CUE DATA REQUEST
CUE-SDG&E-DR-02
SDG&E 2019 GRC – A.17-10-007
SDG&E SUPPLEMENTAL RESPONSE
DATE RECEIVED: JANUARY 5, 2018
DATE RESPONDED: FEBRUARY 12, 2018
SUPPLEMENTAL: APRIL 6, 2018

18. 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. Please confirm that this is an accurate statement.

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

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

ii. The number of customers on the SDG&E gas distribution system.

iii. The ratio of customers per SDG&E employee for the SDG&E gas distribution system

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

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

ii. The number of customers on the SDG&E gas distribution system.

iii. The ratio of customers per SDG&E employee for the SDG&E gas distribution system

SDG&E Supplemental Response 18:

Based on a meet-and-confer with CUE on March 22, 2018, the desired number of historical Gas Distribution employees (head count) would be found in the response to original Question 18.b in the first row of Table 1 of that response. This is repeated in the first row of Table 1R below. This would relate to the personnel available and responsive to a major emergency. The historical values do not include contractors that might respond or employees from mutual aid with other companies. In addition, Customer Service personnel which would also respond are not included here as they are not represented in SDG&E-04 adjusted recorded or forecast data.

CUE DATA REQUEST
CUE-SDG&E-DR-02
SDG&E 2019 GRC – A.17-10-007
SDG&E SUPPLEMENTAL RESPONSE
DATE RECEIVED: JANUARY 5, 2018
DATE RESPONDED: FEBRUARY 12, 2018
SUPPLEMENTAL: APRIL 6, 2018

SDG&E Supplemental Response 18 Continued:
Relative to forecasted values, the FTE forecast from applicable workpapers in Exhibit SDG&E-04-WP-R and SDG&E-04-CWP are also shown in Table 1R.

Table 1R

2019 GRC SDG&E Gas Distribution - CUE-SDG&E-DR-02
Gas Distribution Employee Count

	2012	2013	2014	2015	2016	2017	2018	2019
a. Gas Employees[1]	345	334	374[2]	373	385	383	--	--
b. FTE[3] Forecast							461	509

Notes:
1/ Historical data as shown in original response to CUE 02 Q 18.b Table 1
2/ Starting from 2014, the Traffic Control group was added to the Gas Distribution cost centers
3/ Forecasted FTE is from Exhibit SDG&E-04-WP-R and SDG&E-04-CWP, the sum of FTEs for all O&M and Capital categories

SDG&E Original Response 18:

a. Yes, as of the end of 2016, the workforce of gas distribution employees including front-line construction crews, technical planners, and engineers located at five operating bases and one technical office totaled 385. These employees are responsible for maintaining safe and reliable operation of the gas distribution system.

b. The response to Question 18.b is provided in Table 1 below:

Table 1

2019 GRC SDG&E Gas Distribution - CUE-SDG&E-DR-02
Gas Distribution Employee and Customer Count

	2012	2013	2014	2015	2016	2017
a. Gas Employees	345	334	374[2]	373	385	383
b. Gas Customers[1]	859,314	864,157	867,449	872,883	878,100	883,206
Ratio of b/a	2491	2587	2319	2340	2281	2306

Notes:
1/ From SDG&E R2 Report - Report of Customers, Sales and Revenues
2/ Starting from 2014, the Traffic Control group was added to the Gas Distribution cost centers

c. SDG&E 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

SDG&E Original Response 18 Continued:

waiving these objections, SDG&E responds as follows: SDG&E has forecasted Gas Distribution Operations and Maintenance (O&M) expenses necessary to support the GRC filing, as presented in Ex SDG&E-4-WP-R and the direct testimony of Gina Orozco-Mejia Ex SDG&E-04-R.

i. This data is not available.

ii. Customer forecasts, their description and methodology can be found in the testimony of Rose-Marie Payan, Exhibit SDG&E-37

iii. SDG&E does not forecast the ratio of customers per SDG&E employee for the SDG&E gas distribution system (from part i); therefore, this data is not available.

CUE DATA REQUEST
CUE-SDG&E-DR-02
SDG&E 2019 GRC – A.17-10-007
SDG&E SUPPLEMENTAL RESPONSE DATE
RECEIVED: JANUARY 5, 2018 DATE
RESPONDED: FEBRUARY 14, 2018
SUPPLEMENTAL: APRIL 6, 2018

23. Ex. SDGE-4, p. 5:13-14 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 SDG&E's pipeline infrastructure.

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

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

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

e. SDG&E'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?

SDG&E Supplemental Response 23:

Based on a meet-and-confer with CUE on March 22, 2018, reference to the two tables in the original response to Question 19 and 20 will satisfy this request. The original date of this data snapshot in these two tables was January 17, 2018.

SDG&E Original Response 23:

a. SDG&E 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, SDG&E 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:

   For purposes of this response we will define the pipeline infrastructure as the total miles of pipeline mains and services. Referring to Table 5 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

SDG&E Original Response 23 Continued:

of mains and services (pipeline infrastructure) are shown. This Table therefore will 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 = 2700/14,089 = 19.2% of the infrastructure is 31 years old.

Table 5

2019 GRC SDG&E Gas Distribution - CUE-SDG&E-DR-02
Miles of Gas Mains and Services by Decade of Installation[1] - (End of 2016)

	UNKNOWN	Pre-1940	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	2010-2019	TOTAL
Miles of Mains	0	187	276	1,157	1,113	1,494	1,556	1,047	1,013	228	8,071
Miles of Services[2]	0	47	194	965	815	1,230	1,144	741	695	186	6,018
Total Services and Mains	0	234	470	2,122	1,928	2,724	2,700	1,788	1,708	414	14,089

Notes:
1/ Data source - Annual Report for Calendar Year 2016 - Gas Distribution System SDG&E, DOT Report OMB No. 2137-0629
2/ Miles calculated using the average service length = 50 feet from the 2016 DOT Report

b. Historical Operations and Maintenance (O&M) expense for the period 2012 – 2016 can be found in workgroups 1GD000.000 through 1GD004.000 of Exhibit SDG&E-04-WP-R. This contains historical data for the complete set of the gas distribution workpapers. With the breakdown in O&M historical expense in these 12 groups, specific expenses of interest can be found by group. Financial data for year-end 2017 is not yet available.

c. SDG&E objects to 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, SDG&E responds as follows: SDG&E's filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SDG&E has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism. SDG&E does not forecast the average age of its pipeline infrastructure.

d. SDG&E objects to 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

SDG&E Original Response 23 Continued:

admissible evidence, and is outside the scope of this proceeding. Subject to and without waiving these objections, SDG&E responds as follows: SDG&E's filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SDG&E has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism. Forecasted Operations and Maintenance (O&M) expense for the period 2017-2019 can be found in workgroups 1GD000.000 through 1GD004.000 of Exhibit SDG&E-04-WP-R. This contains the forecasts for the complete set of the gas distribution workpapers. With the breakdown in O&M expense forecasts in these 12 groups, specific forecasts of interest can be found by group. SDG&E did not forecast expenses beyond the 2019 test year.

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

CUE DATA REQUEST
CUE-SDG&E-DR-02
SDG&E 2019 GRC – A.17-10-007
SDG&E SUPPLEMENTAL RESPONSE
DATE RECEIVED: JANUARY 5, 2018
DATE RESPONDED: FEBRUARY 14, 2018
SUPPLEMENTAL: APRIL 6, 2018

40. By what year does SDG&E anticipate completing replacement of all:

a. Steel pipe installed before 1947

b. Non-piggable high-pressure pipeline installed before 1947

c. Medium pressure steel mains installed before 1947.

SDG&E Supplemental Response 40:

As stated in the original response to Question 40, SDG&E cannot accurately forecast when the replacement of pre-1947 pipelines will be completed. For completion dates requested in Question 45 and 46, the table below provides an approximate time frame. The time to complete each project is only an estimate. An accurate forecasted completion date for these projects is not currently possible to determine since the number of replacements or removals, their locations, and the extent of work required will be determined in the analysis phase of each project.

Table 2R

2019 GRC SDG&E Gas Distribution - CUE-SDGE-DR-02
RAMP Pipeline Component Removal Incremental Addition Project Time Frame

RAMP Activity	Testimony Section	RAMP Risk ID:	Expense Element	Forecasted Project Start Year	Estimated Time to Complete Project
Oil Drip Piping Removal[1]	IV. K (BC 510), Page GOM-96	Risk ID 16	Capital	2017 (Started Planning)	3 years
Buried Piping in Vaults Replacement[2]	IV. K (BC 510), Page GOM-96	Risk ID 16	Capital	2018	2 years

Notes on Assumptions:

1/ Approximately 120 oil drips require removal. Each oil drip will require 2 PCF fittings, traffic control and 3 excavations per job.

2/ Approximately 50 vault locations with pipe and fittings that require replacement. Over 1300 Work orders require review to determine locations.

SDG&E Original Response 40:

a., b., c. SDG&E cannot accurately forecast when the replacement of the pre-1947 pipelines will be completed. Replacement mileage will depend on future GRC funding and prioritization with other risk-related projects. Decisions on what pipelines to replace and how much is dependent on the performance of the pipe and priority of replacement based on the level of hazard it presents. As explained in the response to Question 26.b, replacement of a pipeline involves several criteria. These criteria must be evaluated for each pipe replacement candidate for a decision when to replace a pipeline. Therefore, SDG&E cannot accurately forecast what year

CUE DATA REQUEST
CUE-SDG&E-DR-02
SDG&E 2019 GRC – A.17-10-007
SDG&E SUPPLEMENTAL RESPONSE
DATE RECEIVED: JANUARY 5, 2018
DATE RESPONDED: FEBRUARY 14, 2018
SUPPLEMENTAL: APRIL 6, 2018

SDG&E Original Response 40 Continued:
each of the categories in Question 40, subparts a, b, and c will be completed. See also the response to Question 38 regarding the inability to break out high-pressure steel, mains or services, medium-pressure steel, or piggability due to the format of the data kept for pipe replacements.

CUE DATA REQUEST
CUE-SDG&E-DR-02
SDG&E 2019 GRC – A.17-10-007
SDG&E SUPPLEMENTAL RESPONSE
DATE RECEIVED: JANUARY 5, 2018
DATE RESPONDED: FEBRUARY 14, 2018
SUPPLEMENTAL: APRIL 6, 2018

43. Please provide SDG&E's forecasts, for each year from 2018-22, inclusive, of:

a. The number of SDG&E regulator stations at year end

b. The number of new regulator stations to be installed that year

c. The number of pre-existing regulator stations to be replaced that year

d. The forecasted unit cost for new regulator stations

e. The forecasted unit cost for regulator station replacements

SDG&E Supplemental Response 43:

The forecast for regulator station installations is consistent with recent past history with installation numbers and station costs as indicated in the original response to Question 43.d. and e.

SDG&E Original Response 43:

SDG&E 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, SDG&E responds as follows: SDG&E's filed application follows the Rate Case Plan, which identifies forecasted costs for a Test Year of 2019. SDG&E has not forecasted specific funding for years beyond 2019, which is addressed by the attrition mechanism.

a., b., c., The number of new and replacement regulator stations cannot be forecasted year by year into the future as it depends on customer growth, pipeline system conditions, and response to material or component failures.

d., e. SDG&E's cost for new and replacement gas distribution district regulator stations can range from $500,000 to $1,500,000. Year-by-year unit costs cannot be forecasted accurately since station costs can widely vary due to many parameters, including station size, site-specific system tie-in requirements, and local municipal work time and street

SDG&E Original Response 43 Continued:

resurfacing requirements. Typically, SDG&E installs from three to five new district regulator stations annually.

45. Ex. SDGE-4, p. 96:6-17, addresses oil drip piping removal.

a. How many oil drip lines and containers did SDG&E have as of the end of 2017?

b. When does SDG&E anticipate completing removal of all oil drip lines and containers from its system?

CUE DATA REQUEST
CUE-SDG&E-DR-02
SDG&E 2019 GRC – A.17-10-007
SDG&E SUPPLEMENTAL RESPONSE
DATE RECEIVED: JANUARY 5, 2018
DATE RESPONDED: FEBRUARY 14, 2018
SUPPLEMENTAL: APRIL 6, 2018

SDG&E Supplemental Response 45:

Please see the response to Question 40.

SDG&E Original Response 45:

a. Removal of oil drip piping facilities will be completed in two phases. The first phase is the review and field evaluation of 44 work orders for installation locations that have oil drip lines or containers. This phase is the O&M portion and is described in Exhibit SDG&E-04-R, p. GOM-60. The second phase, once the number of oil drip locations are determined, is the capital expense phase for the field removal of the oil drip facilities. That phase is described in Exhibit SDG&E-04-R, p. GOM-96.

   The first phase's purpose is to determine the exact number of oil drip locations requiring removal through the work order analysis and field review. That phase has not been completed yet, and therefore an exact number is unknown at this time. It is estimated that there are 120 locations with oil drip piping facilities requiring removal.

b. As indicated in response to Question 45.a, the first phase of review and field evaluation has not been completed. An estimate of the completion date for the removals is not possible until the number oil drip facilities and the extent of work required have been determined in phase one.

CUE DATA REQUEST
CUE-SDG&E-DR-02
SDG&E 2019 GRC – A.17-10-007
SDG&E SUPPLEMENTAL RESPONSE
DATE RECEIVED: JANUARY 5, 2018 DATE
RESPONDED: FEBRUARY 14, 2018
SUPPLEMENTAL: APRIL 6, 2018

46. Ex. SDGE-4, p. 96:18-27, addresses replacement of buried piping in vaults.

a. How many such vaults did SDG&E have as of the end of 2017?

b. When does SDG&E anticipate completing replacement of all buried pipeline in vaults from its system?

SDG&E Supplemental Response 46:

Please see the response to Question 40.

SDG&E Original Response 46:

a. Replacement of buried high-pressure piping in vaults will be completed in two phases. The first phase is the review and field evaluation of 1,357 work orders for installation locations that have piping that requires replacement. This phase is the O&M portion and is described in Exhibit SDG&E-04-R, p. GOM-61. The second phase, once the number of locations are determined with piping requiring replacement, is the capital expense phase for the field replacement of the vault piping. That phase is described in Exhibit SDG&E-04-R, p. GOM-96.

   The first phase's purpose is to determine the exact number of vault locations requiring piping replacement through the work order analysis and field review. That phase has not been completed yet, and therefore an exact number of affected vaults is unknown at this time. It is estimated that there are 50 vault locations with pipe and fittings requiring replacement.

b. As indicated in response to Question 46.a, the first phase of work order review and field evaluation has not been completed. An estimate of the completion date for all the vault replacement work is not possible until the number of vaults with piping requiring replacement and the extent of work required have been determined in phase one.