

Company: San Diego Gas & Electric Company (U902M)
Proceeding: 2019 General Rate Case
Application: A.17-10-007/-008 (cons.)
Exhibit: SDG&E-207

SDG&E

JOINT REBUTTAL TESTIMONY OF MICHAEL A. BERMEL AND BETH MUSICH

(GAS TRANSMISSION)

JUNE 18, 2018

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



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1 **SDG&E REBUTTAL TESTIMONY OF MICHAEL A. BERMEL AND BETH MUSICH**
2 **GAS TRANSMISSION**

3
4 **I. SUMMARY OF DIFFERENCES**

TOTAL CAPITAL - Constant 2016 (\$000)					
	2017	2018	2019	Total	Variance
SDG&E	\$10,492	\$10,192	\$10,042	\$30,726	
ORA	\$6,202	\$8,765	\$4,808	\$19,775	(\$10,951)

5
6 **II. INTRODUCTION**

7 This rebuttal testimony regarding San Diego Gas & Electric Company's (SDG&E or
8 Company) request for Gas Transmission addresses the following testimony from other parties:

- 9 • The Office of Ratepayer Advocates (ORA) as submitted by Ms. Monica
10 Weaver (Exhibit ORA-10), dated April 13, 2018.

11 As a preliminary matter, the absence of a response to any particular issue in this rebuttal
12 testimony does not imply or constitute agreement by SDG&E with the proposal or contention
13 made by these or other parties. The forecasts contained in SDG&E's direct testimony,
14 performed at the project level, are based on sound estimates of its revenue requirements at the
15 time of testimony preparation.

16 Gas Transmission is responsible for many critical activities and programs that support the
17 ongoing vitality of SDG&E transmission pipeline operations and help SDG&E achieve the
18 overarching objective to provide safe and reliable natural gas services at a reasonable cost. Gas
19 Transmission provides the capital investments that support the safety and reliability of the
20 transmission system.

21 **ORA**

22 ORA issued its report on Gas Transmission on April 13, 2018.¹ The following is a
23 summary of ORA's position(s):

¹ April 13, 2018, ORA Report on the Results of Operations for San Diego Gas & Electric Company, Southern California Gas Company, Test Year 2019 General Rate Case, SDG&E – Gas Transmission Capital, SCG – Advanced Metering Infrastructure, Ex. ORA-10 (Weaver).

- Adoption of 2017 recorded costs absent one-time projects. For New Construction Pipeline, ORA recommends \$1.667 million, \$3.901 million and \$0.094 million for 2017, 2018 and 2019, respectively, compared to SDG&E's request of \$3.901 million, \$3.901 million and \$3.901 million for 2017, 2018 and 2019.² ORA's recommended disallowances of New Construction Pipeline are based on decoupling labor and non-labor forecasts.
- For Pipeline Replacement, ORA recommends \$0.391 million, \$0.588 million and \$0.588 million for 2017, 2018 and 2019, respectively, compared to SDG&E's request of \$1.505 million, \$1.505 million and \$1.505 million for 2017, 2018 and 2019, respectively.³
- For Compressor Stations, ORA does not oppose SDG&E's request for 2018 and 2019 labor. ORA recommends \$3.432 million, \$3.605 million and \$3.455 million for 2017, 2018 and 2019, respectively, compared to SDG&E's request of \$4.415 million, \$4.115 million and \$3.965 million for 2017, 2018 and 2019. These recommended reductions are based on the non-labor component of those capital costs.⁴

III. REBUTTAL TO PARTIES' CAPITAL PROPOSALS

Table MAB-1

Summary of Parties' Total Capital Proposal

TOTAL CAPITAL - Constant 2016 (\$000)					
	2017	2018	2019	Total	Variance
SDG&E	10,492	10,192	10,042	30,726	--
ORA	6,202	8,765	4,808	19,775	(10,951)

² *Id.* at 1.

³ *Id.*

⁴ *Id.* at 1-2.

1 **A. New Construction Pipeline**

2 **1. ORA**

3 ORA uses 2017 recorded data to forecast labor, but modifies its approach by using the
4 2012-2014 historical three-year average, discarding more recent years 2015 and 2016, when
5 forecasting non-labor. “ORA recommends using a three-year average method to forecast the TY
6 2019 expenditures.”⁵ ORA did not oppose SDG&E’s base-year method to forecast 2018 costs.
7 ORA based its recommendations on the impact of two projects, Pio Pico Energy Center and
8 Carlsbad Energy Center. Specifically, ORA states:

9 ORA ascertained that SDG&E’s 2015 and 2016 recorded expenditures for non-
10 labor were entirely due to the Pio Pico Energy Center. SDG&E began
11 construction of the Pio Pico Energy Center in 2015, which was completed in
12 2016. The Pio Pico Energy Center represents the entire non-labor cost in 2015
13 and 2016. SDG&E started construction on the Carlsbad Energy Center in
14 November of 2017 which is expected to be completed in March of 2018. Due
15 to the construction of the Carlsbad Energy Center, ORA recommends adopting
16 SDG&E’s recorded 2017 data as the 2017 forecast. ORA does not oppose
17 SDG&E’s forecast costs for 2018. ORA used a three-year average of recorded
18 2012-2014 capital expenditures to forecast 2019 costs, as they represent normal
19 costs associated with New Construction Pipeline without the Energy Center
20 projects.⁶

21 **2. SDG&E Rebuttal**

22 SDG&E respectfully disagrees with ORA’s recommendation for New Construction
23 Pipeline. The pattern shows that the volume of work in this category has cumulatively increased
24 over time. Furthermore, SDG&E believes the methodology behind ORA’s recommendation
25 does not accurately represent the relationship between labor and non-labor dollars. Labor costs
26 are closely correlated to non-labor costs on projects, and ORA’s selective reduction of only non-
27 labor costs produces a disjointed value because it fails to account for this relationship. Similarly,
28 ORA’s analysis inappropriately selects certain date ranges and removes certain large capital
29 projects to produce the effect of lowering SDG&E’s forecast.
30

31 ORA’s analysis also takes a narrow view on the scope of project work and does not
32 consider large projects that arise periodically in this category. ORA’s testimony itself

⁵ *Id.* at 6.

⁶ *Id.*

1 acknowledges non-labor varying considerably higher in 2015 and 2016 recorded years,⁷ which
2 reinforces the need to take these periodic changes into account. Employing a 3-year average
3 results in data that is not reasonably normalized for this category. SDG&E asserts that if the
4 Commission determines that an average methodology should be used, a 5-year average would
5 more accurately consider the work done in this budget category.

6 Nevertheless, SDG&E continues to recommend the use of the base year for this capital
7 category and its original forecast. SDG&E's goal in employing the base year forecast method
8 was to account for work that could be reasonably anticipated but not yet fully identified. New
9 Construction Pipeline is a "routine" budget category. "Routine" budgets consist of a collection
10 of many like-kind projects of similar type and construction, and are often forecasted not by the
11 characteristics of individual projects themselves, but by historic spending patterns such as
12 averages, trends or most recent year (the "base year" method). Fully identifying and planning
13 the construction of all the new construction pipelines that may occur during the GRC period is
14 neither practical nor efficient. It would be comparable to fully planning the installation of each
15 new service line and meter several years in advance even where those final locations are not yet
16 known.

17 For example, two large projects, Escondido Pressure Limiting Station and Main Line
18 Valve on Line 1600 in Mira Mesa, have recently been scoped but were not identified in the
19 original workpapers for this budget category. The projects have a combined forecast of roughly
20 \$1.75 million and are anticipated to be completed in 2019. Although project costs in this
21 category can vary, there is more anticipated work to be done in this category as seen in the 2016
22 GRC,⁸ in which the recorded costs exceeded the forecast. In that proceeding for the New
23 Pipeline Construction budget, values of \$0.210, \$0.592 and \$1.012 million were forecasted for
24 2014, 2015 and 2016 respectively.⁹ Actual expenses for that same period were \$0.065, \$5.998
25 and \$3.901.¹⁰ Thus, SDG&E's actual costs exceeded its forecast in two of those three forecast

⁷ *Id.*

⁸ Application (A.)14-11-003/-004 (cons.), Exhibit SDG&E-06 (Raymond K. Stanford) at RKS-15.

⁹ *Id.*

¹⁰ December 2017, Revised Capital Workpapers to Prepared Direct Testimony of Elizabeth A. Musich and Michael A. Bermel, on behalf of San Diego Gas & Electric Company, Exhibit SDG&E-7-CWP-R (Musich) at 4.

1 years, 2015 and 2016. While ORA contends these costs are attributable to the Pio Pico and
2 Carlsbad Energy Centers and should be excluded, SDG&E believes these costs are more
3 reflective of the work performed historically and anticipated in this category. Based on the
4 foregoing SDG&E requests that the Commission grant the full forecasted amount in 2017 and
5 2019.

6 **B. Pipeline Replacement**

7 **1. ORA**

8 ORA does not oppose SDG&E's request for pipeline replacements labor. ORA used
9 SDG&E's recorded data to forecast 2017 and recommends a five-year average (2012-2016) for
10 2018 and 2019 non-labor, after removing costs associated with Bear Valley Relocation Project.¹¹

11 **2. SDG&E Rebuttal**

12 SDG&E respectfully disagrees with ORA's disallowance for non-labor forecasts 2017,
13 2018 and 2019. Project costs for 2017 were lower than anticipated because of construction and
14 permitting delays on several projects in this category. For example, Construction Work in
15 Progress (CWIP) for this budget code category currently shows a sum of \$1.023 million for
16 projects that are in construction and not yet completed. As additional examples, SDG&E is
17 planning to execute eight erosion control projects and four additional transmission pipeline
18 exposure mitigation projects.

19 Regarding 2018 and 2019 non-labor costs, there are two more identified projects that are
20 going into construction and anticipated to be placed in service in 2019. These recently identified
21 projects are the Increase of Maximum Allowable Operating Pressure (MAOP) at Otay Mesa
22 Metering Station and Transmission Piping, and Camp Elliot Erosion Mitigation. Each project
23 has an estimated cost of \$1 million. The Otay Mesa Metering Station and Transmission Piping
24 project entails uprating the MAOP of 50 feet of station pipe and 370 feet of transmission pipe to
25 create a permanent solution for the over pressurization at the USA-Mexico border. The Camp
26 Elliot erosion mitigation project currently has seven locations with soil erosion issues that need
27 to be remediated. These newly identified projects along with current work-in progress data
28 further demonstrate that SDG&E's proposed forecast for this budget category more accurately
29 reflects the volume of work forecasted. Therefore, ORA's use of applying a forecast

¹¹ Ex. ORA-10 (Weaver) at 7.

1 methodology by selectively removing projects that SDG&E has physically completed does not
2 capture historical projects and anticipated volume of future projects in this category.

3 The appropriate use of the 5-year average by SDG&E was the subject of an ORA data
4 request.¹²

5 **ORA Question 6**

6
7 According to lines 10-12 on page JGT-11, a five-year average would be used
8 because this methodology best reflects anticipated needs. Please provide an
9 explanation as to why a five-year average is best when the recorded amounts
10 fluctuated from a low of \$0.081 million in 2012 to a high of \$3.436 million in
11 2015.

12 13 **SDG&E Response**

14
15 As further supported in SDG&E's response to ORA Questions 4 and 5, the five-
16 year average forecasting methodology was applied because SDG&E has found
17 that average spend often indicates future need. While SDG&E conducts a variety
18 of surveys on a regular basis to predict what pipelines need to be replaced or
19 repaired, some of these projects cannot be determined in advance. As such,
20 SDG&E applies a blanket work order which is a collection of many like-kind
21 projects that are often similar in scope, and forecasts future activities on a five-
22 year average to take into account variability in individual project scope, cost and
23 schedule to complete.

24 Accordingly, the use of a 5-year average methodology is appropriate in this budget
25 category because it is imprecise and difficult to anticipate when and where many pipelines will
26 need to be replaced, third parties cause damage to pipelines, or weather-related issues cause the
27 need for pipeline replacement. Similarly, SoCalGas' direct testimony states:

28 "Some pipeline sections need to be replaced due to erosion from agricultural
29 activities or storm water runoff; more often, however, replacements are required
30 due to class location change, which is the reclassification of a pipeline"¹³

31
32 This illustrates the unique nature of these projects and the level of uncertainty in planning
33 the projects several years in advance. It would be particularly difficult for SDG&E to predict
34 third-party damages or weather-related incursions. SDG&E thus supports using the 5-year
35 average methodology.

¹² ORA-SDG&E-DR-001, Question 06.

¹³ December 2017, Revised SDG&E Joint Testimony of Michael A. Bermel and Beth Musich on Gas Transmission Capital, Exhibit SDG&E-07-R (Bermel) at JGT-10.

1 **C. Compressor Stations**

2 **1. ORA**

3 ORA recommends using SDG&E’s recorded costs for 2017 capital while maintaining
4 SDG&E’s 2018 and 2019 *labor* forecast.¹⁴ For *non-labor*, ORA recommends using SDG&E’s
5 five-year average of 2012-2016 recorded costs after removing one-time costs associated with
6 security enhancements and a security guard shelter building.¹⁵

7 **2. SDG&E Rebuttal**

8 SDG&E recognizes ORA’s recommendation to use SDG&E’s five-year average for non-
9 labor capital forecasts while removing the “one-time” capital costs associated with the physical
10 security enhancements at the Moreno Compressor Station; however, while these capital
11 improvements for Moreno may appear as a one-time cost for Moreno, SDG&E has another
12 physical security project at the former Rainbow compressor station which will also require
13 capital improvements. As such, we respectively request that the Commission adopt SDG&E’s
14 five-year average of \$4.4M in 2017, \$4.1M in 2018, and \$3.9M in 2019 for this category.

15
16 **IV. COMPRESSOR CAPITAL INVESTMENT IN THE POST TEST YEARS**

17 The Moreno Compressor Station is critical to the continued ability of SDG&E to reliably
18 serve customers. We presented a forecast of this project in our direct testimony and in our
19 capital workpapers.¹⁶ The Moreno Compressor Modernization project is underway and is
20 incurring costs in this instant GRC, but as submitted in our direct testimony the project will be
21 in-service in the post-test years. Upon completion of the project, the compressor station will
22 operate more reliably while significantly reducing emissions in compliance with the South Coast
23 Air Quality Management District’s directive.¹⁷

24

¹⁴ Ex. ORA-10 (Weaver) at 9.

¹⁵ *Id.*

¹⁶ Ex. SDG&E-07-R (Bermel) at JGT-13 to JGT-14; Ex. SDG&E-07-CWP-R (Bermel).

¹⁷ California Health and Safety Code section 40920.6, subpart c(1) states, “On or before January 1, 2019, each district that is a nonattainment area for one or more air pollutants shall adopt an expedited schedule for implementation of best available retrofit control technology (BARCT), by the earliest feasible date, but in any event not later than December 31, 2023.”

TABLE MAB-2

Moreno Compressor Modernization Forecast of Capital Investment

<i>\$(millions)</i>	2017	2018	2019	2020	2021	2022	2023	Total	In-Service Date
Direct Testimony	2	3	80	36	36			158	Q4 2021
June 2018 Update	6	1	15	121	48	59	2	252	Q4 2022

Additional detail for SDG&E’s Moreno Compressor Modernization project is provided in Appendix A of this testimony.

V. CONCLUSION

SDG&E’s ability to meet its obligation to provide natural gas service in accordance with its tariff provisions and customer expectations is highly dependent on the reliable operation of natural gas transmission pipeline, compressor stations, valves, and related natural gas transmission appurtenances. To continue providing safe and reliable service, SDG&E must continue to invest in its infrastructure pursuant to applicable regulatory requirements. Deferring replacement until failure is not a reasonable way to operate safely. SDG&E requests the Commission to adopt its forecasted capital expenditures for years 2017, 2018 and 2019 of \$10,698,000, \$10,398,000, and \$10,248,000, respectively. This forecast reflects SDG&E’s commitment toward sustaining safe and reliable service to our customers while also striving to control project costs without compromising safety or regulatory compliance.

This concludes our rebuttal testimony.

VI. WITNESS QUALIFICATIONS

My name is Beth Musich. In March 2018, I became the Director of Major Projects & Construction for SoCalGas and SDG&E. I was Director of Gas Transmission from January 2015 to March 2018 for SoCalGas and SDG&E.

My name is Michael Bermel. As of March 2018, I am the Director of Gas Engineering for SoCalGas and SDG&E. I was Director of Major Projects & Construction from January 2017 to March 2018.

Appendix A to Exhibit SDG&E-207

SDG&E – Gas Transmission – Witnesses Michael A. Bermel and Beth Musich
Moreno Compressor Modernization

The Moreno Compressor Station is critical to the continued ability of SDG&E to reliably serve customers. We presented a forecast of this project in our direct testimony and in our capital workpapers.¹⁸ The Moreno Compressor Modernization project is underway and is incurring costs in this instant GRC, but as submitted in our direct testimony the project will be in-service in the post-test years. Upon completion of the project, the compressor station will operate reliably while significantly reducing emissions in compliance with the South Coast Air Quality Management District’s directive.¹⁹

Forecasted Project Capital Investment
(\$ in thousands)

Description	Forecasted 2018	Forecasted 2019	Forecasted 2020	Forecasted 2021	Forecasted 2022	Forecasted 2023	Project Total*
Labor	\$162	\$805	\$990	\$936	\$814	\$250	\$4,633
Non-Labor	\$519	\$14,095	\$120,046	\$47,407	\$58,216	\$1,698	\$247,554
Total	\$682	\$14,900	\$121,036	\$48,343	\$59,030	\$1,948	\$252,187

**Includes 2017 Project actual recorded of \$6,248
All costs are presented in direct 2016\$ in thousands. These do not include SCG/SDG&E Overheads, Property Taxes, and/or AFUDC. Forecasted costs are preliminary and subject to change.*

Project Description:

The Moreno Compressor Station currently consists of three compressor plants, as follows:

- Three Clark compressors rated at 995 Horsepower each (installed in 1955)
- Four Solar turbines rated at 1100 Horsepower each (installed in the 1970’s)
- Three Cooper compressors rated at 3,000 Horsepower each (installed in the 1990’s)

The Moreno compressor station operates with aging, inefficient and high-emissions equipment.

The purpose of the Moreno Compressor Modernization project is to replace select compressor

¹⁸ Ex. SDG&E-07-R (Bermel) at JGT-13 to JGT-14; Ex. SDG&E-07-CWP-R (Bermel).

¹⁹ California Health and Safety Code section 40920.6, subpart c(1) states, “On or before January 1, 2019, each district that is a nonattainment area for one or more air pollutants shall adopt an expedited schedule for implementation of best available retrofit control technology (BARCT), by the earliest feasible date, but in any event not later than December 31, 2023.”

1 assets with new equipment that will provide additional reliability while reducing emissions.
2 Currently the Moreno compressor station is operating with insufficient capacity to allow the
3 station to move the design flow of 800 million standard cubic feet per day (MMSCFD) at 440
4 psig suction on a peak day when any single large compressor is out of service. This current state
5 poses an operation risk to the SDG&E's ability to meet its obligations to serve customers if any
6 single compressor is out of service for an extended period.

7 Currently the Moreno Compressor Modernization Project Scope consists of the
8 following:

9 **Project 1**

- 10 1. Install three (3) new gas turbine-compressor/driver units with selective catalytic
11 reduction emissions packages in a new facility (5,000 horsepower each)
- 12 2. Decommission four (4) existing gas turbine-driven centrifugal compressors (1,100
13 horsepower each)
- 14 3. Decommission three (3) Clark reciprocating compressor/Driver Units (995
15 horsepower each)
- 16 4. Install auxiliary systems to support three (3) new gas turbine units. Auxiliaries
17 include combustion air inlet system and exhaust system (Carbon monoxide catalyst,
18 selective catalytic reduction, ammonia injection & vaporization skid, dilution air
19 blowers, silencer, stack, and control panels).
- 20 5. Install overall infrastructure to support three (3) new gas turbine units plus future
21 expansion to support the remaining fourth (4) new turbine unit.
- 22 6. Install two (2) 0.5 megawatt backup Generators to serve the new facility.

23 The design will include forward planning for the future addition of remaining one (1) gas
24 turbine-driven compression unit. This would bring the long-term configuration of the Moreno
25 Compressor Station to include four (4) low emission gas turbine-driven centrifugal compressor
26 units in addition to the existing Cooper compressors.

Estimated “Project 1” Schedule:

