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

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

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

**(DATA REQUEST ORA-71)**

**Date Requested: February 24, 2017**
**Date Responded: March 16, 2017**

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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-Effective Analysis (CEA) criteria of evaluation alternatives**

**QUESTION 1:**

On page 49 of the CEA1, Table 17 is entitled, "Increased Operational Flexibility Benefits Score", and that table scores the proposed project and the alternative projects. For the project alternatives entitled, "Alternative diameter 10" and "Alternative Diameter-12" please provide the maximum, minimum, and expected operating pressures of each of these alternatives, and their expected capacities.

**RESPONSE 1:**

Based on SDG&E's and SoCalGas' (Applicants') experience and engineering judgment, Applicants conclude that the 10" and 12" diameter alternatives would result in a significant reduction in capacity compared to the existing 16" diameter pipeline. This conclusion was conveyed to Pricewaterhouse Coopers (PwC) at the time they were completing the Cost-Effectiveness Analysis (CEA). Capacities for Alternative Diameters 10" and 12" were provided on page 68 of the CEA in Table 34, and are 50 and 70 MMcfd, respectively. If either the 10" or 12" diameter alternatives were to be constructed, Applicants would advocate for a maximum allowable operating pressure (MAOP) of 800 psig to match the ratings of connecting transmission pipelines and that would be the maximum operating pressure (MOP) as well. Minimum operating pressures (MinOP) would also be set to match the corresponding MinOP across the existing system, and the expected operating pressures would fluctuate over the course of the day based between MAOP/MOP and MinOP.

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**QUESTION 2:**

In response to Data Request DR-58 question 3, SDG&E/SoCalGas provided a Table which suggests that in the event of an L3010 complete outage, the number of days the event occurred in 2006-2015 was 30 days.

In response to Data Request DR-07 question 5, SDG&E/SoCalGas provided a table showing 12 events that have occurred since January 2011, and prefaced the table by stating, "Reliable service was maintained to core customers in all instances."

In response to Data Request DR-38 question 9, SDG&E/SoCalGas state, "Applicants' response to ORA Data Request 7, Question 5 provided a table showing 12 curtailments affecting the SDG&E system since 2008." Please answer the following;

A. Please update the table provided in response to DR-07 Question 5, showing the curtailment events that occurred during the period from 2006 through 2015 and add for each event, the following:

a. The date
b. Duration (in hours)
c. Trigger of the event, including root cause, and utilities affected by each event.
d. Whether each curtailment was voluntary or not?
e. Whether a curtailment plan was followed?
f. If a curtailment plan was followed, please provide the name of the plan. Please also provide each plan named.
g. Did core customers lose service during the implementation of the curtailment plan?
h. Did non-core customers lose service during the implementation of the curtailment plan?
i. Did SDG&E/SoCalGas procure gas during the event?
j. If the answer to question "i" is yes, please identify all sources from which gas was procured.
k. What was the daily gas demand on the SDG&E/SoCalGas system during the event?
l. Temperature, including the highest and lowest, in the local area of the event, during the time of the event.

B. Please state if this information was used to inform the CEA, and if so, how it did.

**RESPONSE 2:**

A. For reference, please see the table below from ORA DR 7, Question 5. After a reasonably diligent search, Applicants are unaware of curtailment events in the 2006 through January 2011 time frame

| Start Date and Time | End Date and Time | Duration | Trigger | Affected Utility |
|---|---|---|---|---|
| Feb 3, 2011 3PM | Feb 4, 2011 12 noon | 21 hours | Lack of Supply | SCG/SDGE |
| Oct 1, 2011 6AM | Oct 1, 2011 9PM | 13 hours | Planned Maintenance | SDGE |
| Oct 8, 2011 6AM | Oct 8, 2011 11PM | 17 hours | Planned Maintenance | SDGE |
| Oct 15, 2011 6AM | Oct 15,2011 11PM | 17 hours | Planned Maintenance | SDGE |
| Oct 22, 2011 6AM | Oct 22, 2011 9PM | 15 hours | Planned Maintenance | SDGE |
| Oct 29, 2011 6AM | Oct 30, 2011 4AM | 22 hours | Planned Maintenance | SDGE |
| Nov 5, 2011 6AM | Nov 5, 2011 1PM | 7 hours | Planned Maintenance | SDGE |
| Nov 12, 2011 6AM | Nov 12, 2011 10PM | 16 hours | Planned Maintenance | SDGE |
| Nov 19, 2011 6AM | Nov 19, 2011 8PM | 14 hours | Planned Maintenance | SDGE |
| Dec 6, 2013 12AM | Dec 11, 2013 11:59 PM | 6 days | Lack of Supply | SCG/SDGE |
| Feb 6, 2014 8AM | Feb 10, 2014 11:59 PM | 4 days 16 hours | Lack of Supply | SCG/SDGE |
| Feb 6, 2014 6:45AM | Feb 7, 2014 12AM | 17 hours 15 minutes | Emergency | SCG/SDGE |

a. Start and End Date indicated on table

b. Duration in hours shown on table

c. Trigger and affected Utility indicated on table

d. Curtailments are not voluntary. They are orders to comply.

e. All curtailments were executed once ordered including the planned maintenance outages.

f. All of the Planned Maintenance Outages were described as either Gas Curtailments or Planned Maintenance outages.

g. As stated in the previous response, no core customers were curtailed during these curtailment events

h. Customers do not lose service during a curtailment, they are ordered to stop taking it.

i. Please see table below for reliability supply purchases on curtailment event days:

| Start Date and Time | End Date and Time | Reliability Supply Purchased? | EPNG Sourced (dth) | Otay Mesa Sourced (dth) |
|---|---|---|---|---|
| Feb 3, 2011 3PM | Feb 4, 2011 12 noon | Yes | 362,937 | 115,000 |
| Oct 1, 2011 6AM | Oct 1, 2011 9PM | No | N/A | N/A |
| Oct 8, 2011 6AM | Oct 8, 2011 11PM | No | N/A | N/A |
| Oct 15, 2011 6AM | Oct 15,2011 11PM | No | N/A | N/A |
| Oct 22, 2011 6AM | Oct 22, 2011 9PM | No | N/A | N/A |
| Oct 29, 2011 6AM | Oct 30, 2011 4AM | No | N/A | N/A |
| Nov 5, 2011 6AM | Nov 5, 2011 1PM | No | N/A | N/A |
| Nov 12, 2011 6AM | Nov 12, 2011 10PM | No | N/A | N/A |
| Nov 19, 2011 6AM | Nov 19, 2011 8PM | No | N/A | N/A |
| Dec 6, 2013 12AM | Dec 11, 2013 11:59 PM | Yes | 389,956 | 0 |
| Feb 6, 2014 8AM | Feb 10, 2014 11:59 PM | Yes | 554,918 (includes Feb 6 quantities below) | 0 |
| Feb 6, 2014 | Feb 7, 2014 | Yes | 208,919 | 0 |

| | | | | |
|---|---|---|---|---|
| 6:45AM | 12AM | | | |

j. Please see the response to Question 2.A.i for reliability purchase quantities on curtailment event days.

k. Daily sendout data is available on SoCalGas' Envoy website: https://scgenvoy.sempra.com

l. After a reasonably diligent search, Applicants have determined that they do not have the requested historical temperature data for the San Diego area readily available internally. Applicants understand that this data is publicly available via the National Weather Service. Please refer to weather.gov/sandiego which contains contact information to request official National Weather Service data.

While researching this, Applicants noted that some limited weather data was provided in response to ORA DR-09 Question 21. For convenience, this data is restated as follows:

12/09/13- Miramar Weather (High/Low/Weather): 62°/37°/Partly to mostly cloudy
02/06/14- Miramar Weather (High/Low/Weather): 61°/49°/Overcast, PM rain

B. The CEA took a broader approach to addressing system reliability and curtailments compared to the specific parameters described in part a) of this question. The CEA did not involve a detailed analysis of each of the events and of all of the parameters described above. Please refer to the CEA at 41 through 48, for details of the information and methodology related to curtailment and overall system reliability that were considered and employed during preparation of the CEA.

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**QUESTION 3:**

a. When identifying alternatives to the proposed project, did SDG&E/SoCalGas consider an alternative that would connect lines 6000, 6902, and 6903 to the Gasoducto Rosarito line in order to prevent the need to expand the TransCanada/North Baja Line? If so, please explain why this was not proposed as an alternative in the CPCN application? If SDG&E/SoCalGas did not consider this alternative, why not?

b. Please include the available capacity on lines 6000, 6902 and 6903. If it is possible to connect lines 6000, 6902 and 6903 to the Gasoducto Rosarito line, include an estimated cost to do so.

c. Are there any reasons it is not feasible to connect lines 6000, 6902 and 6903 to the Gasoducto Rosarito line? If so, please list them.

**RESPONSE 3:**

a. No. The SoCalGas' Imperial Valley system (comprised of Lines 6000, 6902 and 6903): (1) does not interconnect with the Gasoducto Rosarito pipeline, but only with the ECOGAS distribution system in Mexicali, and (2) even if the ECOGAS system were interconnected to Gasoducto Rosarito, Line 6903 lacks sufficient capacity to support ECOGAS' (owner and operator of the natural gas distribution system in Mexicali, Mexico) current demand and provide volumes for transport to Otay Mesa as an alternative to the Proposed Project. Further, The Gasoducto Rosarito pipeline is located in Mexico and Applicants do not have authority or jurisdiction to extend their pipelines past the international border.

b. Please refer to the response to Question 3(a) above. The capacity of SoCalGas' Imperial Valley system, which includes Line 6000, Line 6902, and Line 6914 will be approximately 200 million cubic feet per day (MMcfd) when the extension of Line 6914 is put into service later this year. Line 6903 extends from the Imperial Valley system near El Centro to the ECOGAS meter at the U.S. Mexico border in Calexico, and has a capacity of approximately 60 MMcfd. The Gasoducto Rosarito pipeline is located in Mexico and Applicants do not have authority or jurisdiction to extend its pipelines past the international border.

c. Please refer to the responses to Questions 3(a) and 3(b) above. Applicants do not believe this option is feasible because Applicants' understanding is that (a) the ECOGAS

distribution system in Mexicali supplied by Line 6903 lacks an interconnect with the Gasoducto Rosarito pipeline, and is therefore infeasible to use as a conduit to deliver supply from the SoCalGas system to the Gasoducto Rosarito pipeline without additional enhancements, (b) existing infrastructure is unlikely to have sufficient capacity to supply ECOGAS demand along with material volume of gas to Otay Mesa, and (c) may require additional construction of pipelines in Mexico.

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**QUESTION 4:**

**Subject: Hypothetical case in evaluation of proposed project**

For the following set of questions, except for question 4f, reference to Line 3602 is to the project as proposed by Applicants. If the construction of the proposed project L3602 is intended by Applicants to provide resiliency and safety to the system, but not to add unneeded extra capacity to the system, would it be possible to operate Lines 3010 and 3602 at reduced pressures just to provide the capacities needed by San Diego to meet its most current demand forecasts? If not please explain why not? Otherwise please answer the following questions:

a. What would be the lowest operating pressures and associated capacities for Line 3010 and Line 3602 (as proposed by Applicants) that can maintain service of 630 mmcfd to San Diego if Line 1600 is de rated? Are these operating pressures above the minimum allowable operating pressures for Lines 3602 and 3010?

b. Assuming that Line 1600 is derated to 320 psig, that supplies through Moreno were free flowing, and system capacity was not increased beyond the current system capacity of 630 mmcfd, what would SoCalGas/SDG&E set as the maximum operating pressures of Lines 3010 and 3602?

c. Assuming that Line 1600 is derated to 320 psig, and system capacity was not increased beyond the current system capacity of 630 mmcfd, what would SoCalGas/SDG&E set the maximum operating pressures of Lines 3010 and 3602?

d. Provide the number of structures in the potential impact radius for each of Line 3602 and Line 3010, based on the maximum operating pressures provided in response to parts b and c, above.

e. Can the system be operated without operating Moreno station in either of the two situations described in parts b and c? Please explain.

f. Please provide responses for a. through e., but now change the hypothetical to assume Line 3602 is configured with a 40” pipeline diameter.

**RESPONSE 4:**

Applicants object to this question as vague and ambiguous in referring to “capacities needed by San Diego to meet its most current demand forecasts” and calling for speculation by asking if it is “possible to operate Lines 3010 and 3602 at reduced pressures” without expressly taking into

account feasibility or operational prudence. Applicants do not support the concept of limiting operational flexibility by unnecessarily restricting operating pressures. To provide maximum flexibility to respond to system needs and emergencies, Applicants advocate that the pipeline should be able to operate up to MAOP at the discretion of the operator. Furthermore, even with the flexibility to operate a pipeline up to MAOP, SoCalGas and SDG&E seek to operate the system in a safe and efficient manner which includes not running the pipelines at pressures that are higher than are reasonably necessary to ensure safe and reliable operation of the system and to meet anticipated customer demand. Subject to and without waiving this objection, Applicants respond as follows:

a. The pressure delivered to Line 3010 and proposed Line 3602 from the SoCalGas system will vary over the course of the operating day. Applicants interpret this question as seeking the lowest maximum operating pressure of Line 3010 and proposed Line 3602, which would maintain an SDG&E system capacity of 630 MMcfd. Under that assumption, a maximum operating pressure of 500 psig would be required, which is above the current and planned minimum operating pressure.

b. Applicants would set the maximum operating pressure of proposed Line 3602 to 800 psig to match the design of the current transmission system, and Line 3010 would remain unchanged. Please refer to SDGE-12: Supplemental Testimony of San Diego Gas & Electric Company and Southern California Gas Company at page 80, lines 5 – 10.

c. Please refer to the response to Question 4(b) above.

d. As prescribed by 49 CFR 192.903, the potential impact radius is calculated using the MAOP, not the maximum operating pressure. The requested PIR calculation using the maximum operating pressure does not align with federal regulations and therefore was not provided.

   In an effort to be responsive, we have provided calculations performed per 49 CFR 192.3. Per our internal standard, embedded in our calculation is a 50 foot addendum to the PIR which accounts for measurement and mapping inaccuracies on pipelines in operations.

   The number of structures located inside the calculated potential impact circle (PIR) using the current MAOP and diameter of Line 3010 and the proposed diameter of 36” and MAOP of 800 for Line 3602 are as follows:

   - Line 3010: 7,154
   - Line 3602 : 7,362

e. Please refer to SDGE-3-R: Updated Prepared Direct Testimony of David Bisi at page 8, lines 7 – 9.

f. Please refer to the responses below:

i. As explained in the CEA at page 12, n. 27, 40 inches is not a standard size pipeline diameter. As such, Applicants evaluated a 42-inch diameter pipeline instead of a 40-inch. The pressure delivered to Line 3010 and a hypothetical 42-inch diameter pipeline from the SoCalGas system will vary over the course of the operating day. Applicants interpret this question as seeking the lowest maximum operating pressure of Line 3010 and a hypothetical 42-inch diameter pipeline which would maintain an SDG&E system capacity of 630 MMcfd. Under that assumption, a maximum operating pressure of 480 psig would be required, which is above the current and planned minimum operating pressure

ii. Please refer to the response to Question 4(b) above.

iii. Please refer to the response to Question 4(b) above.

iv. Please see the response to Question 4(d) above.

v. Please refer to the response to Question 4(e) above.

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**QUESTION 5:**

**Subject: Additional information regarding the proposed project and the alternatives**

Please fill out the unfilled portion of the attached spread sheet named "DR-71 Additional Information."
ORA filled in the information that is available to ORA thus far. Please overwrite any information that is incorrect and state the reason any information ORA provided is incorrect. Please complete all cells or provide detailed description why you cannot fill the cell and please provide all assumptions made in order to provide the answers.

**Description of current/new alternatives**
Rows 3 through 22 represents the alternatives presented in the CEA without any changes.
Row 23 is a new alternative, assumes (Hypothetically) L3602 and Line 3010 are in operation with Moreno compressor station offline, so the gas is free flowing.
Row 24 is same alternative as that identified on Row 23, but asks for the information associated with Line 3010 only.
Row 25 is not an alternative, but is asking to fill out the information for L3010 at its current operating pressure.

**Description of columns**
Column A: The serial number of alternatives. (This is for reference only and no input is needed.)
Column B: The index of alternatives as provided in the CEA (No input needed.)
Column C: The alternative projects names (No input needed.)
**Input is needed to the following columns for the associated proposed project and alternative projects**
Column D: The total length of the line from the beginning of the line to the end of the line. (in Miles)
Column E: The new construction length of the line that needs to be constructed if the alternative is selected. The values in this column cannot exceed the value in column "D" (in Miles)
Column F: The capacity (in mmcfd)
Column G: The expected operating pressure associated with the alternative (in psig). If necessary to provide a range, please do so, and identify the most likely operating pressure within the range.
Column H: The Maximum Allowable Operating Pressure MAOP associated with the alternative (in psig).
Column I: The number of structures in potential impact radius at maximum allowable operating pressure (Structures).

Column J: The time required to provide gas during an unplanned outage of Line 3010? The time required means the reasonable time that SDG&E/SoCalGas operations team can manage to switch to another source of gas in the case of a Line 3010 unplanned outage (hrs.)
Column K: The capacity that can be provided during the short term (6 hrs.) for a Line 3010 unplanned outage?
Column L: The total number of transmission pipelines providing gas from receipt points (Rainbow Station, Otay Mesa, Other) if the alternative is selected (Lines).
Column M: The total number of sources providing gas to San Diego if the alternative was selected. The values in this column cannot exceed the value in column “L”. The sources of gas are counted based on the location of the start of the pipeline not the origin of the gas.
Column N: Please answer: If the alternative includes a constructed line that has been pigged, please indicate yes. If the alternative includes a constructed line that has not been pigged or is not peggable, please indicate no. If the alternative includes a mix of constructed segments, some of which have been pigged, and others that have either not been pigged or are not pig gable, please indicate in a separate document which segments have been pigged. For alternatives that have not been built: 1) If the whole line will be pig gable, please answer “yes”; 2) If the whole line will not be pig gable, please answer “no”; 3) If only certain segments of the line will be pig gable, please indicate those in a separate document.
Column O: If the alternative includes a line that has been pressure tested, please indicate yes. If the alternative includes a line that has not been pressure tested, please indicate no. If the alternative includes a mix of segments where some have been pressure tested and others have not, please indicate in a separate document which segments have been pressure tested. For alternatives that have not been built: 1) If the whole line will tested, please answer “yes”; 2) If none of the line will be tested, please answer “no”; 3) If only certain segments of the line will be tested, please indicate those in a separate document.
Column P: Please answer: Is the line known to have seam flaws due specifically to manufacturing of the pipe? (Yes/No)
Column Q: Please answer: Is the line known to have seam flaws that occurred after manufacturing? For the alternatives that have not been constructed yet enter “N/A”. For the alternatives that have portions already constructed, answer the question for each of those portions. (Yes/No)
Column R: For each alternative that lacks features that a new proposed line would contain, please identify all such features that are missing. In the case of a new line, please enter “none”.
Column S: The annual Green House Gases (GHG) emissions due to operation of each line. ($CO_2$ Tons/Year)

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**RESPONSE 5:**

Applicants object to Question 5 to the extent that it calls for information not within Applicants' possession, custody or control. Further, Applicants object that some of the subparts and the attached spreadsheet are vague and ambiguous. Applicants will work with ORA to reduce such ambiguity to the extent feasible.

The response to this question will be provided to ORA at a later date as part of ORA 74 since the table was updated in that data request.