

TURN DATA REQUEST
TURN-SCG-DR-05
SOCALGAS 2016 GRC – A.14-11-004
SOCALGAS RESPONSE
DATE RECEIVED: FEBRUARY 12, 2015
DATE RESPONDED: FEBRUARY 27, 2015

TURN-SCG-5 (Gas Distribution)

1. Regarding SCG-04-WP, p. 138 of 182, Field Services Leadership and Operations Assessment, the supplemental workpaper includes a “project duration” column that indicates that the projects planned for 2016 funding last from one to six months.
 - a. What is “project duration” intended to indicate for purposes of this table?
 - b. Does Southern California Gas Company anticipate incurring costs associated with Field Services Leadership & Operations Assessment in 2017 and 2018? If so, please provide the forecast cost of this initiative for 2017 and for 2018.

SoCalGas Response 01:

- a. In the supplemental workpaper SCG-FBA-USS-SUP-006 on page 138, “Project duration” indicates the estimated number of months that each project shown in the table will take to complete. The duration is used to calculate the number of contractor or internal labor hours (columns [E] – [G]). These hours are used to calculate the labor and non-labor totals (columns [H] – [K]) and the number of FTEs (column [M]). All calculation formulas are shown below the column headings in the supplemental workpaper table.
- b. Gas Distribution does anticipate that one-time costs associated with the Field Services Leadership & Operations Assessment cost center will continue after the test year. An example of a one-time expense is the Distribution Monitoring and Control Program Assessment and Blueprint Development. This cost center also includes costs associated with the vice president and assistant for the Gas Field Operations organization (which are forecasted recurring costs). Although SoCalGas has not forecasted other one-time costs for this category, other one-time expenses can be captured in this category beyond the test year.

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2. Regarding SoCalGas response to ORA DR 21-2c and the backlog of pending cathodic protection packages:
- a. Please provide the number of cathodic protection packages found to require remediation, by year from 2009 through 2013, and forecast to require remediation by year from 2014 through 2018.
 - b. Please provide the number of cathodic protection packages remediated, by year, from 2009 through 2013, and forecast to be remediated from 2014 through 2018.
 - c. Please provide the number of cathodic protection packages to be remediated that were backlogged at the end of each year from 2009 through 2013, matching the numbers in the graphic on p. 6 of SoCal’s response to ORA.
 - d. Please identify and explain the rationale for not reducing the number of pending cathodic protection “packages” for additional remediation over the period from 2009 through 2013.

SoCalGas Response 02:

- a. The number of cathodic protection packages that required remediation in the years 2011 – 2013 is provided in the table below. The numbers for 2009 and 2010 are in a legacy system and are not readily accessible. SoCalGas implemented a new electronic SAP tracking technology in 2010.

Year	2011	2012	2013
Total Packages Requiring Remediation	3,612	3,519	3,439

Gas Distribution did not explicitly forecast the total number of cathodic protection packages requiring remediation in each year from 2014 to 2018. Instead, the forecast for the cathodic protection system enhancements was based on the cathodic protection backlog. Additionally, the total forecast for Cathodic Protection was not based on the number of packages forecasted, but instead on historical spending levels and what it will take to reduce the backlog.

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SoCalGas Response to Question 2, Continued:

- b. Please refer to ORA-SCG-DR-021-DAO, Question 7 for the number of cathodic protection packages remediated from 2009 through 2013:

The table below shows the number of cathodic protection packages remediated in the years 2011 through October 2014. The numbers for 2009 and 2010 are in a legacy system and are not readily accessible. SoCalGas implemented a new electronic SAP tracking technology in 2010.

<i>Year</i>	<i>Cathodic Protection Packages Remediated</i>
<i>2011</i>	<i>3,346</i>
<i>2012</i>	<i>2,876</i>
<i>2013</i>	<i>3,221</i>
<i>2014 Through October</i>	<i>2,736</i>

Gas Distribution does not track the costs associated with remediated cathodic protection packages separately, so the O&M and capital costs for this specific activity are not available.

Gas Distribution did not forecast the total number of packages to be remediated in each year from 2014 to 2018. As stated in Question 2.a. above, the forecast for the cathodic protection system enhancements was based on the cathodic protection backlog. Additionally, the total forecast for Cathodic Protection was not based on the number of packages forecasted, but instead on historical spending levels and what it will take to reduce the backlog.

- c. Please see the requested data for 2010 – 2013 in the table below:

Year	2010	2011	2012	2013
Cathodic Protection Packages Requiring Remediation at Year End	796	772	1,486	1,769

The year-end number for 2009 is in a legacy system and is not readily accessible. SoCalGas implemented a new electronic SAP tracking technology in 2010.

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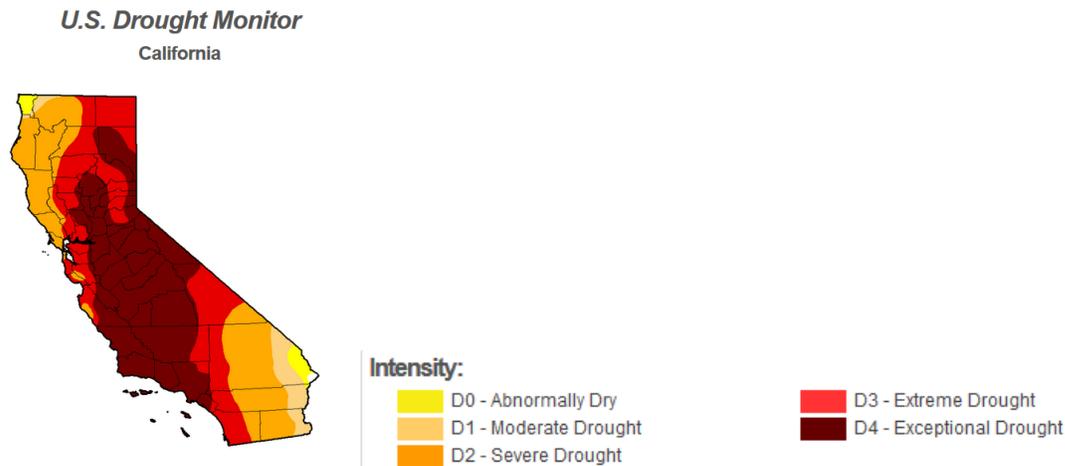
SoCalGas Response to Question 2, Continued:

d. As discussed in Exhibit SCG-04, page FBA-29:

With an aging infrastructure and the multiple variables that impact the life expectancy of CP system components (weather and soil conditions, system damages, electric current interference, customer actions, and pipe coating condition), their effectiveness diminishes over time, requiring additional and more focused attention. Diminished CP effectiveness could lead to increased corrosion, a more rapid deterioration of the steel pipeline and subsequently, increased leakage, thus leading to potential risks associated with public safety and infrastructure integrity.

In recent years, Gas Distribution has seen an increase in some of the factors that diminish cathodic protection effectiveness, including the following:

- In densely populated areas, a significant number of underground substructures are suspected of interfering with cathodic protection electrical currents.
- Expanding passenger transportation systems interfere with cathodic protection electrical systems.
- Past construction methods, including certain types of pipe wrap are diminishing the effectiveness of cathodic protection systems.
- Many magnesium anodes are reaching the end of their useful lives.
- Anode depletion is being accelerated by drought conditions, as dry soil does not allow the current to travel as far and protect as much pipe. The image below shows the drought conditions currently being experienced in California.¹



¹ Additional drought information for California, including historical data, can be found on this website:
<http://droughtmonitor.unl.edu/Home/StateDroughtMonitor.aspx?CA>.

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SoCalGas Response to Question 2.d., Continued:

All of these factors and the aging infrastructure have led to an acceleration in the number of cathodic protection packages needing remediation at a faster rate than we were able to initially respond. Gas Distribution has put in place a remediation which includes applying more impressed current, deep well anodes, and replacement of magnesium anodes. It takes time and resources to ramp up field activities and capital installations, trouble shoot the causes across large territories impacted, plan remediation, obtain permits for impressed current installations, hire contractors to drill and install deep well anode beds, and replace individual anodes in order to address this situation.

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3. Please provide all quantitative analysis SoCalGas has performed regarding the cost-effectiveness of additional remediation for cathodic protection as compared to other leak prevention or safety measures SoCalGas is pursuing on its system.

SoCalGas Response 03:

SoCalGas has implemented mitigation techniques using longstanding practices developed over many years of experience at SoCalGas. It has not completed any additional analyses regarding the cost-effectiveness of additional remediation for cathodic protection as compared to other leak prevention or safety measures.

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4. Please provide all analyses relating the likelihood of leaks developing, or safety incidents occurring in pipe sections in need of additional cathodic protection remediation.

SoCalGas Response 04:

It is known that cathodic protection prolongs the useful life of steel pipelines. SoCalGas uses longstanding practices developed over many years of experience at SoCalGas to apply and maintain cathodic protection on its pipelines. SoCalGas has not completed any additional analyses relating to the likelihood of leaks developing, or safety incidents occurring in pipe sections in need of additional cathodic protection remediation.