Docket:	:	A.15-09-013
Exhibit Number	:	ORA-03
Reference Number	:	
Commissioner	:	L. Randolph
ALJ	:	C. Kersten
Witness	:	Mina Botros

OFFICE OF RATEPAYER ADVOCATES
CALIFORNIA PUBLIC UTILITIES COMMISSION

PREPARED TESTIMONY ON THE SAFETY OF LINE 1600

SAN DIEGO GAS & ELECTRIC COMPANY AND SOUTHERN CALIFORNIA GAS COMPANY FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR A.15-09-013

PHASE 1

San Francisco, California
April 17, 2017

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I. INTRODUCTION

This exhibit presents the Phase 1 analyses and recommendations of the Office of Ratepayer Advocates (ORA) regarding San Diego Gas & Electric Company and Southern California Gas Company (SDG&E and SoCalGas, hereafter also called "Applicants") application for a certificate of public convenience and necessity to construct the Applicants' Proposed Project Line 3206 ("Proposed Project"). The Scoping Memo and Ruling of the Assigned Commissioner dated November 4, 2016 set forth two phases. In Phase 1, the scope provided Questions 1 through 18,[1] which include the topic of Otay Mesa supply capability.[2] This testimony addresses a narrow issue raised under Question 3.

The Proposed Project consists of the construction of a new 47-mile long, 36-inch natural gas transmission line (i.e., Line 3602) and associated facilities between the proposed Rainbow Pressure Limiting Station to Line 2010,[3] and derating the existing approximately 50-mile long,[4] 16-inch gas transmission line (Line 1600) to a reduced pressure after construction completion of Line 3602.[5] [6]

Question 3: How should the quantity of natural gas supply and amount of pipeline capacity that could be available for firm delivery (e.g., imports) to the Applicants' system at Otay Mesa be reasonably estimated/determined, over what period of time from which suppliers, and pipeline capacity owners, and at what indicative price and price ranges?

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[1] Scoping Memo and Ruling of Assigned Commissioner dated November 4, 2016, pp. 14-18.

[2] Scoping Memo and Ruling of Assigned Commissioner dated November 4, 2016, p. 13.

[3] SDG&E-8-R Updated Testimony of N. Kohls, p.1. Based on Footnote 1 of SDG&E-8-R, Mr. Kohls assumes witness role and responsibility for Mr. Navin. The identified purpose of Mr. Kohls's updated direct testimony includes presenting the scope of the proposed project.

[4] Attachment B to the Supplemental Testimony of SoCalGas and SDG&E in A.15-09-013, Corrected CEA and Corrected Workpapers, p. 11.

[5] SDG&E-8-R Updated Testimony of N. Kohls, p. 1.

[6] See Ex ORA-02, ORA direct testimony of N. Skinner and M. Botros, regarding concerns associated with the Applicants' proposed derating of Line 1600, and ORA's proposed alternative regarding Line 1600.

II. TESTIMONY FROM APPLICANTS SUGGESTS THAT QUANTITY OF NATURAL GAS SUPPLY AND AMOUNT OF PIPELINE CAPACITY THAT COULD BE AVAILABLE FOR FIRM DELIVERY TO APPLICANTS' SYSTEM DEPENDS UPON FREQUENCY OF OUTAGES ON LINE 3010 AND MORENO COMPRESSOR STATION

The testimony of Ms. Sabino, ORA's witness, is Exhibit ORA-01 and points out that Applicants assert concerns with bringing gas through Otay Mesa receipt point in the event of an unplanned outage on Line 3010. Specifically, Ms. Sabino references the testimony of Applicants' witness, Mr. Borkovich as follows:

"In the event of an unplanned outage on Line 3010 or loss of compression on the Moreno Compressor Station, Mr. Borkovich argues that it would not be prudent to rely on supplies through the Otay Mesa receipt point due to higher costs and firm capacity through the North Baja Pipeline systems which are not likely to be available.[7] Mr. Borkovich states that it is unknown at the time of his testimony whether 400 million metric cubic feet per day (MMcfd) of firm capacity could be secured on the North Baja Pipeline systems on a long term basis.[8]"

III. RECENT HISTORIC DATA SHOW THAT THE OCCURANCE OF UNPLANNED OUTAGES ON LINE 3010 AND AT MORENO COMPRESSOR STATION HAS BEEN RARE

Line 3010 has rarely experienced outages from 2011 to 2015. The Applicants have no data showing outages for the five years before 2011. Similarly, from 2006 to 2015, Moreno Compressor Station experienced a very limited number of outages, and the average unplanned ones were only for 1.54 hours. The data for the Line 3010 and Moreno Compressor Station are below:

A. Line 3010

ORA asked about the history of Line 3010 being out of service during the 10 year period between and including 2006 and 2015.[9] From 2006 to January 2011, the

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[7] SDG&E-6-R Updated Testimony of Borkovich, pp. 5-9.

[8] SDG&E-6-R Updated Testimony of Borkovich, p. 7.

[9] ORA Data Request (DR) 58 Question (Q) 3 and DR-71 Q2

Applicants are unaware of curtailment events.[10] From February 2011 to December 2015, the Applicants' data shows that Line 3010 experienced the following:

- Only four unplanned outages, averaging 69.56 hours per outage, which represents 0.65% of the total hours during that five year period.[11]
- Gas was sourced during each of the four unplanned outages, and three of these sources were through El Pas Natural Gas (EPNG).
- **Only once during a Line 3010 outage was gas sourced through Otay Mesa**. In that sole instance, Applicants identify the reason four sourcing gas through Otay Mesa as "lack of supply"; not as a problem with Line 3010.[12] [13]
- Even when Applicants identified an emergency, they did not need to source gas through Otay Mesa receipt point.[14]
- Eight planned outages, averaging 15.13 hours per outage, which represents only 0.28% of the hours during that five year period. All of these outages were due to planned maintenance. [15]
- SoCalGas/SDG&E maintained service to 100% of core customers throughout each of these 12 outages.[16]

Table 1 shows the details related to these events from February 2011 and December 2015.

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[10] DR-71 Q2

[11] ORA calculates the 0.65% unplanned outage number as follows: From February 2011 to December 2015, there were 43,080 hours. As shown in Table 1 based upon the Applicant's response to ORA DR-71 Q2, Line 3010 experienced unplanned outages during 278.23 of those 43,080 hours. 278.23/43,080= 0.65%

[12] See Table 1 below, entry date 12/6/13.

[13] DR-71 Q2, ORA understands that the sources of gas which are 1) EPNG (a company) and 2) Otay Mesa (a receipt point) are inconsistent sources. However, this is based on the Applicants' response.

[14] See Table 1 below, entry date 2/6/14.

[15] ORA calculates the 0.28% planned outage number as follows: From February 2011 to December 2015, there were 43,080 hours. As shown in Table 1 based upon the Applicants' response to ORA DR-71 Q2, Line 3010 experienced planned outages during 121.00 of those 43,080 hours. 121.00/43,080= 0.28%

[16] ORA DR-7 Q5 and DR-71 Q2.

TABLE 1: COMPLETE OUTAGE EVENTS ON LINE 3010 AND AMOUNTS OF GAS SOURCED FROM EPNG OR OTAY MESAFEBRUARY 2011 TO DECEMBER 2015[17]

#	Date	Reason	Planned Duration (Hour)	Unplanned Duration (Hour)	Amount of Gas Sourced from EPNG? (dth[18])	Amount of Gas Sourced through Otay Mesa? (dth)
1	2/3/20011	Lack of supply		21.00	362,937	115,000
2	10/1/2011	Planned Maintenance	13.00		N/A	N/A
3	10/8/2011	Planned Maintenance	17.00		N/A	N/A
4	10/15/2011	Planned Maintenance	17.00		N/A	N/A
5	10/22/2011	Planned Maintenance	15.00		N/A	N/A
6	10/29/2011	Planned Maintenance	22.00		N/A	N/A
7	11/5/2011	Planned Maintenance	7.00		N/A	N/A
8	11/12/2011	Planned Maintenance	16.00		N/A	N/A
9	11/19/2011	Planned Maintenance	14.00		N/A	N/A
10	12/6/2013	Lack of supply		144.00	389,956	0
11	2/6/2014	Lack of supply		111.98	345,999[19]	0
12	2/6/2014	Emergency		1.25[20]	208,919	0
	Total Duration (Hr)		**121.00**	**278.23**		
	Number of incidents		**8**	**4**		
	Average duration per incident (Hr/incident)		**15.13**	**69.56**		

B. Moreno Compressor Station

ORA also asked about the history of Moreno Compressor Station being out of service from 2006 to 2015. The Applicants' data show that Moreno compressor station experienced the following:

[17] DR-71 Q2.

[18] dth stands for decatherm, a measurement unit for heat.

[19] As per DR-71 Q2 a total of 554,918 dth (includes 208,919 dth from the emergency event below), ORA subtracted the number to prevent duplication.

[20] As per DR-71 Q2 a total of 17.25 hours (includes 16 hours from the Lack of supply incident above), ORA subtracted the number to prevent duplication.

- Moreno compressor station experienced 19 unplanned outages, averaging 1.54 hours per outage, which represents only 0.03% of the total hours during that period.[21]
- Moreno compressor station experienced 14 planned incidents, averaging 8.43 hours per outage, which represents only 0.13% of the total hours during that time.[22]
- The Applicants maintained 100% reliable service to core and noncore customers during each of those planned and unplanned outages.[23]

Table 2 shows the details for those events.

TABLE 2: MORENO STATION OUTAGES FROM 2006 TO 2015[24]

#	Date	Reason	Planned Duration (Hour)	Unplanned Duration (Hour)
1	3/6/2006	Fault - heat detector		1.00
2	4/14/2006	Planned Maintenance	1.00	
3	4/27/2006	Annual Test	12.50	
4	7/1/2006	Fault - heat detector		1.50
5	11/30/2006	Fault - smoke detector		1.50
6	3/13/2007	Annual Test	12.30	
7	10/24/2007	Fault - heat detector		1.45
8	3/11/2008	Bi-Directional Project Prep	2.00	
9	8/18/2008	Fault - smoke detector		1.00
10	12/2/2008	Generator Control Upgrade	1.70	
11	4/17/2009	Annual Test	12.30	
12	4/23/2009	Test - Critical Valve	5.30	
13	8/19/2009	UV Detector - Alarmed		0.83
14	8/24/2009	UV Detector - Alarmed		1.00
15	1/25/2010	UV Detector - Alarmed		1.20

[21] ORA calculates the 0.03% outage number as follows: From 2006 to 2015, there were 87,648 hours. As shown in Table 2, based upon the Applicants' response to ORA DR-81 Q1, Moreno station experienced an unplanned outage during 29.31 of those 87,648 hours. 29.31 /87,648= 0.03%

[22] ORA calculates the 0.13% outage number as follows: From 2006 to 2015, there were 87,648 hours. As shown in Table 2, based upon the Applicants' response to ORA DR-81 Q1, Moreno station experienced a planned outage during 118.05 of those 87,648 hours. 118.05/87,648= 0.13%

[23] DR-81 Q1.

[24] DR-81 Q1.

#	Date	Reason	Planned Duration (Hour)	Unplanned Duration (Hour)
16	2/1/2010	UV Detector - Alarmed		0.83
17	4/2/2010	Annual Test	12.50	
18	9/9/2010	ESD vent stack replaced	8.00	
19	2/3/2011	UV Detector - Alarmed		2.10
20	5/13/2011	Annual Test	9.00	
21	7/6/2011	Fault - ESD Switch		1.10
22	11/10/2011	Fault - smoke detector		1.30
23	11/11/2011	Fault - smoke detector		2.30
24	12/8/2011	Hot fuel valve / UV		1.00
25	4/17/2012	Annual Test	4.00	
26	8/28/2012	UV Detector - Alarmed		1.00
27	4/12/2013	Annual Test	14.00	
28	8/21/2013	Fault - UV Detector		1.10
29	2/28/2014	Generator Issues		7.00
30	4/11/2014	Annual Test	13.00	
31	4/14/2014	Accidental ESD - Maintenance		1.00
32	4/10/2015	Annual Test	10.45	
33	5/26/2015	UV Detector - Alarmed		1.10
	Total Duration (Hour)		**118.05**	**29.31**
	Number of incidents		**14**	**19**
	Average duration per incident (Hour/incident)		**8.43**	**1.54**

IV. PRICES TO RECEIVE GAS THROUGH OTAY MESA RECEIPT POINT WILL BE EXTREMELY LESS EXPENSIVE THAN CONSTRUCTION OF A NEW PIPELINE

ORA's assessement of the data shows that the low historic occurrence of unplanned outages on Line 3010 and at Moreno Compressor Station, it would likely extremely limit the impact on the rates of Applicants' ratepayers. This is the case, even if gas prices at Otay Mesa receipt point were extremely high. Relatedly, ORA anticipates that purchasing gas through Otay Mesa receipt point (Alternative E)[25], would be immensely less expensive than constructing a new pipeline, regardless of whether that is

[25] In the Joint Assigned Commissioner and Administrative Law Judge's ruling, dated January 22, 2016, at page 13, Alternative E is defined as, "Non-Physical (Contractual) or Minimal-Footprint Solutions Not included in PEA. Address multi-year contracting for capacity and supplies; Southern system minimum flow requirement; operational flow order/system balancing; and tariff discounts."

construction of Line 3602, or any other construction alternative identified by Applicants. Alternative E is identified on page 13 of the Joint Assigned Commissioner and Administrative Law Judge's ruling, dated January 22, 2016.

V. CONCLUSION

Question 3 of the scoping memo prompts some discussion regarding the gas prices through the Otay Mesa receipt point. Low historic occurrence of unplanned outages on Line 3010 and of Moreno Compressor Station would likely mean extremely limited need for gas at the Otay Mesa receipt point in the near term, and very low impact on ratepayers, even if gas prices at Otay Mesa receipt point were extremely high.

PREPARED TESTIMONY AND QUALIFICATIONS OF MINA BOTROS

My name is Mina Botros. My business address is 505 Van Ness Avenue, San Francisco, California, 94102. I am employed by the California Public Utilities Commission as a Utilities Engineer in the Office of Ratepayer Advocates' Energy Safety and Infrastructure Branch. I am sponsoring the calculations contained in Ex. ORA-02-C, Confidential Workpapers and Supporting Attachments of M Botros.

I have a MA in Mechatronics Engineering from the Information Technology Institute. I have a BA in Mechanical Engineering from Alexandria University. I am a PE and my license number is 38305. I have also taken a graduate-level course in Managing Cracks and Seam-Weld Anomalies on Pipelines.

Since joining the ORA in February 2016, I have worked on the Commission's San Joaquin Valley Disadvantaged Community Order Instituting Rulemaking (R. 15-03-010), General Order 58-A (R. 16-07-006), Sempra Pipeline Safety Enhancement Plan - Phase 2 (Application (A.) 15-06-013), Pipeline Safety Enhancement Plan - Reasonableness Review (A. 16-09-005), Wildfire Expenses Memorandum Account (A. 15-09-010), California Independent System Operator Metering Rules Enhancements, and Rule 21 (R 11-09-011).

This completes my prepared testimony.