**SAN DIEGO GAS & ELECTRIC COMPANY**
**SOUTHERN CALIFORNIA GAS COMPANY**

**PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)**

**(A.15-09-013)**

**(DATA REQUEST ORA-35)**

**Date Requested: August 19, 2016**
**Date Responded: September 2, 2016**

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## PRELIMINARY STATEMENT

1. These responses and objections are made without prejudice to, and are not a waiver of, SDG&E and SoCalGas' right to rely on other facts or documents in these proceedings.
2. By making the accompanying responses and objections to these requests for data, SDG&E and SoCalGas does not waive, and hereby expressly reserves, its right to assert any and all objections as to the admissibility of such responses into evidence in this action, or in any other proceedings, on any and all grounds including, but not limited to, competency, relevancy, materiality, and privilege. Further, SDG&E and SoCalGas makes the responses and objections herein without in any way implying that it considers the requests, and responses to the requests, to be relevant or material to the subject matter of this action.
3. SDG&E and SoCalGas will produce responses only to the extent that such response is based upon personal knowledge or documents in the possession, custody, or control of SDG&E and SoCalGas. SDG&E and SoCalGas possession, custody, or control does not include any constructive possession that may be conferred by SDG&E or SoCalGas' right or power to compel the production of documents or information from third parties or to request their production from other divisions of the Commission.
4. A response stating an objection shall not be deemed or construed that there are, in fact, responsive information or documents which may be applicable to the data request, or that SDG&E and SoCalGas acquiesces in the characterization of the premise, conduct or activities contained in the data request, or definitions and/or instructions applicable to the data request.
5. SDG&E and SoCalGas objects to the production of documents or information protected by the attorney-client communication privilege or the attorney work product doctrine.
6. SDG&E and SoCalGas expressly reserve the right to supplement, clarify, revise, or correct any or all of the responses and objections herein, and to assert additional objections or privileges, in one or more subsequent supplemental response(s).
7. SDG&E and SoCalGas will make available for inspection at their offices any responsive documents. Alternatively, SDG&E and SoCalGas will produce copies of the documents. SDG&E and SoCalGas will Bates-number such documents only if SDG&E and SoCalGas deem it necessary to ensure proper identification of the source of such documents.
8. Publicly available information and documents including, but not limited to, newspaper clippings, court papers, and materials available on the Internet, will not be produced.

9. SDG&E and SoCalGas object to any assertion that the data requests are continuing in nature and will respond only upon the information and documents available after a reasonably diligent search on the date of its responses. However, SDG&E and SoCalGas will supplement its answers to include information acquired after serving its responses to the Data Requests if it obtains information upon the basis of which it learns that its response was incorrect or incomplete when made.
10. In accordance with the CPUC's Discovery: Custom And Practice Guidelines, SDG&E and SoCalGas will endeavor to respond to ORA's data requests by the identified response date or within 10 business days. If it cannot do so, it will so inform ORA.
11. SDG&E and SoCalGas object to any ORA contact of SDG&E and SoCalGas officers or employees, who are represented by counsel. ORA may seek to contact such persons only through counsel.
12. SDG&E and SoCalGas objects to ORA's instruction to send copies of responses to entities other than ORA.

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**Subject: Cost Effectiveness Analysis in A.15-09-013 by PWC and Mr. Neil Navin Prepared Testimony Attachment A & B PSRP Report and Mr. David Bisi Prepared Testimony in A.15-09-013**

**QUESTION 1:**

Figure 1 shown on page 4 of Mr. Bisi's Prepared Testimony presents a schematic of the SDG&E system that is part of the integrated Gas System. On page 3, Mr. Bisi describes the Moreno Compressor Station as "the third major component of the SDG&E system bringing gas from the north." Figure 1 does not appear to include the Moreno Compressor Station. Please provide a schematic that shows the Moreno Compressor Station.

**RESPONSE 1:**

Please see the attached document.

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**QUESTION 2:**

Page 5 of Mr. Bisi's Prepared Testimony states:

"While the capacity of Line 1600 is far less than that of Line 3010, several large noncore customers and single-sourced distribution systems are directly served by Line 1600. North of Escondido, a large noncore customer operates an electric generation (EG) peaking facility, and another EG peaking facility along with a gas turbine manufacturing and testing facility are located at the southern end of the pipeline. Single-sourced distribution systems are also directly served by Line 1600 along its entire length. Therefore, many customers would be directly impacted by the prolonged outage on Line 1600 that would be required for pressure testing, if supplies at Otay Mesa are unavailable, as discussed in Ms. Marelli's testimony."

"Other customers that are not served directly by Line 1600 may also experience disruptions resulting from a prolonged outage on that pipeline."

In Response to ORA-06 Q.5, the Applicants provided customer information designated as confidential pursuant to G.O.66-C and Ca.Pub. Util. Code §583.

(a) Please state the number of single-sourced distribution systems and identify the aggregate amount of their load that are directly served by Line 1600 if these are different from the information provided in Response to ORA-06 Q.5.

(b) Please state the number of "other customers that are not served directly by Line 1600" that may experience disruptions and identify the aggregate amount of their load that are not served directly by Line 1600 that may also experience disruptions.

(c) Please explain whether the Applicants propose to transfer all of the loads identified in item (a) and those in Response to ORA-06 Q.5, to the Proposed Project and whether the cost associated with the transfer of these loads have already been factored into the cost estimates of the Proposed Project used in the Cost-Effectiveness Analysis (CEA).

(d) Please explain the amount of effort and amount of time that will be involved in the transfer of all loads identified in items (a) and the Response to ORA-06 Q.5 and state whether any of these costs relating to the migration of load have been factored into the CEA.

(e) Please explain whether the Applicants would similarly propose to transfer all of the loads identified in items (a) and the Response to ORA-06 Q.5 to one of the Project Alternatives should an Alternative be selected (instead of the Proposed Project) as described in the Ruling, and if so, state whether the cost associated with the transfer of load have already been factored into the cost estimates of the Project Alternatives.

(f) Please explain whether "Other customers that are not served directly by Line 1600" may also experience disruptions as a result of the migration of loads from Line 1600 to the Proposed Project.

(g) Please explain the amount of effort and amount of time that will be involved in migrating load to the derated Line 1600 for distribution service and state whether the cost associated with this effort have already been factored into the cost estimates of the Proposed Project provided in the CEA.

**RESPONSE 2:**

a) There are 27 gas pressure systems that are fed solely from Line 1600 with peak hour loads totaling 3,154 thousand cubic feet per hour (MCFH). Of the 27, there are 25 single source (one Regulator Station) gas pressure systems fed from Line 1600 (this is excluding the large customers previously mentioned in Response to ORA DR 6, Question 5). The total peak hour design load of these 25 systems is 620 MCFH. The remaining two systems are multi-source systems (two or more Regulator Stations), where all inlet sources rely solely on Line 1600 for supply. The total peak hour design load for these two systems is 2,533 MCFH.

b) As explained in the Prepared Direct Testimony of David Bisi at pages 5 and 6, should Line 1600 be hydrotested, during the time it is out of service for testing and/or repair, there would be a decrease in system capacity. During this time, the loss of capacity provided by Line 1600 could lead to more widespread and/or frequent curtailments during periods of high sendout and/or when alternative supplies at Otay Mesa cannot be relied upon. Customers would be curtailed per SDG&E Gas Rule 14, which applies to the entire SDG&E service territory, not just Line 1600. Furthermore, the number of customers and amount of load impacted by these curtailments would be dependent on the specific conditions of the particular curtailment event. The exact numbers are theoretical, and therefore, impossible to specify. The number could range from a few large non-core and electric generation (EG) customers on the low end, to many thousands of core customers should the capacity shortfall be large and over an extended duration. The amount of gas associated with the curtailment could equate to many tens of million cubic feet per day (MMcfd) or more.

c) The systems and loads described in response to Question 2(a) above and in response to ORA DR 6 Question 5 will either be directly transferred to the proposed Line 3602 or indirectly supplied by the Proposed Project though the pipeline interconnections that the Proposed Project will have with other supply lines, such as the derated Line 1600.

Detailed information describing these interconnections can be found in Attachment XI of the Prepared Direct Testimony of Neil Navin. The costs for these improvements are included in the cost estimates presented for the Proposed Project.

d) See the response to Question 2(c) above. These efforts would be accomplished through implementing the Proposed Project. The details are explained throughout the Prepared Direct Testimony and workpapers of Neil Navin, which were used in developing the Cost Effectiveness Analysis (CEA).

e) Similar improvements, as described in the response to Question 2(c) above, would be made for all alternative diameter pipeline alternatives that follow the same route as the Proposed Project. For other alternatives, with the exception of batteries, the alternatives include necessary contractual arrangements and improvements to allow existing customers to continue receiving the same quantities of gas they currently receive. The estimated costs of such improvements are included in each of the alternatives as applicable.

f) Based on preliminary plans and designs, SDG&E and SoCalGas do not anticipate curtailment of customers associated with implementing the project as proposed. However, detailed engineering and the planning of the operational steps required to place the proposed project in service have not yet been completed to further validate this. Furthermore, there is a chance that an unforeseen system emergency or other unplanned event could occur that could lead to a curtailment during the process of migrating loads from Line 1600 to the Proposed Project.

g) See the response to Question 2(d) above.

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**QUESTION 3:**

Page 5 of Mr. Bisi's Prepared Testimony states:

"As explained by Mr. Navin, while a pressure test of Line 1600 may be theoretically possible, it is expected to require up to four years to perform if tested during the shoulder months, and additional time to make any required repairs, which could further extend the outage absent OtayMesa supplies."

Table 1 in Attachment B of Mr. Navin's Prepared Testimony shows three options for the testing scenarios of hydro testing Line 1600 where Option 1: Testing 4/1 -6/15 & 10/1 – 12/15.

(a) Given Option 1 shown in Table 1 which indicates testing during shoulder months of approximately 33 months, please explain the statement above that the pressure test of Line 1600 is "expected to require up to four years to perform if tested during the shoulder months."

(b) Please explain if "additional time to make any required repairs" is included in the "up to four years" expected time required for pressure testing, and if so, state how many required repairs were assumed.

**RESPONSE 3:**

a. The Prepared Direct Testimony of Neil Navin at page 30 states: "The overall schedule for completing the hydrotesting, as depicted in Figure 3 below, would be approximately four years from regulatory approval and any subsequent approvals required by environmental review." Regarding Option 1 in Table 1 of Attachment B to Mr. Navin's testimony, the 11 quarters cited is for the physical testing only, and does not include time required to engineer the project, obtain permits, and procure material. These activities are estimated to require another six quarters or 18 months, totaling just over four years as specified. See Attachment B of Mr. Navin's Testimony under Attachment VI-Hydrostatic Testing Schedules.

b. No additional time for repairs was included in the estimated hydrostatic testing schedules as Applicants are unable to predict the number of hydrotest failures that may occur, nor how long it would take to locate and repair a leak associated with a failed hydrotest. Additional information on this issue is provided at pages 5 and 6 of Attachment B (Line 1600 Hydrotest Study and Cost Estimate) of the direct Testimony of Neil Navin. Time to repair and retest the segment is likely to extend the overall hydrotest schedule beyond those shown in the referenced study.

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**QUESTION 4:**

Page 6 of Mr. Bisi's Prepared Testimony states:

"Despite the technical feasibility of pressure testing as an option, the Utilities have determined that it is prudent to replace Line 1600's transmission function for several reasons beyond PSEP implementation. One of those reasons is the need for a new pipeline in San Diego to enhance system reliability and resiliency, as explained in the next Section."

(a) Please provide the "several reasons beyond the PSEP implementation" why the Applicants have determined that it is prudent to replace Line 1600 referenced above.

(b) Please confirm that pressure testing Line 1600 is "technically feasible" rather than just being "theoretically possible."

**RESPONSE 4:**

a) SDG&E and SoCalGas have provided the requested information throughout its Application, which includes discussion of improved reliability and redundancy of the SDG&E system, and operational flexibility to meet customer demand. See generally, the Prepared Direct Testimony of Douglas M. Schneider.

b) The Prepared Direct Testimony of Dave Bisi at page 6 states that pressure testing Line 1600 is technically feasible.

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**QUESTION 5:**

Page 6 of Mr. Bisi's Prepared Testimony states:

"As previously stated, the integrity of the SDG&E system is highly dependent upon two transmission assets: Line 3010 and the Moreno Compressor Station. An outage at either of these two facilities may impact the Utilities' ability to maintain continuous service to their customers, including core customers; an outage at both facilities certainly will.[6]"

Footnote 6 states: "The Cost-Effectiveness Analysis includes a scenario analysis that evaluates SDG&E's system performance in the case of an outage or pressure reduction of Line 3010. I have provided data input to the analysis, which PWC used to model a range of scenarios across a variety of parameters and variables, with the aim to assess any resulting gas and electric curtailment impacts to customers."

(a) Please explain whether the CEA includes a scenario analysis that evaluates SDG&E's system performance in the case of an outage or pressure reduction of Line 3010 both under the "with and without the Proposed Project situations." Please cite reference to the testimony and workpapers on the scenario analysis that demonstrates the "with and without the Proposed Project situations" and shows the resulting gas and electric curtailment impacts to customers.

(b) Please identify the project costs associated with the scenario analysis described in item (a) under the "with the Proposed Project situation."

(c) Please identify the project costs associated with the scenario analysis described in item (a) under the "without the Proposed project situation."

(d) Please identify the project benefits associated with the scenario analysis described in item (a) under the "with the Proposed Project situation."

(e) Please identify the project benefits associated with the scenario analysis described in item (a) under the "without the Proposed Project situation."

(f) Please state whether the scenario analysis described in item (a) was subject to a sensitivity analysis under the "with and without the Proposed Project situations." If so, please cite reference to the testimony and workpapers where this is provided and discussed.

**RESPONSE 5:**

a. Yes, the CEA includes a scenario analysis that evaluates SDG&E's system performance in the case of an outage or pressure reduction of Line 3010 both under the "with and without the Proposed Project situations."

- Each of the 960 scenarios includes as one of the variables a complete outage of Line 3010 or Line 3010 operating at 80% (see CEA, page 64, Table 31).

- The scenarios evaluate both the Proposed Project and each of the Alternatives in combination with complete outage of Line 3010 or Line 3010 operating at 80% (see CEA, page 64, Table 31).

The Scenario Analysis workpapers supporting the CEA provide the results of all 960 scenarios and indicates if the scenario includes a complete outage of Line 3010 or Line 3010 operating at 80%. For example, on the workpaper tab labeled, "Gas", Line 95 outlines a the scenario evaluating Line 1600 pre/post hydrotesting with Line 3010 operating a 80% supply and full supply available from Otay Mesa. The results of this scenario are presented on Lines 99-111.

The results of all of the scenario analyses are presented in the Scenario Analysis workpapers: "Gas" tab, lines 95-3011; and "Electric" tab on lines 27-1505.

b. The costs for the Proposed Project and the Alternatives are presented in the CEA on page 32, Table 8. There are no scenario specific project costs.

c. See response to Question 5(b) above.

d. The project benefits associated with the scenario analysis for both the Proposed Project and each of the Alternatives are:

- Curtailment impact to core gas customers – Benefit 2.2 (CEA page 42-43)
- Curtailment impact to electric generation (EG) gas customers – Benefit 2.3 (CEA page 43)
- Curtailment impact to non-core, non-EG gas customers – Benefit 2.4 (CEA page 44)
- Curtailment impact to electric customers – Benefit 2.5 (CEA page 44-45)

The scores for the scenario analysis benefits 2.2, 2.3, 2.4 and 2.5 for the Proposed Project and the Alternatives are set forth in the CEA, pages 45-46, Table 14 and further discuss in the CEA on pages 46-48.

The benefits scores are also provided in the scenario analysis workpapers on the tab, "Scoring" Columns J-M (Benefits Evaluation Model Scoring of Avg Curtailment %," lines 4-23.

e. See response to Question 5(d) above.

f. The scenario analysis was not subject to a sensitivity analysis but is in itself a sensitivity analysis, given that the scenario evaluates changes to system operations as different variables are applied.