1. SCG-04, page GOM-104 explains that...

"In developing the service replacements forecast, historical expenditures and work units for 2012 through 2016 were evaluated. SoCalGas replaced an average of 7,574 service lines per year under this work category during the period 2012 through 2016. As discussed above, the main drivers for service line replacement are leakage and corrosion."

a. Since 2012, what proportion of the replacements addressed each of i) leaks due to Dig-Ins, ii) leaks due to Corrosion, iii) leaks due to factors other than Dig-Ins and Corrosion, and iv) non-leaking but corroded pipe?

b. Since 2012, how has the proportion of hazardous leaks as a percentage of total leaks changed? Please explain.

c. What is SCG's target percentage for what the company deems an acceptable proportion of hazardous leaks? Please explain.

SDG&E and SoCalGas Response 01:

a. Please see Table 1.A below for the number of service replacements addressed due to i) leaks due to Dig-Ins, ii) leaks due to Corrosion, and iii) leaks due to factors other than Dig-Ins and Corrosion. SoCalGas does not track replacements due to non-leaking corroded pipe, and therefore, the data is not available.

Table 1.A Leaks addressed through Service Replacement/Cause of Replacement

Cause Category	2012	2013	2014	2015	2016
i. Damage	2	7	16	33	25
ii.Corrosion	542	546	1,284	1,280	1,156
iii.Other Factors	37	46	84	156	135

b. Please see Table 1.B below for the proportion of hazardous leaks as a percentage of total leaks found on services that were resolved through replacement. In 2014, SoCalGas increased the number of service replacements to resolve leaks.

Cause Category	2012	2013	2014	2015	2016
Hazardous Leaks Resolved	454	384	703	818	707
Total Leaks Resolved	851	820	2,326	2,000	1,712
% Hazardous vs Total Leaks					
Resolved	53%	47%	30%	41%	41%

Table 1.B Leaks addressed through Service Replacements

SDG&E and SoCalGas Response 01 Continued:

c. SoCalGas prudently addresses every hazardous leak with prompt action and continuously works until the leak is either temporarily or permanently repaired and the conditions are no longer hazardous. Therefore, while the term "acceptable proportion" in the question is vague and ambiguous, SoCalGas does not recognize an "acceptable" target percentage for the proportion of hazardous leaks.

2. SCG-04, page GOM-105 explains that...

"With the increase in leak survey and leak inventory reduction activities previously discussed, as well as an increasingly aging infrastructure, SoCalGas forecasts service line replacements at the five-year (2012 through 2016) trend to mitigate potential risks associated with pipeline integrity, system reliability, and public safety. This forecast methodology best represents the increasing requirements of service line replacement work qualified on an annual basis and captures the various challenges encountered during the construction activity."

a. Considering this statment, and the monotonically-increasing, linear forecasting model used, does this mean SCG has not yet reached an equilibrium replacement rate for services? Please comment, including whether Sempra has determined an equilibrium service replacement rate (i.e., the replacement rate which would just cover needed replacements emerging during the year, and leaving no backlog leaks).

SDG&E and SoCalGas Response 02:

a. SoCalGas has not forecasted an "equilibrium service replacement rate," defined in the question as the rate at which backlog repairs would equal the rate of newly-emergent repairs, leaving a static inventory. Additional repairs beyond an equilibrium rate would be necessary to reduce an existing backlog.

3. SCG-04, page GOM-5, discusses the distinctions between gas distribution expenditures caused by aging infrastructure, system expansion and customer base growth:

a. Please tabulate the total proposed O&M and capital costs associated with each of the aforementioned causative factors listed, over the GRC term (the years 2019 through 2021, inclusive).

SDG&E and SoCalGas Response 03:

Please see SoCalGas' response to CFC-Sempra-2019 #9 Question 3.

4. SCG-04, pages GOM-44 and -45, describe cost drivers influencing the metering and regulation budget:

"Work activities within the M&R workgroup are driven by regulatory requirements as well as the need to safeguard the safety and integrity of the pipeline system, thus mitigating risks associated with hazards to public and employee safety and system reliability... Some of these activities are driven by the age and type of equipment installed, with generally older or obsolete equipment requiring more maintenance... Furthermore, the RAMP Report identified the need to continue M&R activities to respond to the incremental work anticipated in the forecast period. The costs associated with this RAMP activity are included in the M&R base forecast for TY 2019."

- a. How has the average age of SCG's Mains changed since 2010? Please explain.
- b. How has the average age of SCG's Service Lines changed since 2010? Please explain.

SDG&E and SoCalGas Response 04:

SoCalGas notes that the testimony citation referenced by CFC in this Q4 refer to measurement and regulation (M&R), whereas questions a. and b. appear to address mains and service lines. Therefore, SoCalGas responds to these questions by addressing mains and service lines only.

- a. Please see SoCalGas' response to CFC-Sempra-2019 #9 Question 2. Since 2010, the average age of mains has increased because SoCalGas' infrastructure has aged at a higher rate than replacements.
- b. Please see SoCalGas' response to CFC-Sempra-2019 #9 Question 2. Since 2010, the average age of services has increased because SoCalGas' infrastructure has aged at a higher rate than replacements.

5. SCG-04, page GOM-78, describes staff additions aimed at improving leak management activities:

"In order to adequately manage the leak inventory reduction effort previously discussed under main maintenance activities (Section III.A.5), SoCalGas is adding three project advisors responsible for implementing leak analysis and process strategy. They will schedule work and coordinate with field crews and contractors to verify that repairs and service replacements are completed on time. They will also develop reports to track cost, set up performance metrics, manage contractors, and coordinate material and fleet needs. SoCalGas is requesting an incremental \$298,000 over the adjusted base forecast for TY 2019."

a. As part of the performance metrics that will be developed, does SCG intend to track leak performance against peer gas distribution utilities? Please explain.

b. What gas distribution utilities does SCG consider as peers for performance comparison purposes? Please comment.

c. Generally, how does SCG's existing leak rate (per distribution system mile) compare to peer gas distribution utilities? Please comment.

SDG&E and SoCalGas Response 05:

SoCalGas objects to the 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 the foregoing objections, SoCalGas responds as follows:

The scope of these questions is best addressed by the best practices and leak performance of gas distribution utilities within the Senate Bill (SB) 1371 Rulemaking 15-01-008, which is a separate proceeding being handled outside of the GRC proceeding. SB 1371 focuses 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 tacilities. SoCalGas does not track leak performance against peer gas distribution utilities. Although SoCalGas is aware of other utility companies, it neither compares nor seeks to compare performance measures, in part because of the differences in how the utilities track and record their data. For instance, with regards to known leaks, SoCalGas' data values tend to be higher because it includes known leaks in the existing inventory, which is excluded by other gas distribution utilities.

6. SCG-04, page GOM-7, describes the Dig Safe Act of 2016:

"In 2016, the California Governor signed SB 661, named the Dig Safe Act of 2016, which added enforcement to the digging law by establishing the California Underground Facilities Safe Excavation Board. The Board is authorized to take action against those parties who violate the excavation law under California Government Code Section 4216. The Dig Safe Act is expected to require more excavators to notify USA, which will add upward pressure to an already increasing USA ticket volume in California. Other notable impacts of the Dig Safe Act include the requirement for marking the presence of known abandoned lines and keeping abandoned line records, which will increase time spent locating each ticket and create additional work for supporting activities."

a. Of the excavation damage affecting the SCG distribution system, what proportion is due to 'first party' (i.e., company employee excavation damage) and how has that proportion been changing since 2010? Please comment, and identify any expenditures within the GRC application aimed at reducing first party excavation damage.

SDG&E and SoCalGas Response 06:

Using the definition provided by CFC in this question, SoCalGas recorded less than one percent of damages attributed to 'first party' excavation. Since the end of 2016, SoCalGas has had zero 'first party damages.' SoCalGas' activities that include the objective of reducing 'first party' damages include mapping system enhancements, locate and mark training, crew operations training, maintenance of gas standards, and investigation of excavation damages.