Company: Southern California Gas Company (U904G)
Proceeding: 2019 General Rate Case
Application: A.17-10-007/-008 (cons.)
Exhibit: SCG-217

SOCALGAS

REBUTTAL TESTIMONY OF RENE F. GARCIA

(ADVANCE METERING INFRASTRUCTURE POLICY)

JUNE 18, 2018

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

SoCalGas
A Sempra Energy utility®

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SOCALGAS REBUTTAL TESTIMONY OF RENE F. GARCIA (ADVANCED METERING INFRASTRUCTURE)

I. INTRODUCTION

This rebuttal testimony regarding SoCalGas' request for Advanced Metering Infrastructure (AMI) addresses the following testimony from other parties:

- The Office of Ratepayer Advocates (ORA) as submitted by Ms. Monica Weaver (Exhibit ORA-10) in relation to Advanced Metering Infrastructure, dated April 13, 2018.
- ORA as submitted by Ms. Dao A. Phan (Exhibit ORA-11) in relation to Gas Distribution, dated April 13, 2018.
- The Coalition of California Utility Employees (CUE), as submitted by Mr. David Marcus, Exhibit CUE (Marcus), dated May 14, 2018.
- The Environmental Defense Fund (EDF), as submitted by Mr. Gregory Lander (Exhibit EDF-01), dated May 14, 2018.

In my rebuttal testimony I will address comments by EDF specific to AMI as well as comments by ORA and CUE in relation to other SoCalGas witness areas that are impacted by the AMI implementation.

As a preliminary matter, the absence of a response to any particular issue in this rebuttal testimony does not imply or constitute agreement by SoCalGas with the proposal or contention made by these or other parties. In addition, the forecasts contained in SoCalGas' direct testimony are based on information known at the time of testimony preparation.

A. ORA

The following is a summary of ORA's position(s) related to or impacting Advanced Meter.

In the report on Advanced Metering Infrastructure, ORA does not oppose or have other recommendations for any of the AMI requests, including the following:

- SoCalGas' TY 2019 request for AMI O&M expenses of $10.477 million[1]

[1] April 13, 2018, ORA Report on the Results of Operations for San Diego Gas & Electric Company [SDG&E] Southern California Gas Company [SoCalGas] Test Year 2019 General Rate Case [GRC],

- SoCalGas' business justification for DCU LTE Upgrade Capital project[2]
- SoCalGas' business justification for DCU Software Information Security Upgrade Capital project[3]
- SoCalGas' business justification for DCU Compliance Inspection Work Management Capital project[4]
- SoCalGas' analysis on AMI impacted business areas[5]

In the report on Gas Distribution, ORA witness Dao A. Phan (Exhibit ORA-11) recommends the following positions:

- Disallowance of 2018 Capital-related costs for curb meter installations associated with SoCalGas' AMI deployment[6]
- ORA states that AMI-related parts should not be funded in the 2019 GRC[7]

B. CUE

The following is a summary of CUE's position(s) in relation to Customer Services - Field and Meter Reading, an area affected by the AMI deployment:

- CUE assumes that the annual replacement rate should be 5% due to the 20-year expected useful life of the AMI module[8]

SDG&E Gas Transmission Capital, SCG Advanced Metering Infrastructure, Exhibit ORA-10 (Monica Weaver) at 14-15.

[2] *Id*. at 16.

[3] *Id*.

[4] *Id*.

[5] *Id*. at 17.

[6] April 13, 2018, ORA Report on the Results of Operations for SDG&E and SoCalGas Test Year 2019 GRC, SoCalGas Gas Distribution and Gas Control & System Operations/Planning, Exhibit ORA-11 (Dao Phan) at 82-84.

[7] *Id*.

[8] May 14, 2018, Opening Testimony of David Marcus on behalf of the Coalition of California Utility Employees [CUE], CUE (Marcus) at 29:5-7.

- CUE also claims a 1.92% failure rate should be applied to all AMI modules and therefore proposes an increase in SoCalGas' O&M expenses by $3.308 million to fund AMI module replacements[9]
- CUE states that SoCalGas' annual failure rate of 0.68% implies a 150-year module life[10]

C. EDF

The following is a summary of EDF's position(s) related to AMI testimony:

- EDF recommends reallocating "at least 10%" of the $10.477 million Advanced Meter Operations (AMO) funding request to a "Gas Electric Coordination" plan and related "Risk Mitigation"[11]

II. REBUTTAL TO PARTIES' PROPOSALS

A. ORA

ORA takes issue with the Customer Services - Field (CS-F) labor and non-labor capital expenses for curb meter replacements associated with the AMI implementation.

ORA recommends adopting the 2017 recorded expenditure of $1.278 million. However, ORA disputes SoCalGas' request of $2.032 million for 2018. The total capital funding needed for the curb meter replacements for 2017 and 2018 is $2.419 million.[12] ORA's recommended adoption of $1.278 million for 2017 results in a disallowance of the remaining $1.141 million associated with the pending curb meter replacements in 2018.

[9] *Id*. at 29:13-17.

[10] *Id*. at 29:11-13.

[11] May 14, 2018, Prepared Expert Testimony of Gregory Lander, on behalf of Environmental Defense Fund [EDF], Exhibit EDF-01 (Lander) at 22:515-520.

[12] In response to ORA-SCG-075-DAO, SoCalGas discovered a discrepancy in the information submitted in the testimony and workpaper. There are 22,162 curb meters remaining to be upgraded with the AMI technology as of the end of 2016, instead of the 26,600 curb meter count contained in the December 2017, Revised Direct Testimony of Gina Orozco-Mejia, on behalf of SoCalGas, Exhibit SCG-04-R (Orozco-Mejia). As a result, the 2017 - 2018 forecast should be reduced by $0.340 million from $2.759M to $2.419M.

1. ORA incorrectly states that the AMI deployment ended in 2017.

ORA states that, *"The [AMI] deployment period ended in 2017. Funding for AMI deployment projects also ended in 2017."* [13] Although AMI deployment was originally intended to be completed in 2017, SoCalGas was authorized a one-year extension by the Commission in Advice Letter 5134-G. SoCalGas filed Advice Letter 5134 on May 5, 2017 requesting the following: "Pursuant to Ordering Paragraph (OP) 8 of Decision (D.) 16-06-054, SoCalGas revises the AMIBA Preliminary Statement to: 1) extend the mechanism at least one year beyond the seven-year deployment period (2010-2017) through 2018, or until the associated costs and benefits are incorporated in a subsequent General Rate Case (GRC); and 2) establish separate subaccounts in the AMIBA to record costs associated with the deployment and post-deployment periods of the AMI project as well as for on-going meter reading costs in areas where the AMI network is not constructed." [14] The Commission approved SoCalGas' request contained in Advice Letter 5134-G, which was effective as of June 4, 2017.[15]

2. ORA incorrectly states that AMI-related parts should not be funded in the 2019 GRC; SoCalGas' 2018 Capital-related costs are not for AMI parts.

ORA asserts, "*SCG received the full funding for parts regardless when the parts were manufactured."* [16] ORA further states, *"Because SCG failed to receive the right parts by end of 2017 is insufficient reason to make ratepayers pay for them again."*[17] ORA's statements are based on a misunderstanding of the costs contained in this category. SoCalGas' capital funding request for curb meter replacements excludes AMI-related parts. As discussed by Ms. Orozco-Mejia (Ex. SCG-04-R), costs for all AMI modules and meters for curb meter installations are not included in

[13] Ex. ORA-11 (Phan) at 83:17-18.

[14] May 5, 2017, Advice Letter (AL) 5134-G, *Extension of AMI Balancing Account (AMIBA) and Updates to the Advanced Meter Infrastructure (AMI) Revenue Requirement*, effective June 4, 2017, *available at* https://www.socalgas.com/regulatory/tariffs/tm2/pdf/5134.pdf

[15] *Id*.

[16] Ex. ORA-11 (Phan) at 83-84.

[17] *Id*. at 84:5-6.

this cost category since these costs are funded by the AMI project implementation.[18] SoCalGas agrees with ORA that AMI should have already funded AMI parts for these remaining curb meter replacements, as this is in fact the case. SoCalGas' GRC request for replacing these curb meters is instead associated with the labor to replace them. The AMI parts, including the curb meters and the AMI communication modules, were purchased and funded by the AMI project. Therefore, ORA is incorrect in stating that "*Ratepayers would be paying twice for the same parts if the Commission authorizes the SCG request of $2.032 million."*[19]

3. SoCalGas acknowledges the impact of the one-year AMI curb meter deployment delay and accepts ORA's recommendation.

As is also stated in the Gas Distribution rebuttal testimony of Ms. Orozco-Mejia (Exhibit SCG-204), SoCalGas acknowledges the curb meter deployment effort's one-year delay due to vendor product manufacturing issues and appreciates ORA's position regarding unanticipated ratepayer impacts in 2018.[20] Therefore, SoCalGas will not contest the disallowance of the remaining $1.141 million of capital-related curb meter installation costs in 2018.

B. CUE

1. CUE inappropriately applies the 1.92% annual failure rate to all modules; therefore, their proposed increase of $3.308 million in O&M funding is unwarranted.

In his testimony, witness Mr. David Marcus CUE Marcus) states the following:

SCG is requesting $0.264 million of O&M expense for the cost of replacing AMI module units on the meters maintained by the M&R workgroup, based on a failure rate of 1.92% per year. SCG is requesting $1.814 million for remediation of AMI meters by the Customer Service-Field (CS-F) group, based on a failure rate of 0.68% per year. SCG says that the basis for these failure rates can be found in Ex. SCG-17. However, while that testimony contains footnotes with both the 1.92% and 0.68% failure rate estimates, neither Ex. SCG-17 nor its

[18] Ex. SCG-04-R (Orozco-Mejia) at 142:17-20.

[19] Ex. ORA-11 (Phan) at 84:1-2.

[20] Ex. SCG-04-R (Orozco-Mejia) at 143:1-3.

workpapers appear to contain any analysis or text regarding the basis for the two different failure rate estimates.[21]

The annual module failure rates estimated in this GRC are driven by mechanical and electrical failures that can occur with such devices.[22] To derive the annual failure rate for module field replacements for this GRC, SoCalGas first determined the average amount of time (in years) for all modules installed in its service territory. SoCalGas then divided the total number of module failures, since the start of the AMI deployment in late 2012, by the average time all modules have been installed. Finally, the annual failure rate is determined by dividing the annual MTU failures by the total installed MTUs. The calculation is provided below for reference:

Annual MTU Failure Rate (AFR) Calculation (a):

- AFR (a) = Annual MTU Failures (b) / total Installed MTUs (c), where
- Annual MTU Failures (b) = total MTU Failures to date (d) / Average Time Installed (in Years) (e)

This calculation was separately performed for the module types maintained by Customer Services-Field (CS-F) and the M&R group, as the M&R group maintains meters and modules that are more mechanically and electronically complex than those maintained by CS-F. The increased complexity of the M&R maintained devices resulted in an annual failure and replacement rate that is higher than those maintained by CS-F. The annual failure and field replacement rates for AMI modules for M&R and CS-F are 1.92% and 0.68%, respectively.

CUE also states and proposes the following:

CUE proposes that the O&M budget for the CS-F group be increased to allow for the same 1.92% per year failure rate expected for modules maintained by the M&R group. That would require an O&M allowance for AMI module

[21] CUE (Marcus) at 28-29.

[22] The MTU solutions for the larger meters serviced by M&R are often more complex and subject to more failure points. For example, many of these installations require a more complex mechanical interface (gearing) to the meter or a tethered (versus a direct mount) solution to the meter which includes the MTU to be connected via a wire.

replacements by the CS-F group of $5.122 million in 2019, an increase of $3.308 million over SCG's request.[23]

Aligning the annual failure rate for CS-F maintained AMI modules with the M&R module failure rate is not appropriate as it is not based on the actual failure rates. As stated above, the mechanical complexity of the M&R maintained modules results in a higher failure rate for those modules and M&R modules represent less than 2% of system modules. CS-F modules represent 5.9 million modules or 98% of the system. Therefore, the module AFR and associated budget forecast for CS-F should not be increased to match the M&R rate and budget.

2. CUE's assertions that the annual replacement rate should be 5% and that SoCalGas' annual failure rate forecast implies a 150-year module life are incorrect and irrelevant.

In his testimony, witness Mr. David Marcus CUE (Marcus) states the following:

SCG is aware that it has two different failure rate estimates for AMI modules, depending on who maintains them. SCG estimates that the average life of an AMI module is 20 years, which would imply a steady-state replacement rate of 5 percent per year. That is larger than either of the two replacement rates proposed by SCG, 1.92% and 0.68%.

Since SCG's AMI modules were all recently deployed, it is reasonable to expect that they do not yet need to be replaced at their long-term replacement rate of 5 percent per year. However, SCG has presented no evidence for the 0.68% rate in Exs. SCG 17 and 18, which would imply an average module life of almost 150 years. [24]

Each AMI module's expected useful life is 20 years. However, this does not mean that all MTUs currently installed will fail at a linear rate over the next 20 years. The module expected life is determined by the life of the batteries that are contained within them. Once the MTU batteries are exhausted, the batteries cannot be removed and replaced, as the module itself must be replaced. The annual failure rate forecasted by SoCalGas for this GRC is not associated with the battery-related useful life of the module. Since the AMI deployment only began in late-2012, module battery life is not a factor in this GRC.

[23] CUE (Marcus) at 29:13-17.

[24] *Id*. at 29:4-13.

C. EDF

1. EDF's recommendation to reallocate "at least 10%" of the Advanced Meter Operation's (AMO) funding request to "Gas Electric Coordination" and related "Risk Mitigation" is baseless and should not be considered.

EDF argues that SoCalGas should be required to establish a plan related to "Gas Electric Coordination" and associated risk mitigation.[25] To do so, EDF claims that "at least 10%" of the AMO funding request should be reallocated to prioritizing this plan.[26]

Additionally, EDF implies that the entire funding request presented in AMO testimony is associated with Risk Mitigation. EDF subsequently states that the AMO forecast does not allocate dollars toward mitigating risks related to "operational and market risks" associated with "the challenges of GEC."[27] EDF is correct in stating that SoCalGas AMI does not explicitly allocate expenditures towards mitigating "operational and market risks" associated with "Gas Electric Coordination." As SoCalGas responded in data request EDF-SCG-004, SoCalGas' AMO testimony and workpapers do not include forecasts for the activities EDF is asserting should be pursued by SoCalGas in this GRC.[28] Although SoCalGas considers and has identified in this GRC a portion of the AMO request associated with RAMP (i.e. SoCalGas' key safety risks), most of the AMO funding request is associated with the operation and maintenance of the advanced metering infrastructure, which is not associated with RAMP. As described in my direct testimony, AMO's planning assumptions and workpapers are specific to what is needed to operate and maintain SoCalGas' AMI infrastructure, which is not related to "Gas Electric Coordination." SoCalGas had no reason, business justification or Commission directive to embed planning assumptions associated with EDF's proposal within its AMO forecast.

EDF's motivation to reallocate SoCalGas AMO expenditures is unclear. EDF has not provided rationale for their reallocation scheme. EDF has used broad, but undefined terms, such

[25] Ex. EDF-01 (Lander) at 22:500-507.

[26] *Id*. at 22:517-520.

[27] *Id*.

[28] EDF-SCG-004, SoCalGas Response to Q.4.10, attached in Appendix A.

as "operational and market risks." EDF has provided no specifics regarding ratepayer benefits from their proposal.

Although AMI data is a component of EDF's "Gas Electric Coordination" concept,[29] there is no basis for associating EDF's "Gas Electric Coordination" concept to "at least 10%" of the operations and maintenance funding request for advanced meter operations.

The following is from EDF's testimony, where EDF witness Greg Lander asks (Q) if he has an estimate for the costs needed to implement his concept. The response (A) is also provided by Mr. Lander.

> *Q. Do you have an estimate of the costs of addressing the operational and market risks associated with these GEC challenges?*
>
> *A. No. While we requested data with respect to any dollars SCG allocated within the $10,477,000 million allocated to Risk Mitigation of these operational and market issues, SCG stated that they had not allocated any dollars to these risks. That said, I recommend that at least 10% of such Risk Mitigation funds be directed to the challenges of GEC.* [30]

EDF does not indicate why it would be appropriate to reduce AMO funding by any amount, nor from where "the at least 10%" of the AMO request should be reduced to reallocate to functions they are asserting should now be undertaken by SoCalGas. EDF has provided no analysis or due diligence to determine the reasonableness of this reallocation of funds and if the concept described by EDF would be prudent and/or appropriate for SoCalGas and its customers. EDF also did not address nor consider the affect or operational risk this reduction of funds would have on any of the functions supported by SoCalGas' AMO.

As stated above, the requested funding for AMO is required to operate and maintain SoCalGas AMI and an arbitrary reduction and reallocation "off-the top" could negatively affect SoCalGas' ability to effectively monitor, operate and maintain its advanced metering infrastructure. AMI is a core component of SoCalGas' customer meter reading and billing

[29] Ex. EDF-01 (Lander) at 4:117-122.

[30] *Id*. at 22:515-520.

(revenue cycle), among other key functions. EDFs recommended reduction, without considering those impacts, has no factual basis and should be denied by the Commission.

III. CONCLUSION

To summarize, SoCalGas accepts ORA witness Weaver's position regarding AMI's testimony. SoCalGas is also clarifying and correcting statements made by ORA witness Dao, in relation to the testimony of SoCalGas witness Gina Orozco-Mejia, and accepts Ms. Dao's recommended disallowance of capital-related curb meter deployment costs.

CUE misunderstood SoCalGas' annual failure rate for the replacement of modules between operating groups. SoCalGas provides clarification and is asking that CUE's proposed increase in O&M funding be disallowed due to CUE's misunderstanding.

And finally, SoCalGas opposes EDF's proposal to reallocate 10% of AMI's funding request to a "Gas Electric Coordination Risk Mitigation" plan as this request is baseless and does not consider the impacts to Advanced Metering Operations. EDF's proposal should be denied by the Commission.

This concludes my prepared rebuttal testimony.

APPENDIX A

Response to Data Request EDF-SCG-DR4 Q 4.10

EDF DATA REQUEST
EDF-SCG-004
SOCALGAS 2019 GRC – A.17-10-008
SOCALGAS RESPONSE
DATE RECEIVED: APRIL 24, 2018
DATE RESPONDED: MAY 8, 2018

4.10 Of the $10,477,000 set forth in SCG-17 at RFG-iii what are the amount(s) allocated toward:

A) Enabling Regulatory Demand Forecast Group to make better forecasts using AMI data stored in the ICDA and or the data warehouse?

B) Enabling the Gas Acquisition Department to make better forecasts using AMI data of their accounts stored in the ICDA and/or the data warehouse?

C) Enabling the Customer Transport Agents/Aggregators to make better forecasts using AMI data of their accounts stored in the ICDA and/or the data warehouse?

D) Enabling Gas Control to provide to the Gas Acquisition Department gas balance data of their accounts for their use in balancing current day scheduled gas for their accounts against prior day imbalances for their accounts to rectify such prior day imbalances?

E) Enabling Gas Control to provide to the Customer Transport Agents/Aggregators gas balance data of their accounts for their use in balancing current day scheduled gas for their accounts against prior day imbalances for their accounts to rectify such prior day imbalances?

F) Enabling Gas Control to provide to the Gas Acquisition Department gas balance data for their use in balancing within day scheduled gas for their accounts to within day consumption for their accounts?

G) Enabling Gas Control to provide to the Customer Transport Agents/Aggregators gas balance data for their use in balancing within day scheduled gas for their accounts to within day consumption for their accounts?

SoCalGas Response 4.10:

The TY 2019 forecast in Rene Garcia's testimony (Exhibit SCG-17) is not allocated to any of the functions described in Q4.10. A-G.