. 98:9-11, SCG's "Supply Line Replacements" testimony says that SCG gas has 3700 miles of "supply lines," some built as long ago as the 1920s, which operate at pressures greater than 60 psi.

a. Please confirm that SCG uses the term "supply lines" to refer to gas pipelines that are part of the SCG distribution system, but are considered high pressure lines because they operate at above 60 psi. If that is not correct, provide SCG's definition of a "supply line"

b. Please provide a table, in Excel format, showing for each year from 1920 through 2017, inclusive, the number of miles of supply line built in that year that were still in service as of the end of 2017.

c. If the sum of the mileages listed in the response to subpart (b) of this question is not approximately 3700 miles, please provide a quantitative reconciliation with SCG's claim that it has "approximately 3700 miles" of supply lines.

d. For each year from 2012-2017, inclusive, please provide the number of miles of supply lines that were replaced that year, split between proactive replacements and reactive replacements after in-service failures (if any).

e. For each year from 2018-2022, inclusive, please identify the number of miles of supply lines that SCG intends to replace that year, split between proactive and reactive replacements.

f. What is SCG's best estimate of the average service life for a supply line?

g. What is SCG's best estimate for the maximum life expectancy for a supply line?

SoCalGas Response 192:

a. Yes, the term "supply lines" refers to SoCalGas pipelines operating over 60 psi, managed by Gas Distribution.
b. From the DOT Reports required by CFR 192, please see line five (5) in the table provided below regarding the number of supply lines in service. To calculate the miles of supply line installed by decade that is currently in service, apply the percentage provided in line five (5) to the respective cell in line three (3). As an example, the calculation to find the miles of pre-1940 supply lines installed that is currently in service is: 0.09 x 2354 = 219.9 miles of pre-

SoCalGas Response Continued 192:

1940 supply lines that are still in service as of the end of 2016. This calculation applies to all responses in this data request to translate percentage to miles using the data in the table below.

SCG 2016 DOT Distribution Report, Part B Section 1

		STEEL										
		UNPROTECTED		CATHODICALLY PROTECTED								
		BARE	COATED	BARE	COATED	PLASTIC	CAST/WROUGHT IRON	DUCTILE IRON	COPPER	OTHER	RECONDITIONED CAST IRON	SYSTEM TOTAL
1	MILES OF MAIN	3,287	4,667	0	18,198	24,204	0	0	0	0	0	50,356
2	NO. OF SERVICES	139	853,266	20	736,634	2,841,243	0	0	0	0	0	4,431,302

SCG 2016 DOT Distribution Report, Part B Section 4

		UNKNOWN	PRE-1940	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	2010-2019	TOTAL
3	Miles of Main Installed (DOT Reported)	0	2354	2942	8263	7065	7102	9576	5513	6327	1214	50356
4	Number of Services (DOT Report)	0	58168	124734	599536	587800	700235	1066470	525030	595200	174129	4431302
	Subset, Miles of Mains by Decade											
5	Miles of Supply Lines	0	9%	11%	6%	7%	7%	4%	8%	5%	6%	6%
6	Miles of Steel Main (<60psig)	0	91%	89%	94%	93%	36%	10%	5%	1%	3%	45%
7	Miles of Plastic Main	0	0%	0%	0%	0%	57%	86%	87%	94%	91%	48%
	Subset, Service Counts by Decade											
8	Count of Steel Services	0	100%	100%	100%	100%	28%	1%	1%	1%	3%	35%
9	Count of Plastic Services	0	0%	0%	0%	0%	72%	99%	99%	99%	97%	65%

The DOT report for 2017 will not be available until the end of first quarter of 2018.

c. The sum of mileages provided include both DOT-defined transmission lines and high-pressure lines that do not meet the DOT definition of transmission lines. SoCalGas continuously evaluates the number of high-pressure pipeline miles in its system. After its most recent evaluation, SoCalGas determined that the number of high-pressure pipeline miles managed by Gas Distribution is closer to 3,994 miles. Of that total, there are 714 miles of high-pressure supply lines that are included in the DOT Transmission Report and 3,280 miles of supply lines in the SoCalGas Gas Distribution system.

d. For the purpose of this question, SoCalGas is assuming abandoned Supply Line pipe as a proxy for Supply Line replacements. Please see the table below regarding the miles of abandoned Supply Lines during the years of 2012-2016. SoCalGas does not track Supply Line replacements by proactive and reactive replacements. The 2017 data is currently not available.

	2012	2013	2014	2015	2016
Total Installed Miles	4.7	2.1	2.7	-	0.4

SoCalGas Response Continued 192:

e. SoCalGas did not use the Supply Line mileage for forecasting. Instead, SoCalGas estimated the expenditures for the years 2017 through 2019 based on a historical average of recorded expenditures from 2012 through 2016. Based on the number of variables involved in these larger scale projects, the historical average is a more reliable predictor of future work requirements and expected expenditures, as it takes into account typical fluctuations in supply line project costs from year to year.

f. Supply lines, as defined by SoCalGas in response to Question 192(a) above, are capitalized to Federal Energy Regulatory Commission (FERC) Account 376 – Distribution Mains. Per Exhibit SCG-36-R (Revised Direct Testimony of Flora Ngai), the proposed average service life for assets in FERC Account 376 is sixty-eight (68) years. Please see Exhibit SCG-36-R at pages 18:26 – 19:3 for more information.

g. As shown in Exhibit SCG-36-R-WP (Revised Workpapers to Prepared Direct Testimony of Flora Ngai) on page 172, the maximum life expectancy for a supply line FERC Account 376 is approximately 120 years.

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193. Ex. SCG-4, pp. 100-102, discusses Main Replacements for SCG's "approximately 51,070 miles of steel and plastic main." Ex. SCG-4-CWP, p. 45 says SCG's "distribution medium pressure system is comprised of approximately 47,093 miles of steel and plastic pipeline."

a. Please provide a table, in Excel format, showing for each year from the earliest year in which mains (but not supply lines, which were addressed in the previous question) were installed that are still operating, through 2017, inclusive:

i. the number of miles of steel mains installed in that year that were still in service as of the end of 2017, and the number of those miles that were "cathodically-unprotected" (Ex. SCG-4, p. 101:16).

ii. the number of miles of plastic mains installed in that year that were still in service as of the end of 2017.

b. If the sum of the mileages listed in the response to subpart (a) of this question is not approximately 47,093 miles, please provide a quantitative reconciliation with SCG's claim that it has "approximately 47,093 miles" of distribution gas mains.

c. For each year from 2012-2017, inclusive, please provide the number of miles of steel gas mains that were replaced that year, split between proactive replacements and reactive replacements after in-service failures (such as leakage, as referenced in Ex. SCG-4, p. 100:19-20).

d. For each year from 2012-2017, inclusive, please provide the number of miles of plastic gas mains that were replaced that year, split between proactive replacements and reactive replacements after in-service failures (such as leakage, as referenced in Ex. SCG-4, p. 100:19-20).

e. For each year from 2018-2022, inclusive, please identify the number of miles of steel mains that SCG expects to replace that year, split between proactive and reactive replacements.

f. What is SCG's best estimate of the average service life for a steel main?

g. What is SCG's best estimate for the maximum life expectancy for a steel main?

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h. For each year from 2018-2022, inclusive, please identify the number of miles of plastic mains that SCG expects to replace that year, split between proactive and reactive replacements.

i. What is SCG's best estimate of the average life expectancy for a steel main?

j. What is SCG's best estimate for the maximum life expectancy for a steel main?

k. Please provide actual costs for each year from 2012-2017, inclusive, and forecast costs for each year from 2018-22, inclusive, per mile of:

i. Steel main replacement

ii. Plastic main replacement

l. Please confirm that the responses to subparts (a) , (c) and (d) of this question match the totals in SCG's testimony regarding miles of older pipe (Ex. SCG-4, p. 101:14-16) and miles of pipe replaced (Ex. SCG-4, p. 101:11-12). If they do not, please provide a quantitative reconciliation of the mileage data in the testimony and the mileage data in the response to this data request.

m. Combining the approximately 47,093 miles of distribution medium pressure pipelines and the approximately 3700 miles of distribution supply lines (Ex. SCG-4-WP, pp. 36 and 45) gives a total of approximately 50,793 miles of distribution pipelines of all types. Please reconcile this number with the 51,070 miles of pipeline SCG reports in Ex. SCG-4, p. 100:10-11 for distribution mains alone.

SoCalGas Response 193:

SoCalGas objects to all portions of this question requesting 2020-2022 forecasts 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism.

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a. Please refer to the table provided in answer to Question 192.b.
   i. Please refer to line 6 in the table provided in answer to Question 192.b.
   ii. Please refer to line 7 in the table provided in answer to Question 192.b.

b. Based on the table provided in the response to Question 192.b the sum of main mileage excluding supply lines are approximately 47,092 miles of distribution gas mains.

c. Please see the table below for the number of miles of steel gas mains that were replaced between 2012-2016. The 2017 data is currently not available.

	2012	2013	2014	2015	2016
Miles of Steel gas mains replaced	42.0	41.8	23.8	11.0	4.0

d. Please see the table below regarding the number of miles of plastic gas mains replaced between 2012-2016. The 2017 data is currently not available.

	2012	2013	2014	2015	2016
Miles of Plastic gas mains replaced	-	0.13	1.8	11.0	24.0

e. SoCalGas did not forecast the number of steel mains that is expected to be replaced. SoCalGas used a five-year (2012 through 2016) historical average cost to forecast main replacement costs in the years 2017 through 2019.

f. Steel mains are capitalized to Federal Energy Regulatory Commission (FERC) Account 376 – Distribution Mains. Per Exhibit SCG-36-R (Revised Direct Testimony of Flora Ngai), the proposed average service life for assets in FERC Account 376 is sixty-eight (68) years. Please see Exhibit SCG-36-R at pages 18:26 – 19:3 for more information

g. As shown in Exhibit SCG-36-R-WP (Revised Workpapers to Prepared Direct Testimony of Flora Ngai) on page 172, the maximum life expectancy for a steel main within FERC Account 376 is approximately 120 years.

h. SoCalGas did not forecast the number of miles of plastic mains expected to be replaced. SoCalGas used a five-year (2012 through 2016) historical average cost to forecast main replacement costs in the years 2017 through 2019.

i. Steel mains are capitalized to Federal Energy Regulatory Commission (FERC) Account 376 – Distribution Mains. Please refer to the response to Question 193.f above.

j. Please refer to the response to Question 193.g above.

k. Please see the table below regarding costs associated with steel and plastic main replacements.

2016 Dollars ($000)	2012	2013	2014	2015	2016
i. Costs of Steel main replacement	$1,206	$ 2,492	$ 1,345	$ 1,808	$3,754
ii. Costs of Plastic main replacement	$ 36,408	$41,529	$26,927	$24,559	$28,528
Total Cost of Main Replacement	$ 37,614	$ 44,021	$28,272	$26,367	$32,282

l. SoCalGas confirms that the responses provided in answering Question 193 subpart (a), (c) and (d) match with the totals within the revised testimony of Gina Orozco-Mejia regarding miles of older pipe Ex. SCG-04-R, GOM-102, Line 14-16 and the miles of pipe replaced Ex. SCG-04-R, GOM-102, lines 11-12.

SoCalGas' revised testimony Ex. SCG-04-R, GOM-102, Line 14-16 states, *As of the end of 2016, SoCalGas had approximately 2,354 miles of pre-1940 main and approximately 3,287 miles of are cathodically-unprotected main.*

In agreement with the above statement, the table provided in response to Question 192.b line 3 under 'Pre-1940' states the same.

Moreover, the responses provided in Question 193 subpart (c) and (d) match with the statement from SoCalGas' revised testimony Ex. SCG-04-R, GOM-102, Line 11-12 that states, *SoCalGas replaced an average of 32 miles of pipe per year under this work category during the period of 2012 through 2016.*

When taking the sum of Steel gas mains and Plastic gas mains replaced from Question 193 subpart (c) and (d), the average total replacement of miles of pipe results in approximately 32 miles per year, consistent with SoCalGas' revised testimony.

m. SoCalGas continuously evaluates the number of miles of high-pressure pipe in its system. After further review of its data, SoCalGas has determined that the number of high-pressure pipeline miles managed by Gas Distribution is closer to 3,994 miles. Of that total, there are 714 miles of high-pressure supply lines that are accounted on the DOT Transmission Report and an additional 3,280 miles of supply lines in the SoCalGas Gas Distribution system. With a current valuation of 3,994 miles of supply lines combined with approximately, 47,093 miles of distribution medium-pressure mains, the aggregate amounts to approximately 51,087 miles of SoCalGas distribution mains.

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194. Ex. SCG-4, pp. 103-105, discusses gas service replacements, which are described in terms of total mileage, steel mileage, plastic mileage, number of service lines, and number of service lines without cathodic protection. Please provide an age distribution table as of the end of 2017, in Excel format, showing for 2017 and each preceding year:

a. Miles of steel service installed that year

b. Miles of plastic services installed that year

c. Miles of steel services installed that year that are currently cathodically unprotected

d. Number of steel service lines installed that year

e. Number of plastic service lines installed that year

f. Number of steel service lines installed that year that are currently cathodically-unprotected

g. What is SCG's best estimate of the average life expectancy for a cathodically protected steel service?

h. What is SCG's best estimate for the maximum life expectancy for a cathodically protected steel service?

i. What is SCG's best estimate of the average life expectancy for a cathodically-unprotected steel service?

j. What is SCG's best estimate for the maximum life expectancy for a cathodically-unprotected steel service?

k. What is SCG's best estimate of the average service life for a plastic service? To the extent they differ, please provide independent estimates for pre-1973 plastic, pre-1986 plastic, and post-1985 plastic.

l. What is SCG's best estimate for the maximum life expectancy for a plastic service? To the extent they differ, please provide independent estimates for pre-1973 plastic, pre-1986 plastic, and post-1985 plastic.

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m. For each year from 2012-2017, inclusive, please provide the following data regarding service replacements:

i. Miles of cathodically-unprotected steel services replaced

ii. Number of cathodically-unprotected steel services replaced

iii. Miles of steel services of all types replaced

iv. Number of steel services of all types replaced

v. Miles of plastic services replaced (with separate data for pre-1973 and post-1985 plastic, if available)

vi. Number of plastic services replaced (with separate data for pre-1973 and post-1985 plastic, if available)

vii. Cost per mile to replace cathodically-unprotected steel services

viii. Cost per mile to replace steel services of all types

ix. Cost per mile to replace plastic services

x. Cost per service to replace cathodically-unprotected steel services

xi. Cost per service to replace steel services of all types

xii. Cost per service to replace plastic services

n. For each year from 2018-2022, inclusive, please provide SCG's best forecast of the following data regarding service replacements:

i. Miles of cathodically-unprotected steel services to be replaced

ii. Number of cathodically-unprotected steel services to be replaced

iii. Miles of steel services of all types to be replaced

iv. Number of steel services of all types to be replaced

v. Miles of plastic services to be replaced (with separate data for pre-1973 and post-1985 plastic, if available)

vi. Number of plastic services to be replaced (with separate data for pre-1973 and post-1985 plastic, if available)

vii. Cost per mile to replace cathodically-unprotected steel services

viii. Cost per mile to replace steel services of all types

ix. Cost per mile to replace plastic services

x. Cost per service to replace cathodically-unprotected steel services

xi. Cost per service to replace steel services of all types

xii. Cost per service to replace plastic services

SoCalGas Response 194:

a. Please refer to line eight (8) of the table response to Question 192.b, which provides the count of total steel services within the SoCalGas system. To calculate the miles of steel services currently in service, apply the percentage provided in line eight (8) to the respective cell in line four (4). Then multiply by the average service length of 59 feet (ft) provided in the 2016 DOT Report and divide by 5280 ft to convert to miles. As an example, the calculation to find the miles of 1970-1971 steel services that are currently in service is: 0.28 x 700,235 = 196,066 number of steel services. Then 196,066 x 59 = 11,567,894 ft, 11,567894/5280 = 2,190.9 miles of 1970-1971 steel services currently in service as of the end of 2016.
b. Please refer to line nine (9) of the table response to Question 192.b, which provides the count of total plastic services within the SoCalGas system. To calculate the miles of plastic services currently in service, apply the percentage provided in line nine (9) to the respective cell in line four (4). Then multiply by the average service length of 59 ft provided in the 2016 DOT Report and divide by 5280 ft to convert to miles. As an example, the calculation to find the miles of 1970-1971 plastic services that are currently in service is: 0.72 x 700,235 = 504,169 number of plastic services. Then 504,169 x 59 = 29,745,971 ft, 29,745,971/5280 = 5,633.7 miles of 1970-1971 plastic services currently in service as of the end of 2016.
c. Pursuant to 49 CFR, Section 192.455 Subsection (a) inclusive, all buried or submerged pipelines installed after July 31, 1971 must have cathodic protection installed and in operation within one (1) year after completion of construction. In compliance with this

SoCalGas Response 194 Continued:

d. federal regulation, SoCalGas does not install steel service lines that are cathodically-unprotected. Please refer to the response of Question 194.a above for the miles of steel services installed.

e. Please refer to line eight (8) of the table response to Question 192.b, which provides the count of total steel services within the SoCalGas system. To calculate the number of steel services currently in service, apply the percentage provided in line eight (8) to the respective cell in line four (4). As an example, the calculation to find the miles of 1970-1971 steel services that are currently in service is: 0.28 x 700,235 = 196,066 number of steel services currently in service as of the end of 2016.

f. Please refer to line nine (9) of the table response to Question 192.b, which provides the count of total plastic services within the SoCalGas system. To calculate the miles of plastic services currently in service, apply the percentage provided in line nine (9) to the respective cell in line four (4). As an example, the calculation to find the miles of 1970-1971 plastic services that are currently in service is: 0.72 x 700,235 = 504,169 number of plastic services currently in service as of the end of 2016.

g. Pursuant to 49 CFR, Section 192.455 Subsection (a) inclusive, all buried or submerged pipelines installed after July 31, 1971 must have cathodic protection installed and in operation within one (1) year after completion of construction. In compliance with this federal regulation, SoCalGas does not install steel service lines that are cathodically-unprotected. Please refer to the response of Question 194.e above for the number of steel services installed.

h. Gas services, whether steel or plastic, cathodically protected or cathodically-unprotected, are capitalized to Federal Energy Regulatory Commission (FERC) Account 380 - Distribution Services. SoCalGas' plant asset ledger does not distinguish between type of services and whether they are cathodically protected or cathodically-unprotected. Life analysis is performed at a combined group level for all distribution services. Per Exhibit SCG-36-R (Revised Direct Testimony of Flora Ngai), the proposed average service life for assets in FERC Account 380 is 67 years. Please see Exhibit SCG-36-R at page 19:15-18 for more information.

i. Please refer to the response to Question 194.g above. As shown in Exhibit SCG-36-WP-R (Revised Workpapers to Prepared Direct Testimony of Flora Ngai) at page 176, the maximum life expectancy for assets in FERC Account 380 is approximately 116 years.

j. Please refer to the response to Question 194.g above.

k. Please refer to the response to Question 194.g and .h above.

l. Please refer to the response to Question 194.g above.

m. Please refer to the response to Question 194.h above.

m.	2012	2013	2014	2015	2016
i. Miles of NON-CP Steel Services replaced	0.1	0.1	0.3	0.6	0.3
ii. Number of NON-CP Steel Services replaced	22	23	37	50	52
iii. Miles of Steel Services replaced	0.7	0.7	1.9	1.1	1.0
iv. Number of Steel Services replaced	92	98	124	93	109
v. Miles of Plastic Services replaced	104.1	100.7	106.8	116.6	138.7
vi. Number of Plastic Services replaced	7,353	6,961	7,046	8,190	9,565

The data on service replacement cost by material is not in a format that allows it to be readily available nor be extracted accurately; therefore, SoCalGas is not able to provide service replacements by material. Below is the average service replacement cost overall.

	2012	2013	2014	2015	2016
vii, viii, ix. Average Cost per mile	$ 261,656.53	$ 312,027.88	$347,121.20	$ 369,948.16	$ 410,487.97
x, xi, xii. Average Cost per Service	$ 2,923.81	$ 3,486.68	$3,878.82	$4,133.89	$ 4,586.89

n. SoCalGas objects to all portions of this question requesting 2020-2022 forecasts 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism. SoCalGas did not forecast the number of steel or plastic services to be replaced or the unit cost for future steel service replacements. SoCalGas chose the five-year (2012 through 2016) trend to forecast the funding requirement for the years 2017 through 2019 for service replacements.

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195. SCG states that it has approximately 853,405 cathodically-unprotected services, which represent 46 percent of its steel services (Ex. SCG-4, pp. 103:11 and 103:26-104:1). Please confirm that the total number of steel services reported in SCG's response to subpart (d) of the preceding question is approximately 1.86 million (853405/.46), or else provide a quantitative explanation for why it is not.

SoCalGas Response 195:

SCG stated 46% of its steel services are protected by cathodic protection. The reference in Ex. SCG-04, pp. 103:26-104:1 is related to cathodically-unprotected services. As shown in the 2016 DOT Report, the total number of steel services in SCG's system as of December 31, 2016 was approximately 1,590,059. As referenced in Ex. SCG-04, p. 103:11, there are approximately 853,405 service lines without cathodic protection. There are approximately 736,654 cathodically protected steel services as shown in the 2016 DOT Report. Dividing 736,654 by 1,590,059 results in 46%, as referenced in Ex. SCG-04, p. 103:11.

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196. Ex. SCG-4, pp. 108-110, discusses SCG's aging fleet of regulator stations and SCG's plan to augment its current replacement of an average of 23 regulator stations per year (Ex. SCG-4, p. 109:1) with an additional 8 replacements in 2018 and 18 replacements in 2019 (Ex. SCG-04, p. 110:16-18). SCG provides other snapshot data regarding its total number of regulator stations (1975), their average life expectancy (35 years), their average age (29 years), and so on. To place this data in a fuller context, please provide an age distribution table showing, as of the end of 2017, how many of SCG's nearly 2000 regulator stations were installed in each year from the earliest installation year through 2017.

SoCalGas Response 196:

Please see the table below for the number of regulator stations and year installed.

Year	Count
1941	1
1942	1
1943	2
1944	1
1945	1
1946	1
1947	5
1948	7
1949	7
1950	8
1951	7
1952	13
1953	15
1954	11
1955	20
1956	9
1957	10
1958	16
1959	15
1960	11
1961	21
1962	13
1963	18
1964	34
1965	24
1966	28
1967	24
1968	28
1969	24
1970	29
1971	63

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1972	44
1973	49
1974	36
1975	29
1976	19
1977	28
1978	15
1979	29
1980	33
1981	35
1982	24
1983	26
1984	41
1985	25
1986	31
1987	30
1988	46
1989	39
1990	72
1991	61
1992	71
1993	49
1994	36
1995	24
1996	26
1997	28
1998	25
1999	23
2000	32
2001	40
2002	35
2003	32
2004	38
2005	19
2006	30
2007	38
2008	33
2009	26
2010	21
2011	30
2012	29
2013	27
2014	19
2015	21
2016	21
2017	23

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197. Please reconcile SCG's reference to "approximately a third of its regulator stations with components that exceed 35 years" (Ex. SCG-4, p. 100:22-24) and "At the current replacement rate 69% of the regulator stations in the system will be above the expected useful life of 35 years" (Ex. SCG-4, p. 101:21-23).

SoCalGas Response 197:

The statement "approximately a third of its regulator stations with components that exceed 35 years" is found on page GOM-109, lines 22-23, of Ex. SCG-04. This statement refers to the approximate percentage of regulator stations that exceeded 35 years of age, or approximately a third of the 1,975 regulator stations in the system. Please note SoCalGas referred to 68% of the regulator stations in testimony and not 69% as referenced in the question above. The statement "At the current replacement rate 68% of the regulator stations in the system will be above the expected useful life of 35 years" is found on page GOM-110, lines 21-23, of Ex. SCG-04. This statement is included as part of the overview of an incremental program to increase the number of regulator station replacements. It provides a 10-year projection of the percent of the current regulator stations that would exceed 35 years if no incremental replacements took place over this 10-year period.

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198. For each of the years 2012-2017, inclusive, how many regulator stations were replaced each year, at what cost each year?

SoCalGas Response 198:

Please see below the number of regulator stations replaced each year. The cost data for regulator stations replaced is not in a format that allows it to be readily available nor be extracted accurately; therefore, SoCalGas is not able to provide cost per regulator station replaced as requested. However, SoCalGas is providing the overall associated costs for regulator stations, which include replacements and new installations. The 2017 year-end costs are not available because 2017 financial information will not be available until after SoCalGas makes its 10-K filing with the SEC in early 2018.

	2012	2013	2014	2015	2016	2017
Replacements	20	19	12	17	15	9
Total Cost	$4,665,000	$7,172,000	$6,398,000	$7,422,000	$8,635,000	-

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199. For each of the years 2018-2022, inclusive, how many regulator stations does SCG expect to replace in total, at what cost each year?

SoCalGas Response 199:

SCG did not forecast the number of regulator stations it expects to replace in total for 2020-2022, and SCG also did not forecast the number of regulator stations it expects to replace as part of its base work. SoCalGas used the 2016 base plus incremental forecast to capture the expenditures for the Regulator Station work category for forecast years 2017-2019. SCG did forecast the number of incremental regulator stations it plans to replace in 2018 and 2019. Please see page 88 of workpapers SCG-04-CWP_GDIST for the number of regulator stations it plans to replace and the forecasted cost.

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200. In Ex. SCG-4-WP, p. 19, the text of subsection (B) refers to a "10% increase in volume" but the numbers in subsection (B) do not change by 10% either annually or cumulatively. Please explain.

SoCalGas Response 200:
Within SCG-04-WP, p. 19 the numbers represented in subsection B represent the calculation of the historical trend of new tickets from 2012-2016 and then adding 10% of the previous year's tickets to account for a 10% increase in volume from historical trend values.

For example:
2016 volume = 306,464
2017 volume based on five-year trend = 333,417
333,417 + 10% of 2016 tickets (30,646) = 364,063

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201. In Ex. SCG-4-WP, p. 19, subsections (F) and (G) show an increase in USA North fees of more than 60% from 2016 to 2019. Please quantify how much of this increase is due to a change in the fee per ticket, and how much of this increase is due to a change in the number of tickets.

SoCalGas Response 201:
The data shown on columns (F) and (G) represent estimated fees that USA North will be implementing as a new rate structure. Please see attachment "CUE-DR-Q_201."

USA North 811 - 3 YEAR PARITY PLAN Breakdown

Member Organization: Southern California Gas

Tickets received in 2014: 185,902
% of Total Tickets if > 200 Tkts above: 2.989510%

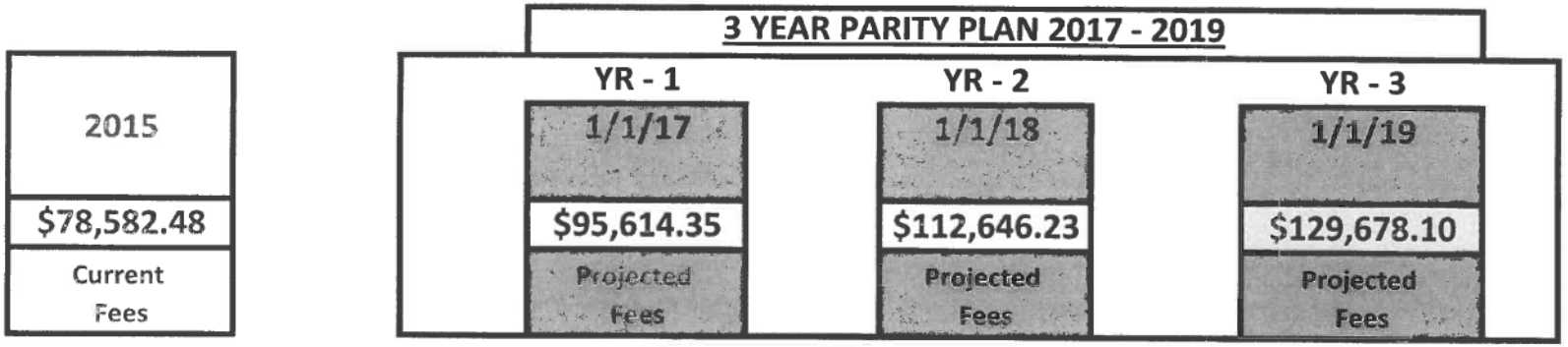
Current Membership Fees: $78,582.48

Projected New Membership Fees:

Every member is charged the Flat Rate:	Flat Rate	$150.00
Members who received > 200 Tkts will also be charged a % of the Budget based on their % of Total Tickets above:	> 200 Tkts Rate	$129,528.10

Total Projected New Membership Fees as of the final Parity Plan year below: **$129,678.10**

The following 3 Year Parity Plan will be used to transition your projected membership fees over to the NEW Rate Structure:



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202. In Ex. SCG-4-WP, pp. 31 and 32, section (B) on each page shows survey footage of 6114 feet per day "based on historical information."

a. Please supply the "historical information" cited by SCG.

b. Please explain how new leak detection technology (Picarro, etc.) may change the footage capable of being surveyed daily.

c. Please describe what pilot studies SCG has performed with regard to using new leak detection technology to increase the rate of leak detection and/or increase the daily survey rate above 6114 feet per day.

d. Please provide any memos, studies, or other communication sent to SCG management since the last SCG GRC decision was issued which address potential changes in SCG leak surveys using new leak detection methods.

SoCalGas Response 202:

a. The survey footage was based on the average amount surveyed by gas distribution employees on an hourly basis in each of its regional areas. The average footage was 1,019 ft. per hour. The number also took into consideration the amount of time an employee took for allocated break and meal times as well as drive time. SoCalGas determined an employee could effectively survey for 6 hours a day which results in a daily footage of 6,114.

b. SoCalGas objects to this request as overly broad, unduly burdensome, vague and ambiguous with respect to the phrase "new leak detection technology," and exceeding the scope of permissible discovery under Rule 10.1, of the Commission's Rules of Practice and Procedure. SoCalGas further objects to the request in that it seeks information that may be outside the scope of this proceeding, as changes in leak detection technologies, and their expected impacts are part of the scope of the SB 1371 Rulemaking 15-01-008. Subject to and without waiving the foregoing objection, SoCalGas responds as follows: SoCalGas is currently researching additional mobile technology, however this new technology is not currently approved to replace compliance leak survey. As a result, SoCalGas has not conducted efficiency testing on the new technology being researched. The new technology focuses on capturing all atmospheric methane indications, which requires SoCalGas to return for additional walking leak survey to areas where indications may be detected.

SoCalGas Response 202 Continued:

c. Please see response to Question 202.b above.

d. SoCalGas objects to this request as overly broad, unduly burdensome, vague and ambiguous with respect to the phrase "new leak detection methods," and exceeding the scope of permissible discovery under Rule 10.1, of the Commission's Rules of Practice and Procedure. SoCalGas further objects to the request in that it seeks information that may be outside the scope of this proceeding, as changes in leak detection technologies, and their expected impacts are part of the scope of the SB 1371 Rulemaking 15-01-008. Subject to and without waiving the foregoing objection, SoCalGas responds as follows: SoCalGas has not provided any memos, studies, or other communications to its management team since the last GRC decision was issued addressing potential changes in leak surveys using new leak detection methods with regards to Gas Distribution pipelines. SoCalGas has applied a new instrument leak detection method for Transmission lines using aerial survey twice a year.

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203. In Ex. SCG-4-WP, p. 54, section A shows the number of CP packages to be reevaluated more than doubling from 2018 to 2019.

a. Please provide the corresponding numbers for each of the years 2012-2017, inclusive, and the projected numbers for 2020-2022, inclusive.

b. Please explain the basis for the large jump from 2018 to 2019, and whether 2019 represents a plateau or just a step in a continuing multi-year increase.

SoCalGas Response 203:

a. SoCalGas did not track the number of cathodic protection (CP) packages reevaluated from 2012-2017 as SoCalGas tracks work orders and a package may require multiple orders to complete its reevaluation (troubleshooting). As referenced in Ex. SCG-04, p. 47, SoCalGas used a five-year (2012 through 2016) historical linear trend to forecast the base expense for the Cathodic Protection workgroup. Added to this base forecast was an incremental item to re-evaluate cathodic protection areas currently using the "100 mV shift" test criteria. This effort will increase the need to reevaluate (troubleshoot) packages associated with these cathodic protection areas. As shown in Ex. SCG-04-WP, p. 54, SoCalGas will reevaluate an additional 75 CP packages in 2018 and 175 in 2019 to support this incremental effort. SoCalGas did not forecast the number of cathodic protection packages it will reevaluate after the 2019 test year; however, it will continue the incremental effort discussed in testimony after 2019.

b. See the response to Question 203.a above. 2018 is a project implementation year, with lower expected production. The rate of work is expected to increase in 2019 closer to the ongoing production rate. This effort will continue until all areas under the "100 mV shift" test criteria are reevaluated.

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204. In Ex. SCG-4-WP, p. 67, section A is defined as "Total leaks to be worked per year" while sections C, E, and G each refer to "Incremental" costs.

a. Are the numbers in section A the total of all leaks to be worked on, including new leaks found in the future, are they incremental leaks over and above those new leaks to be found in the future, or are they something else? Please clarify.

b. Please confirm that the "incremental" costs in sections C, E, and G are costs associated solely with the leaks shown in section A.

SoCalGas Response 204:

a. The numbers in section A are incremental leaks over and above those new leaks to be found in the future.

b. The "incremental" costs in sections C, E, and G are cost associated solely with the leaks shown in section A.

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205. In Ex. SCG-4-WP, pp. 72 and 79, the forecasted number of meter guard orders increases 7-fold from 2017 to 2019, from 500 orders in 2017 to 3500 orders in 2019.

a. Please provide the actual number of orders in each of the years 2012-2017, inclusive.

b. Please explain whether this large increase represents working off a backlog, and if so describe how the backlog came to be, how large it is, and how long SCG expects to take to eliminate it.

c. If the increase from 2017 to 2019 does not represent a backlog of old work, but is new work, please explain the cause(s) of the large increase, and indicate how long they are expected to continue.

d. Please provide all workpapers underlying the forecasted increase in orders from 500 to 3500 between 2017 and 2019.

e. Please reconcile the 3500 meter guard orders shown in Ex. SCG-4,-WP, pp. 72 and 79, with the 12,848 meter guard orders shown in Ex. SCG-4-CWP, p. 138.

SoCalGas Response 205:

a. Please see the number of meter guard orders completed from 2012-2016 below.

Meter Guard Orders (O&M only)					
2012	2013	2014	2015	2016	2017
51	25	96	119	124	88

b. Yes, the increase in work represents working the current inventory of meter guards. At the time of the forecast, the inventory in meter guard orders, under O&M replacement, was approximately 5,200 orders. Pursuant to CFR § 192.481, the DOT requires that each MSA be inspected every three (3) years for atmospheric corrosion. Although meter readers have historically performed this function, with the replacement of AMI, a new group, the CS-F MSA Inspection Organization, was formed in base year 2016. The CS-F MSA Inspection Organization performs physical, on-site inspections for each MSA, in compliance with DOT's mandatory MSA inspections for atmospheric corrosion and to identify conditions that may require remediation by CS-F and Distribution field employees. SoCalGas will increase the rate of meter guard orders under O&M to reduce the number of remaining inventory that is outstanding. SoCalGas did not forecast how long this effort will take. However, as MSA inspection work continues, it is reasonable to expect that meter guard orders under O&M will increase as well.

SoCalGas Response 205 Continued:

c. See response to Question 205.b above.

d. The forecast was based on a ramp-up effort to address the inventory of existing meter guard maintenance. The meter guard costs and units are shown in Ex. SCG-04-WP, pp. 72-74 and 79.

e. The 3,500 meter-guard orders in Ex. SCG-04-WP, pages 72 and 79 and the 12,848 meter guards shown in Ex. SCG-04-CWP, page 128 are two different activities. The 3,500 meter-guard orders are related to existing locations that require additional maintenance and replacement, which are recorded under O&M expense. The 12,848 meter guards are related to new installations, which are recorded under capital expense. As referenced in the response to Question 205.b above, the MSA inspection organization has identified approximately 125,000 locations where a meter guard, or other means of meter protection, may be required.

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206. In Ex. SCG-4-CWP, p. 77, SCG says it plans to replace "an incremental 10 regulator stations in 2018." But Ex. SCG-04, p. 110:16-18 says SCG plans to replace an incremental 8 regulator stations in 2018. Please reconcile this discrepancy.

SoCalGas Response 206:

SoCalGas plans to replace an incremental 10 regulator stations in 2018, as referenced in Ex. SCG-04-CWP. The 8 regulator stations referenced in Ex. SCG-04, p. 110:16-18 was an error and will be corrected at the next available opportunity.

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207. SCG says it replaces an average of 23 regulator stations per year (Ex. SCG-4, p. 109:1-2). It plans incremental replacements in 2018 and 2019 which will cost $0.6 million per regulator station (Ex. SCG-4-CWP, pp. 78 and 88). At $0.6 million per station, maintaining the historical average replacement rate of 23 stations per year would cost 23 x $0.6 million = $13.8 million per year, before considering the incremental cost of the planned increase in regulator station replacements. However, SCG's planned baseline spending for regulator station replacements is $8.634 million per year in 2017-2019 (Ex. SCG-4-WP, p. 78), not $13.8 million.

a. Please explain the discrepancy between the planned baseline spending of $8.634 million per year and the $13.8 million per year required to replace the historical average of 23 regulator stations per year.

b. If SCG were to increase its direct spending for base regulator replacements by $5.166 million per year, from $8.634 million per year to $13.8 million per year, please separately quantify each other spending increase that would also be triggered by that $5.166 million per year increase (e.g., Field Capital Support costs of 32.7% as shown in Ex. SCG-4-WP, p. 228, other associated overheads, associated O&M expenses, etc.).

c. Please provide the data and calculations underlying the estimated unit cost of $0.6 million per regulator station replacement shown in section E of Ex. SCG-4-CWP, p. 88.16

SoCalGas Response 207:

a. The $0.6 million unit cost forecasted for the incremental regulator station replacements was an estimate provided by a subject matter expert based on the average replacement cost of large regulator stations in an urban location. SoCalGas used the 2016 base plus incremental forecast to capture the expenditures for the Regulator Station work category. The base forecast includes regulator station replacements and new installations throughout the service territory. Applying the unit cost assumption used for the incremental replacements would not be accurate as the base forecast includes replacements and new installations that may vary widely due to the scope of the work and location throughout the service territory.

b. SoCalGas objects to this request under Rule 10.1 of the Commission's Rules of Practice and Procedure on the grounds that the burden, expense and intrusiveness of this request clearly outweigh the likelihood that the information sought will lead to

SoCalGas Response 207 Continued:

the discovery of admissible evidence. SoCalGas further objects on the grounds that there have been no studies or analyses performed by SoCalGas as requested and SoCalGas is not required to create new data quantifying the requested information. Subject to and without waiving the foregoing objections, SoCalGas responds as follows: An increase in costs associated with the capital regulator stations work category increases the funding requirement for Field Capital Support at a rate of 32.7% of the related capital increase. SoCalGas did not forecast other expenditures such as associated overheads and O&M related expenses based on the increase in its regulator station forecast and therefore is not able to provide this information.

c. Please see the response to Question 207.a above.

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208. Ex. SCG-5, p. 9:7-9, describes a request for $252K of incremental spending in 2019 "in order to adequately resume routine operations" which had been cut back due to "a reprioritization of Company resources" Is it appropriate to describe this as a request for catch-up funding for work that wasn't done in the past? If not, why not?

SoCalGas Response 208:

As the testimony indicates at that same page and line, the full passage reads: "Some management employees in this workgroup provided customer support during the Aliso Incident, which required a reprioritization of Company resources. In order to adequately resume routine operations, $252,000 over the forecast base for TY 2019 is needed. Please refer to my workpapers, Ex. SCG-05-WP."

This request is related to a return-to-normal operations once those management employees completed their customer support duties performed during the 2015/2016 Aliso incident. Approximately 3 management employees were temporarily assigned to the emergency mitigation efforts of the incident during that period; those costs were excluded from the GRC forecast as ordered and therefore, are not part of the 2016 Base Year expense. However, as these employees resumed routine operations, SoCalGas is accounting for this cost in its 2017-2019 forecasting. For additional detail regarding the costs incurred, and excluded, related to the Aliso Canyon incident, please see the testimony of Mr. Andrew Steinberg, Exhibit SCG-12.

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209. Ex. SCG-5, p. 43-46 describes SCG's request for $3.83 million in 2019 for the Gas Contractor Control department. Ex. SCG-5-WP, p. 78 shows that this $3.83 million cost is for 20 SCG employees at $116.5K each and 10 non-SCG contractors at $150K each.

a. Please explain why the cost per SCG employee drops from 2018 to 2019 (Ex. SCG-4-WP, pp. 77-78).

b. Please explain why SCG plans to rely on 10 outside contractors to monitor its use of outside contractors.

c. Please provide any analysis performed by or for SCG regarding the relative costs of using outside contractors and then having to spend $3.83 million to monitor their work performance (Ex. SCG-5-WP, p. 78), vis-a-vis performing the work in house.

SoCalGas Response 209:

a. The mix of employee skills and job classifications results in an overall average labor change from 2018 to 2019 as new employees are added. A weighted average was used to estimate the costs.

b. The question as stated would appear to misunderstand the description of SoCalGas' request for the Gas Contractor Control department. SoCalGas anticipates the hiring of additional employees for its own workforce beginning in 2017, as described in the workpaper Exhibit SCG-05-WP at page 77. (SoCalGas represents additional labor to its own workforce as 'labor' expense; contracted workforce services are normally shown as a 'nonlabor' expense). Accordingly, SoCalGas does not anticipate using contracted labor to monitor contracted labor at this time.

c. Please see the response to Question 209.b above.

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210. Ex. SCG-5, p. 23:11-13, asserts that "third party dig-ins pose the greatest hazard to our system and the safety of the communities we serve."

a. Please identify each place in SCG's testimony or work papers where it includes funding to mitigate the risks of third party dig-ins, and provide the dollars requested that are specifically for dealing with third party dig-ins.

b. For each of the years 2012-17, inclusive, please provide:

i. The number of deaths, if any, resulting from third party dig-ins on the SCG system.

ii. The number of injuries, if any, resulting from third party dig-ins on the SCG system.

iii. SCG expenses incurred responding to third party dig-ins on the SCG system.

iv. SCG capital expenditures incurred responding to third party dig-ins on the SCG system.

SoCalGas Response 210:

a.

2017		
Involving Third Party Dig-Ins	**$ Amount Requested (000s)**	**Reference page in Ex. SCG-5-WP**
Technical Specialist for Modernization of Training Materials*	300	Pg. 7
Situation City Enhancements*	150	Pg. 7
Classroom Technology*	21	Pg. 8
Automated USA Ticket Prioritization	260	Pg. 63
QA Operations Employee*	105	Pg. 93
R&D*	20	Pg. 138
Golden Shovel Implementation*	5	Pg. 138
Pipeline System Construction Policy Baseline Activities	200	Pg. 138
Pipeline System Construction	120	Pg. 138-139

Policy Support Staff		
Shared Public Awareness Activities	320	Pg. 149
Locate and Mark Field Activities	739	EX. SCG-04-WP Pg.8
Funds to standardize leak detection equipment	3,800	Ex. SCG-04-CWP Pg. 203
2018		
Involving Third Party Dig-Ins	**$ Amount Requested (000s)**	**Reference page in Ex. SCG-5-WP**
Technical Specialist for Modernization of Training Materials*	700	Pg. 9-10
Locate and Mark Trainer	105	Pg.8-9
Situation City Enhancements*	250	Pg.10
Classroom Technology*	250	Pg. 10
Compliance Assurance Technical Advisor*	210	Pg. 10
Public Awareness	500	Pg. 56
QA Operations Employee*	105	Pg. 93
R&D*	20	Pg. 139
Golden Shovel Implementation*	5	Pg. 139
Pipeline System Construction Policy Baseline Activities	200	Pg. 139
Pipeline System Construction Policy Support Staff	120	Pg. 139-140
Shared Public Awareness Activities	420	Pg. 149
Locate and Mark Field Activities	1,330	EX. SCG-04-WP Pg.9
Funds to standardize leak detection equipment	2,500	Ex. SCG-04-CWP Pg. 203
2019		
Involving Third Party Dig-Ins	**$ Amount Requested (000s)**	**Reference page in Ex. SCG-5-WP**
Technical Specialist for Modernization of Training Materials*	1,050	Pg. 12
Locate and Mark Trainer	210	Pg. 11
Situation City Enhancements*	250	Pg.12
Classroom Technology*	500	Pg. 12-13
Compliance Assurance Technical Advisor*	210	Pg. 13

Public Awareness	1,000	Pg. 56
QA Operations Employee*	105	Pg. 93
Management Team for Pipeline System Construction Policy	865	Pg. 140
R&D*	20	Pg. 140
Golden Shovel Implementation*	5	Pg. 140
Pipeline System Construction Policy Baseline Activities	250	Pg. 140-141
Shared Public Awareness Activities	420	Pg. 149
Locate and Mark Field Activities	1,921	EX. SCG-04-WP Pg.10

Please note that any item listed with an asterisk* means that a percentage of that dollar amount will be designated towards mitigating the risks of third-party dig-ins.

b.

i. No fatalities have resulted from third-party dig-ins.

ii. The number of known injuries resulting from third-party dig-ins are as follows: 1 injury in 2012, 3 injuries in 2014, and 3 injuries in 2017.

iii. SoCalGas expenses (O&M) incurred responding to third-party dig-ins on the SoCalGas system include the following:

2012- $960,739
2013- $1,358,022
2014- $2,101,911
2015- $1,515,150
2016- $1,670,321
2017- $1,906,060

iv. SoCalGas does not track the data in relation to capital expenditures incurred responding to thirdparty dig-ins.

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211. Ex. SCG-5, p. 24:10, shows 2019 costs of $4.734 million for Gas Operations Staff and Training,an increase of $3.662 million. However, on pp. 25:3 and 27:16 these numbers are shown as $3.734 million and 2.662 million, respectively, exactly $1 million less.

a. Are these inconsistencies due to typographical errors?

b. Which number(s) are correct, which are incorrect, and what other numbers elsewhere in SCG's testimony would need to be changed if the incorrect numbers are corrected?

SoCalGas Response 211:

a. Yes.
b. The value of $4.734 million is correct for all occurrences. The erroneous showing of $3.734 million was due to a typographical error, which was corrected with the revised testimony Exhibit SCG-05-R served on December 20, 2017. This entry can be found in the revision log appearing on the last page of that revised testimony. The two related entries for Table OR-8 at page OR-25 are the only known errors in Exhibit SCG-05, and affect only that table.

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212. Ex. SCG-14, p. 10:23-26, indicates that SCG "tailored" its bare steel main replacement program.

a. Does "tailored" mean that the scope of the program was reduced? If not, please explain.

b. Please provide the number of miles of bare steel main as of the end of 2016, and how many miles per year SCG would have replaced in each of the years 2017-22, inclusive, under the "wholesale replacement" it considered.

c. Please provide the miles of actual bare steel main replacement actually done in 2017.

d. Please provide the planned miles of bare steel main replacement in each year from 2017-2022, inclusive, under the "tailored" program now in effect.

e. Please provide all analysis, memos, or other documents provided to SCG management discussing the relative merits of "wholesale replacement" versus "tailored" replacement programs for bare steel main.

f. Under a "wholesale replacement" program, in what year would SCG have anticipated completing the replacement of all bare steel mains?

g. Under its current "tailored" program, in what year does SCG anticipate completing the replacement of all bare steel mains?

SoCalGas Response 212:

a. Yes, "tailored" means that the scope of the program was adjusted, in this case reduced.

b. The number of miles of bare steel as of end of 2016 is 3,287 miles. An estimate of the number of miles of bare steel that would be replaced under the "wholesale replacement" scenario was not prepared.

c. In 2017, 30 miles of bare steel was replaced.

d. SoCalGas 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism.

SoCalGas Response 212 Continued:

Planned Replacement Bare Steel	**2017**	**2018***	**2019-2022***
Bare Steel	30 miles	22 miles	29 miles

*projected

e. See SoCalGas' RAMP Report, Chapter SCG-10 – Catastrophic Damage Involving a Medium-Pressure Pipeline Failure, Section 9.

f. SoCalGas did not calculate how many years it would take for complete replacement of bare steel mains.

g. As noted in Ms. Martinez's testimony, Exhibit SCG-14, at p. MTM-26:7-10, it is a 25-to 30-year horizon with increased level of replacement over the next 6-8 years while monitoring performance to continually review the benefits and risk reduction accomplished.

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213. Ex. SCG-14, p. 22:3-11, indicates that SCG expects to complete its DRIP program to inspect and remediate 2.6 million anodeless risers by 2029.

a. How did SCG decide that 2029 was an appropriate target date for completing this program?

b. Please provide any memos, studies, or other documents created since the last SCG GRC decision was issued which address the expected or desired completion date for the DRIP program.

SoCalGas Response 213:

a. This program is proactive in nature since these risers are operating safely today, but the coating has been observed to have premature degradation. Therefore, the main driver for project execution was the ability to effectively sustain resources, which has been in the 180,000-190,000 range recently. This projects out to a completion date of 2029.

b. There is none.

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214. Ex. SCG-14, pp. 24:23-26:2 describes SCG's proposed Vintage Integrity Plastic Plan, or VIPP. Please confirm CUE's understanding that VIPP consists of the following three phases (or explain if CUE's understanding is incorrect):

a. Phase 1 expands annual leak surveys from 2200 miles of early vintage plastic to all 6000 miles.

b. Phase 2 replaces all pre-1973 plastic pipe.

c. Phase 3 replaces pre-1986 plastic pipe, starting with incremental replacements of 78 miles in 2019, increasing annual replacements for the next 6-8 years, and taking 25-30 year for "wholesale" (which CUE takes to mean "100 percent") replacement of pre-1986 plastic pipe to be complete.

52. Please provide data, in Excel format, showing for each year up to and including 2017:

a. The miles of plastic installed that year that were in service on SDG&E's distribution system as of the end of 2017.

b. The miles of plastic mains installed that year that were in service on SDG&E's distribution system as of the end of 2017.

c. The miles of plastic services installed that year that were in service on SDG&E's distribution system as of the end of 2017.

d. The miles of Aldyl-A plastic installed that year that were in service on SDG&E's distribution system as of the end of 2017.

e. The miles of Aldyl-A mains installed that year that were in service on SDG&E's distribution system as of the end of 2017.

f. The miles of Aldyl-A services installed that year that were in service on SDG&E's distribution system as of the end of 2017.

SoCalGas Response 214:

a. Yes, this is correct.

b. Yes, this is correct.

c. Yes, this is correct.

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SoCalGas Response 214 Continued:

Please note the balance of questions under what is labeled Question "52," subparts a-f, appear to address SDG&E and also appear to be included here in error. These are not answered in this data request, but in response to identical questions in CUE SDGE DR-02, Question 63, subparts a-f.

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215. Please indicate which calendar years SCG means by "the next 6-8 years" in Ex. SCG-14, p. 25:25.

SoCalGas Response 215:

It means starting in 2019, so it would be 2019 to 2024-2026.

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216. For each year starting in 2017 and continuing through the end of "the next 6-8 years," please provide SCG's planned incremental ("above and beyond routine replacements") annual miles of replacement of:

a. "Early vintage plastic"

b. Pre-1986 plastic

c. Pre-1973 plastic

d. Pre-1986 plastic mains

e. Pre-1986 plastic services

d. Pre-1986 Aldyl-A mains

e. Pre-1986 Aldyl-A services

f. Pre-1973 mains

g. Pre-1973 services

h.Pre-1973 Aldyl-A mains

i. Pre-1973 Aldyl-A services

SoCalGas Response 216:

SoCalGas 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism.

The Vintage Integrity Plastic Plan (VIPP) is focused on replacement of mains, but the services associated to the mains will be replaced. So, this program is not specifically targeting service replacements. SoCalGas provides the planned annual miles of replacement below for vintage plastic; assumptions for the forecast years were not planned to the level of granularity requested in each subpart of Question 216 and thus the data is not available.

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SoCalGas Response 216:

	2017	2018*	2019-2022*
Vintage Plastic	33 miles	43 miles	78 miles

*projected

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217. Please describe the extent of, and basis for, SCG's knowledge of whether plastic mains and services installed before 1973 are Aldyl-A or not.

SoCalGas Response 217:

All plastic pipe installed prior to 1973 is Aldyl-A. Plastic pipe was purchased from one manufacturer during this period.

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218. Please describe the extent of, and basis for, SCG's knowledge of whether plastic mains and services installed between 1973 and 1985 are Aldyl-A or not.

SoCalGas Response 218:

The majority of pipeline installed prior to 1986 were Aldyl-A. From 1978 to 1986, at relatively limited volumes, new manufacturers were introduced at various operating districts. Based on SoCalGas' records showing that over 85% of our known plastic inventory is Aldyl-A, any remaining pipelines with an unknown manufacturer installed prior to 1986 are treated as Aldyl-A for most conservative risk assessments.

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219. With regard to the second phase of VIPP, please provide the total number of miles of pre-1973 plastic to be replaced each year from 2017 through the completion of Phase 2, divided between mains and services.

SoCalGas Response 219:

See response to Question 216.

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220. With regard to the third phase of VIPP, SCG says it will start by replacing 78 miles in 2019 "above and beyond routine replacements" (Ex. SCG-14, p. 25:21-24). For each year from 1986-2017, inclusive, how many miles of pre-1986 plastic has SCG replaced that year due to "routine replacements"? Please provide separate data for mains and services, or explain why the data is not available.

SoCalGas Response 220:

Routine replacement is contained in Gas Distribution testimony (Ex. SCG-04 Gina Orozco Mejia). The data for routine replacement does not have that granularity to break out vintage plastic pipe.

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221. For each year from 2018 until the end of "the next 6-8 years," please provide SCG's best estimate of the miles of pre-1986 plastic that will be replaced through "routine replacements." Please provide separate data for mains and services, or explain why the data is not available.

SoCalGas Response 221:

SoCalGas 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism. The years 2023-2026 are beyond this GRC cycle. See also response to Question 220.

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222. Ex. SCG-14, p. 26:3-13, discusses SCG's Bare Steel Replacement Plan (BSRP), which "will continue" to replace "poor performing bare steel" and will lead over 25-30 years to "wholesale replacement of non-state-of-the-art bare steel."

a. Is "poor performing bare steel" a subset of bare steel, or is "poor performing" just a description that applies to all bare steel?

b. Does "wholesale replacement" mean 100 percent replacement? If not, what does it mean?

c. Is " non-state-of-the-art bare steel" a subset of bare steel, or is " non-state-of- the-art " just a description that applies to all bare steel?

d. Please provide an age distribution table that shows, as of year-end 2017, for each year in which SCG installed bare steel mains or services:

i. Miles of bare steel mains installed that year

ii. Miles of bare steel mains installed that year that are now considered "poorly performing"

iii. Miles of bare steel mains installed that year that are now considered "non-state-of-the-art"

iv. Miles of bare steel services installed that year

vi. Miles of bare steel services installed that year that are now considered "poorly performing"

vii. Miles of bare steel services installed that year that are now considered "non-state-of-the-art"

viii. Number of bare steel services installed that year

vi. Number of bare steel services installed that year that are now considered "poorly performing"

vii. Number of bare steel services installed that year that are now considered "non-state-of-the-art"

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SoCalGas Response 222:

a. Pipelines are prioritized for replacement based on their performance; therefore, the focus of replacement is the poor performing pipelines first. As part of the prioritization, additional consideration is given to steel pipes that are bare.

b. Yes, it means 100 percent replacement.

c. Non-state-of-the-art steel (NSOTA) includes all steel that is not cathodically protected and/or bare. As part of the SoCalGas distribution system, bare steel is not protected; therefore it is a subset of pipe that is not cathodically protected.

d. SoCalGas does not have the information at the level of detail requested or in a format to be extracted accurately. The following data is taken from the SoCalGas 2016 DOT Report. The DOT Report for 2017 will not be available until the end of first quarter of 2018.

SoCalGas 2016 DOT Distribution Report, Part B Section 1

DOT Reported	Unprotected Bare Steel
Miles of Main	3,287
No. of Services	139

Average service Length – 59 Ft

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223. Please explain why SCG describes the BSRP as a continuing program and then describes activities "starting in 2019" (Ex. SCG-14, p. 26:3-4).

SoCalGas Response 223:

In 2017, SoCalGas changed the DIMP PAAR Distribution Risk Evaluation and Monitoring System (DREAMS) into separate PAARS: Vintage Integrity Plastic Plan (VIPP) and Bare Steel Replacement Plan (BSRP) for activities starting in 2019.

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224. For each year from 2012-2017, inclusive, please describe replacements under the BSRP in the following categories:

a. Total miles of replacements

b. Miles of main replacements

c. Miles of service replacements

d. Number of service replacements

SoCalGas Response 224:

SoCalGas does not have the information available broken down to the level of detail requested due to the format of the data kept for pipe replacements. The table below represents combined miles of mains and service replacements.

Year	Vintage Steel	Vintage Plastic	Total
2017	30	33	63
2016	25	11	36
2015	11	2	13
2014	4	0	4
2013	0	1	1
2012	0	0	0

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225. In Ex. SCG-14, p. 26:4-5, SCG describes planned incremental replacements under the BSRP of "29 mile of mains and associated services and targeted replacement of 2,000-4,000 services."

a. Is the budget SCG is requested for this work based on replacement of 2,000 services, 4,000 services, or some other number? Please clarify.

b. Where in the SCG workpapers are the costs for BSRP, and their derivation, broken out?

c. For each year starting in 2018 and continuing through the end of "the next 6-8 years," please provide SCG's the following data regarding SCG's planned incremental ("above and beyond routine replacements") BSRP activities :

i. Miles of mains replaced

ii. Cost per mile of main replaced

iii. Capital expenditure for main replacement

iv. Miles of services replaced

v. Cost per mile of service replacements

vi. Capital expenditures for service replacement

vii. Number of services replaced

viii. Cost per service replacement

ix. If the product of the numbers provided in response to subsections

vii and viii is not the same as the cost shown in response to subsection vi, an explanation for the difference.

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SoCalGas Response 225:

a. Based on replacing 2,500 services.
b. It is included in the total Budget Code 277 amount.
c. SoCalGas 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism.
SoCalGas does not have the information to the level of detail requested. Please see response to Question 212.d.

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226. The preceding question asked about incremental BSRP activities. With regard to "routine replacements of bare steel (Ex. SCG-14, p. 26:6), please:

a. State whether "routine replacements" are considered part of the BSRP, if not what program they are part of, and in either case where their costs can be found in SCG's workpapers.

b. For each year from 2012-2017, inclusive, how many miles of bare steel has SCG replaced that year due to "routine replacements"? Please provide separate data for mains and services, and also the number of service replacements, or explain why the data is not available.

c. For each year from 2018 until the end of "the next 6-8 years," please provide SCG's best estimate of the miles of bare steel that will be replaced through "routine replacements." Please provide separate data for mains and services, as well as the number of services forecasted to be replaced, or explain why the data is not available.

SoCalGas Response 226:

a. Routine replacements are not considered part of the BSRP and are part of the Gas Distribution testimony (Ex. SCG-04 Gina Orozco Mejia, p. 90 and SCG-04-CWP, pp. 93-100).

b. None. Routine replacements do not have that granularity of data due to the format of the data kept for pipe replacements. The table in response to Question 224 presents vintage steel replacements and represents combined miles of mains and service replacements.

c. SoCalGas 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, and is outside the scope of this proceeding. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SoCalGas has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism. SoCalGas does not have the information to the level of detail requested. Please see response to Question 212.d.

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227. With regard to TIMP O&M costs (Ex. SCG-14-WP, p. 5):

a. Please provide the zero-based forecast that is said to underlie the forecast, broken out by activity (ILI, ECDA, P&M, G&A) and showing activity quantities (e.g., miles of ILI) and unit costs.

b. Please explain why labor costs are forecasted to be lower in 2017-18 than in any of the preceding five years, while non-labor costs are forecasted to be higher in 2017-18 than in any of the prior five years.

SoCalGas Response 227:

a.

TIMP O&M (000s)	**2019**
ILI	26,000
ECDA	12,500
P&M	1,500
G&A	5,000
Total	**45,000**

b. The labor costs for TIMP have remained fairly constant throughout that period when you combine both O&M and capital labor. The incremental work needed for TIMP O&M and capital is provided by contract labor, which is classified in workpapers as non-labor.

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228. With regard to DIMP O&M costs (Ex. SCG-14-WP, p. 14:.

a. Please provide the zero-based forecast that is said to underlie the forecast, broken out by activity (VIPP, BSRP, GIPP, SLIP, DRIP, G&A, DIMP DREAMS not included in VIPP and BSRP, other) and showing activity quantities (e.g., miles of pipe replacement or numbers of service replacements) and unit costs.

b. Please explain why labor costs are forecasted to be lower in 2017-18 than in any of the preceding four years, while non-labor costs are forecasted to be higher in 2017-18 than in any of the prior four years.

SoCalGas Response 228:

a.

DIMP O&M (000s)	**2019**
DREAMS/VIPP/BSRP	1,000
DRIP	16,000
GIPP	1,500
SLIP	9,600
Other PAARs	1,950
G&A	9,950
Total	**40,000**

b. The labor costs for DIMP have remained fairly constant throughout that period when you combine both O&M and capital labor. The incremental work needed for DIMP O&M and capital is provided by contract labor, which is classified in workpapers as non-labor.

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229. With regard to TIMP capital costs (Ex. SCG-14-CWP, pp. 4-24), all of the forecasts are shown as zero-based.

a. Please provide actual TIMP expenditures for each of the years 2012-17, inclusive.

b. Please provide the zero-based forecasts for each of the years 2017-2019 that are said to underlie the various requests, broken out by activity and showing activity quantities (e.g., miles of ILI) and unit costs, as well as all calculations and assumptions used to arrive at the proposed forecasts.

SoCalGas Response 229:

a. Years 2012-2016 are shown in Ex. SCG-14-CWP workpapers. 2017 capital expenditure for TIMP was $106,700 million.

b.

TIMP capital (000s)	**2019**
ILI	49,000
P&M	2,200
Other Misc	3,800
Total	**55,000**

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230. With regard to DIMP capital costs (Ex. SCG-14-CWP, pp. 25-40):

a. Please explain why labor expenditures are forecasted to fall over 75% from 2016 to 2017, and then remain at the 2017 level thereafter (Ex. SCG-14-CWP, p. 27).

b. Please provide the zero-based forecasts for each of the years 2017-2019 that are said to underlie the various requests, broken out by activity (VIPP, BSRP, GIPP, SLIP, DRIP, G&A, DIMP DREAMS not included in VIPP and BSRP, other), and showing activity quantities (e.g., miles of pipe replacement or numbers of service replacements) and unit costs, as well as all calculations and assumptions used to arrive at the proposed forecasts.

c. Please reconcile the $85.617 million forecast adjustment shown starting in 2019 for budget code 277 (DIMP DREAMS) on Ex. SCG-14-CWP, p. 29) and the $96.346 million of incremental spending shown starting in 2019 for the same budget code on Ex. SCG-14-CWP, p. 37.

d. Please explain why the base DIMP capital expenditures forecast falls $10.729 million from 2018 to 2019 (Ex. SCG-14-CWP, p. 33). Please provide the underlying analysis, annual quantities and unit prices, and calculations which cause this decrease, disaggregated by the individual programs (GIPP, VIPP, BSRP, other DREAMS components, etc.) which comprise this $61-72 million per year budget item.

e. DIMP capital costs are shown as equal in 2017 and 2018 (Ex. SCG-14-CWO, p. 29, due to the exact balancing out of the increase shown on p. 33 and the decrease shown on p. 35. Is this balancing a coincidence, a typo, or due to a transfer of costs from one category to the other?

SoCalGas Response 230:

a. The labor costs for DIMP have remained fairly constant throughout that period when you combine both O&M and capital labor. The incremental work needed for DIMP O&M and capital is provided by contract labor, which is classified in workpapers as non-labor.

SoCalGas Response 230:-Continued

b.

DIMP Capital (000s)	2019
DREAMS (VIPP/BSRP)	150,000
GIPP	5,800
Other PAARS	4,200
Total	**$160,000**

c. The $85,617 needs to be added to the base-year 2017 amount of $74,383 to equal the total 2019 requested amount of $160,000. The amount shown on p.37 is the RAMP workpapers, which is a different presentation format. It shows the incremental spend of $96,346 from the 2016 base-year amount of $63,654, which totals $160,000.

d. The amounts shown on p. 33 as mentioned for 2018 and 2019 are the RAMP workpapers, which are presented in different format and are broken out by the various RAMP categories. The 2019 requested amount of $160,000 is contained on pages 26-31 for DIMP capital.

e. The workpapers on p. 29 shows SoCalGas' requested amount for 2019 in the amount of $160,000. This calculation begins with the base-year estimate from year 2017 in the amount of $74,383 (this is same estimated amount for 2018), then adds an adjusted amount based on increased activity during 2019 in the amount of $85,617, to arrive at the $160,000 total. The amounts shown from pp. 33 and 35 are related to the RAMP workpapers, which are formatted and presented differently.

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231. In Ex. SCG-35-WP, p. 5, line 5, and also in Ex. SCG-44-WP, p. 6, line 5, working cash is shown as slightly negative in 2016 (actual) and 2017-18 (forecast), but is then forecasted to jump to almost $180 million in 2019.

a. Please confirm that negative working cash decreases rate base (and thus revenue requirements), while positive working cash increases rate base, and thus revenue requirements.

b. Please describe the working cash methodology adopted in the last SCG GRC and explain how it results in slightly negative working cash requirements for 2017 and 2018.

c. Please describe each of the methodological changes SCG is proposing for the working cash calculation for 2019, why SCG believes they are justified on a policy basis, and why SCG believes the existing GRC decision methodology is inappropriate to use in 2019.

d. If the working cash calculation methodology for 2019 were not changed from the methodology currently in place, what would the 2019 working cash value be?

SoCalGas Response 231:

a. Confirmed.

b. For its Test Year (TY) 2016, SoCalGas requested $80 million in working cash (WC) requirement. However, the 2016 WC requirement was settled at -$341 thousand and 2017 and 2018 WC requirements were settled at -$353 thousand and -$365 thousand, respectively, including a 3.5% attrition. Please see table below for the settlement terms and how they impacted 2016 WC requirement.

WC ISSUES SETTLED	HOW SETTLEMENT IMPACTED WC	IMPACT TO WC REQUIREMENT TY 2016
Parties agreed to the ORA forecast for Cash Balances of $ 0	Reduced WC requirement for cash balances to $0.	($3) Million
Parties agreed to the ORA forecast for revenue lag days of 41.55	Base year 2013 recorded revenue lag was 41.99 days. Shorter revenue lag assumes SoCalGas collected revenues faster. Therefore, it reduced the WC requirement.	($5) Million
Parties agreed to the ORA forecast for federal income tax lag days of 37.50	Base year 2013 recorded lag was -724.93 days primarily due to refunds held by the IRS. This resulted in large WC needs. Settlement of 37.50 days significantly reduced the WC requirement.	($42) Million

SoCalGas Response 231: Continued		
Parties agreed to the ORA forecast for state income tax lag days of 20.60	Base year 2013 recorded lag was -573.92 days primarily due to refunds held by the SBE. This resulted in large WC needs. Settlement of 20.60 days significantly reduced the WC requirement.	($30) Million

c & d. To clarify, the 2016 settlements were not changes in methodologies or policies, they were merely numerical values settled among parties specifically for the 2016 GRC. SoCalGas' methodology of calculating the working cash requirement did not change from 2016 and 2019 GRCs. Rather, SoCalGas continues to comply with the CPUC Standard Practice U-16 and used base year 2016 recorded data in determining its 2019 working cash requirement of $180 million. SoCalGas did not compute the 2019 working cash requirement using 2016 GRC settlement terms.

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232. Comparing Ex. SCG-35-WP, p. 41, unique ID items 30 and 1012 to the same unique ID items in Ex. SCG-35-WP, p. 67, the increase in cost of each of these two items from non-escalated direct expenditures (p. 41) to fully loaded expenditures (p. 67) is 60.27% (from $60.854 million to $97.529 million for item 30, and from $96.346 million to $154.411 million for item 1012).

a. Please confirm that this 60.27% represents the combined impact of all overheads plus inflation from 2016 dollars to 2019 dollars, or else explain the basis for the 60.27% increase.

b. Please confirm that the increase from direct costs to fully loaded costs is different for different capital expenditure items.

c. Please confirm that for all costs attributed to a given unique ID, the percentage increase attributable to converting direct capital costs to fully loaded capital costs can be determined by dividing the fully loaded capital expenditure for that unique ID (found on pp. 49-72 of Ex. SCG-35-WP) by the direct capital cost for the same unique identifier (found on pp. 21-47 of Ex. SCG-35-WP).

SoCalGas Response 232:

a. Yes. The increase from the costs on page 41 to the costs on page 67 is due to the impact of all applied overheads and applicable inflation impact.

b. Yes. Different classifications (or types) of capital projects would have different overheads applied.

c. Yes, the mechanical process of dividing the fully loaded capital expenditure number by the direct cost number will provide a percentage change.

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233. In Ex. SCG-36-WP, pp. 2 and 4, for each line item in FERC Accounts 365-390 and/or Asset IDs 60-120, please indicate how many of the dollars shown in the "Recorded Depreciation Reserve" column for that line are associated with depreciation of gross plant, and how many are associated with future net salvage dollars

SoCalGas Response 233:

SoCalGas' accounting data maintains two depreciation reserves: 1) life reserve, which includes gross salvage, and 2) cost of removal. Gross salvage is small relative to net salvage. Instead of gross plant and net salvage, the recorded depreciation dollars (in thousands) between life reserve and cost of removal for Asset IDs 60-120 are presented in the table below.

Asset ID	Recorded Depreciation Reserve (Combined)	Recorded Depreciation Reserve (Life)	Recorded Depreciation Reserve (Cost of Removal)
60	21,115	16,859	4,256
70	792,006	650,251	141,755
90	81,890	85,564	-3,674
100	4,718,592	2,848,200	1,870,392
120	186,901	150,450	36,451

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234. Ex. SCG-36, p. 16:19-21, asserts that "a 64 R3 life and dispersion curve ranked 14th on the best fit curve results" for FERC gas account G367 (Transmission System Mains).

a. Please confirm that Ex. SCG-36-WP, p. 163, shows that the best-fitting R3 curve ranks 14th in a ranking of the best-fitting Iowa curve types for account G367, but does not rank as the 14th best combination of curve and life, because higher ranked curves may have multiple alternative lives for which that curve and life combination is superior to a 64 R3 life and dispersion curve.

b. Please confirm that in Ex. SDGE-34-WP, p. 238, SDG&E's analysis of account G367, also shows R3 as the 14th best Iowa curve, but shows the best-fitting R3 curve as 142nd overall, not 14th.

c. Please provide an updated version of Ex. SCG-36-WP, p. 163 which shows the ranking of the 64 R3 curve for Account G367 as compared to all the curve and life combinations considered, comparable to the "Rank" column shown for account G367 in Ex. SDGE-34-WP, p. 238.

d. Please confirm that the best-fitting curve and life combination for Account G367 in SCG's analysis is not the 64 R3 combination it is proposing, but rather is a 97 R2 combination (Ex. SCG-36-WP, p. 163).

e. Please explain why SCG chose the best-fitting R3 curve over the best fitting R2 curve for Account G367, when the R2 curve was ranked first in SCG's own analysis.

SoCalGas Response 234

a. Exhibit SCG-36-WP, page 163 shows the ranking of the best fitting curves (Iowa curve type and average service life combination) based on the sum of the least squared deviations. There is only one mathematically best fit average service life for each curve type based the same observed life data. "The intent is not to select the one *best* curve but to consider the indicated patterns."[1] Other factors are considered in selecting the proposed life curve.

[1] Public Utility Depreciation Practices, NARUC, 1996, page 125.

SoCalGas Response 234-Continued:

As stated in Exhibit SCG-36-R at FN-12:10-13, "[t]he service life and curve dispersion selections…for each account were derived from statistical analysis of historical data, visual matching to Iowa curves, informed judgment, discussions with field personnel, and expectations about the future projection of life and dispersion curve and net salvage." SoCalGas proposes to retain the 64 R3 curve, ranked 14th, which is the same as what was proposed and approved in its Test Year (TY) 2016 GRC. Upon consideration of the various factors outlined above, there are no indications that the current life curve should be modified.

b. SoCalGas objects to this request on the basis that it is irrelevant and outside the scope of SoCalGas' sponsored testimony and area of responsibility. Inquiries pertaining to the material sponsored by SDG&E should be directed at SDG&E.

c. SoCalGas objects to this request on the basis that it is irrelevant and outside the scope of SoCalGas' sponsored testimony and area of responsibility. Inquiries pertaining to the material sponsored by SDG&E should be directed at SDG&E. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' proposals as contained in its prepared testimony and workpapers are based on its own completed depreciation study. Therefore, SoCalGas has not prepared, and does not possess, the requested information.

d. Please refer to the response to Question 234(a) above. The 97 R2 best fit curve is mathematically ranked higher than the proposed 64 R3 best fit curve. Factors other than mathematical matching are considered.

e. Please refer to the response to Question 234(a) above. The highest-ranking curve of 97 R2 results in an increase to the average service life of 33 years, from the currently authorized life of 64. In consideration of factors other than mathematical matching, SoCalGas believes that proposing the 97 R2 curve would not be prudent and unnecessarily extend the service lives of the assets in that account. SoCalGas expects the current life and retirement dispersion to continue and absent any indications to modify the life/curve.

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235. Ex. SCG-36, pp. 18:25-19:3 discusses FERC account G376 (Distribution Mains), where SCG currently uses a 68 R2.5 curve but is proposing to change to 68 R3 curve, "ranked 13th on the best fit curve results."

a. Please confirm that Ex. SCG-36-WP, p. 173, shows that the best-fitting R3 curve ranks 13th in a ranking of the best-fitting Iowa curve types for account G376, but does not rank as the 13th best combination of curve and life, because higher ranked curves may have multiple alternative lives for which that curve and life combination is superior to a 68 R3 life and dispersion curve.

b. Please confirm that in Ex. SDGE-34-WP, p. 246, SDG&E's analysis of account G376, shows that the 13th best Iowa curve is ranked 104th overall, not 13th.

c. Please provide an updated version of Ex. SCG-36-WP, p. 173 which shows the ranking of the 68 R3 curve for Account G376 as compared to all the curve and life combinations considered, comparable to the "Rank" column shown for account G376 in Ex. SDGE-34-WP, p. 246.

d. Please confirm that the best-fitting R2.5 curve and life combination for Account G376 in SCG's analysis is 89 R2.5, where the R2.5 curve is the 7th best fitting curve as opposed to SCG's proposed 13th best fitting curve (Ex. SCG-36-WP, p. 173).

e. Please explain why SCG is proposing to abandon the R2.5 curve family it is currently using for Account G376 and change to an R3 curve, even though the best R2.5 curve and life combination is a better fit to the data, per SCG's own analysis.

SoCalGas Response 235:

a. Exhibit SCG-36-WP, page 173 shows the ranking of the best fitting curves (Iowa curve type and average service life combination) based on the sum of the least squared deviations. There is only one mathematically best fit life for each curve type based on the same observed life data. "The intent is not to select the one *best* curve but to consider the indicated patterns."[2] Other factors are considered in selecting the proposed life curve.

[2] *Id*.

SoCalGas Response 235:-Continued:

As stated in Exhibit SCG-36-R at FN-12:10-13, "[t]he service life and curve dispersion selections…for each account were derived from statistical analysis of historical data, visual matching to Iowa curves, informed judgment, discussions with field personnel, and expectations about the future projection of life and dispersion curve and net salvage." SoCalGas proposes retaining the current average life of 68 but moving to an R3 curve, which is ranked 13th.

b. SoCalGas objects to this request on the basis that it is irrelevant and outside the scope of SoCalGas' sponsored testimony and area of responsibility. Inquiries pertaining to the material sponsored by SDG&E should be directed at SDG&E.

c. SoCalGas objects to this request on the basis that it is irrelevant and outside the scope of SoCalGas' sponsored testimony and area of responsibility. Inquiries pertaining to the material sponsored by SDG&E should be directed at SDG&E. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' proposals as contained in its prepared testimony and workpapers are based on its own completed depreciation study. Therefore, SoCalGas has not prepared, and does not possess, the requested information.

d. Please refer to the response to Question 235(a) above. The 89 R2.5 best fit curve is mathematically ranked higher than the proposed 68 R3 best fit curve. Factors other than mathematical matching are considered.

e. As explained in Exhibit SCG-36-R at FN-18:25 to FN-19:3, SoCalGas expects the average service life for Account G376 to remain unchanged at 68 years. The higher ranked best fit curve of 89 R2.5 results in an increase of 21 years which SoCalGas believes would be an excessive extension of service life considering distribution mains have a design life of 50 years. Therefore, SoCalGas proposes the R3 curve over the R2.5 curve as less emphasis is placed on the historical dispersion since SoCalGas' retirements for distribution mains are systematically applied using the currently authorized curve.

236. Ex. SCG-36, p. 19:15-18 discusses FERC account G380 (Services), where SCG currently uses a 67 R2 curve and is proposing no change, while conceding that the R2 curve "ranked 6th on the best fit curve results."

a. Please confirm that Ex. SCG-36-WP, p. 177, shows that the best fitting R2 curve ranks 6th in a ranking of the best-fitting Iowa curve types for account G380, but does not rank as the 6th best combination of curve and life, because higher ranked curves may have multiple alternative lives for which that curve and life combination is superior to a 67 R2 life and dispersion curve.

b. Please confirm that in Ex. SDGE-34-WP, p. 250, SDG&E's analysis of account G376, shows that the 6th best Iowa curve is ranked 38th overall, not 6th.

c. Please provide an updated version of Ex. SCG-36-WP, p. 177 which shows the ranking of the 67 R2 curve for Account G380 as compared to all the curve and life combinations considered, comparable to the "Rank" column shown for account G380 in Ex. SDGE-34-WP, p. 250.

d. Please confirm that the best-fitting R1.5 curve and life combination for Account G380 in SCG's analysis is 93 R1.5, where the R1.5 curve is the 4th best fitting curve as opposed to SCG's proposed 6th best fitting curve (Ex. SCG-36-WP, p. 177).

e. Please explain why SCG is proposing to use an R2 curve for Account G380, even though there are better-fitting R-curves in the R0.5, R1, and R1.5 families, per SCG's own analysis.

SoCalGas Response 236:

a. Exhibit SCG-36-WP, page 177 shows the ranking of the best fitting curves (Iowa curve type and average service life combination) based on the sum of the least squared deviations. There is only one mathematically best fit life for each curve type based on the same observed life data. "The intent is not to select the one *best* curve but to consider the indicated patterns."[3] Other factors are considered in selecting the proposed life curve.

[3] *Id*.

SoCalGas Response 236:-Continued

As stated in Exhibit SCG-36-R at FN-12:10-13, "[t]he service life and curve dispersion selections…for each account were derived from statistical analysis of historical data, visual matching to Iowa curves, informed judgment, discussions with field personnel, and expectations about the future projection of life and dispersion curve and net salvage." SoCalGas proposes retaining the 67 R2 curve, ranked 6th, which is the same as what was proposed and approved in its TY 2016 GRC. Upon consideration of the various factors outlined above, there are no indications that the current life curve should be modified.

b. SoCalGas objects to this request on the basis that it is irrelevant and outside the scope of SoCalGas' sponsored testimony and area of responsibility. Inquiries pertaining to the material sponsored by SDG&E should be directed at SDG&E.

c. SoCalGas objects to this request on the basis that it is irrelevant and outside the scope of SoCalGas' sponsored testimony and area of responsibility. Inquiries pertaining to the material sponsored by SDG&E should be directed at SDG&E. Subject to and without waiving these objections, SoCalGas responds as follows: SoCalGas' proposals as contained in its prepared testimony and workpapers are based on its own completed depreciation study. Therefore, SoCalGas has not prepared, and does not possess, the requested information.

d. Please refer to the response to Question 236(a) above. The 93 R1.5 best fit curve is mathematically ranked higher than the proposed 67 R2.5 best fit curve. Factors other than mathematical matching are considered.

e. Please refer to the response to Question 236(a) above. SoCalGas expects the current average life and curve to continue at the currently authorized 67 R2, absent any indications to modify the life/curve. The mathematically higher ranked best-fit Iowa curves have average services lives that SoCalGas believes are excessive and not reasonable projections of the life/curve for the assets in this account. The life curve projection should not be based solely on mathematical ranking.[4]

[4] *Id*. at 126.

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237. In Ex. SCG-44, p. 3:1-4, arguing in support of a 4-year GR cycle instead of a 3-year cycle, SCG claims that a longer cycle "would allow the utility to maintain focus on safe, and reliable operations."

a. SCG is currently operating in a 3-year GRC cycle. Does SCG claim that it has failed to maintain focus on safe and reliable operations during this GRC cycle? If so, please document all such failures.

b. Does SCG claim that if its request for a 4-year GRC cycle is denied, it will fail to maintain focus on safe and reliable operations during the 2019-2021 period?

SoCalGas Response 237:

a. No. As stated in the direct testimony of witness Jawaad A. Malik, p. 3:1-13, "SoCalGas supports the adoption of the 4-year GRC term because it would free up scarce resources needed to litigate a GRC every three years and to allow the utility to maintain focus on safe, and reliable operations and customer responsibilities. Over the last several years, the GRC filing process has become more complex and subject to extended delays, which is now compounded by new processes, reviews, and reporting required by the Risk OIR decisions incorporating Safety Model Assessment Proceeding (S-MAP) and Risk Assessment and Mitigation Phase (RAMP) procedures.
Moving to a four-year GRC cycle would give both the Commission and the utilities more flexibility to manage additional responsibilities created by the integrated S-MAP, RAMP and GRC proceedings. The four-year GRC term would reduce the administrative burden on all parties, and allow the utility to more effectively operate its business while implementing new risk mitigation and accountability structures, processes and reporting requirements."

b. No. Please see response above.

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238. Ex. SCG-44-WP, do the plant additions for rate base shown on p. 7, lines 7-16 include the PSEP costs shown starting on p. 16? Please clarify how PSEP is integrated into SCG's proposed post-test-year ratemaking proposal.

SoCalGas Response 238:

No, the plant additions for rate base shown on p. 7, lines 7-16 do not include the PSEP costs shown starting on p. 16.

As stated in the direct testimony of witness Jawaad A. Malik, p. 9, lines 15 – 21 and p. 10, line 13 – 15. "SoCalGas proposes that the PSEP capital-related costs not fully reflected in the TY 2019 revenue requirement be included as part of the PTY attrition mechanism. The adjustment is necessary because majority of PSEP capital expenditures are expected to close to plant in service in 2020, 2021, and 2022, and therefore the associated capital-related costs will not be fully reflected in the TY 2019 revenue requirement."

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239. In Ex. SCG-44-WP, p. 10, lines 1-7, please explain why a net-to-gross multiplier is applied to depreciation-related revenue requirements, when depreciation is an expense item and not an income item subject to income taxes.

SoCalGas Response 239:

In Ex. SCG-44-WP, p.10 lines 1-7, a net-to-gross multiplier is applied to depreciation expense to account for the difference between book depreciation and regulatory tax depreciation. When SoCalGas files a tax return, SoCalGas would add back book depreciation and deduct regulatory tax depreciation (federal and state) in its computation of taxable income. SCG-44-WP, p.12 lines 1 – 18, reflect the increase in federal tax depreciation and state tax deprecation.

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240. In Ex. SCG-44, p/ 11, lines 11-17, SCG calculates a post-2019 increase in revenue requirements attributable to preferred stock.

a. When was the last time SCG issued preferred stock?

b. Does SCG have any expectations that it will issue preferred stock during the 2018-2022 period? If so, please describe those expectations.

SoCalGas Response 240:
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 outside the scope of the pending proceeding and not relevant to the subject matter involved. Subject to and without waiving the foregoing objection, SDG&E responds as follows.

Included in the capital component of revenue requirement are Depreciation, Taxes, and Return. Included in the Return is a Preferred Stock component, which is approved in the Cost of Capital Proceeding. SoCalGas does not calculate an increase specifically attributable to preferred stock in this application nor is SoCalGas asking for an increase in Preferred Stock. Preferred Stock levels and issuances are out of scope in a General Rate Case and is a matter for a Cost of Capital Proceeding. With that understanding, the following is SoCalGas' response:

a. The last time SCG issued preferred stock was in January 1993.

b. Currently SCG does not plan to issue preferred stock during the 2018-2022 period.