

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
(A.15-09-013)
(DATA REQUEST ORA-30)
Date Requested: August 11, 2016
Date Responded: August 25, 2016**

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.

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Date Requested: August 11, 2016

Date Responded: August 25, 2016

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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.

**SAN DIEGO GAS & ELECTRIC COMPANY
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Subject: Cost Effectiveness Analysis (CEA) for the Pipeline Safety & Reliability Project (PSRP) by PWC and Neil Navin Prepared Testimony Attachment A PSRP Report and Ms. Gwen Marelli Prepared Testimony in A.15-09-013

QUESTION 1:

About the middle of Table 3 at page 10 of the CEA, Applicants describe “increased reliability” as a quantitative non-monetary benefit in terms of “redundancy to natural gas transmission system.”

- (a) Please provide the definition of “redundancy” as used in Table 3.
- (b) Please clarify whether the reference to the term “redundancy” in Table 3 is designed to equate “increased reliability” on the system with a redundant natural gas transmission system. Please explain your response.

RESPONSE 1:

- a. Redundancy as used in Table 3 is defined in the Cost-Effectiveness Analysis (CEA) on page 42 as the “[a]bility for a project to provide redundancy to the natural gas system should an unplanned event occur and place any of the two primary gas transmission assets (Line 3010 and Moreno Compression Station) out of service.”
- b. Increased reliability is explained in the CEA on page 41. Increased reliability is an effect of redundancy in a system. The proposed Line 3602 will not be a “redundant natural gas transmission system,” it will be a piece of the entire transmission system, offering redundancy within that system.

**SAN DIEGO GAS & ELECTRIC COMPANY
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PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
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**Date Requested: August 11, 2016
Date Responded: August 25, 2016**

QUESTION 2:

Page 41 of the CEA states:

“System reliability refers to the ability to maintain safe, consistent, and continuous service to customers. System reliability is insured by maintaining safe operating pressures, which in turn result from having sufficient supply to meet demand and sufficient pipeline and storage capacity.”

Using modern design standards and state-of-the-art materials and technology can increase the reliability of the physical gas transmission asset. Additionally, extra capacity as a result of a larger pipe diameter and the ability to operate safely at a higher pressure, can help improve the inherent reliability of a system during events when (a) projected daily demand exceeds forecast levels or (b) intra-day demands fluctuate in a manner that exceeds current operating parameters.

“The Proposed Project and Alternatives were evaluated and scored in terms of their impact on increasing the current reliability/redundancy of the Applicants’ gas transmission system. The three main distinctions in assessing the impacts to reliability/redundancy are as follows:

- No change to system reliability/redundancy;
- Increased system reliability/redundancy, and
- Decreased system reliability/redundancy.”

- (a) Please explain how the term “System” is used in the above. Does “System” refer to the “integrated SoCalGas and SDG&E gas transmission system including the southern system” or does “System” refer solely to the SDG&E gas transmission system, or does it refer to both the gas distribution and transmission systems of SDG&E, or to something else. Please explain your response.
- (b) As used by the Applicants, please clarify whether “System Reliability” is the ability to “maintain safe, consistent, and continuous service to customers” within a specified period of time for a specified function or something else. Please explain your response.
- (c) Please provide the definition of “redundancy” relative to “system reliability” as used in the above.
- (d) Based on your responses to items (a) and (b), please identify a measurable metric that best indicates the extent the “System Reliability” goal is met either presently in the gas transmission system or could be expected to increase or decrease from current levels.

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
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**Date Requested: August 11, 2016
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[Note: For instance: the recorded high frequency of occurrence and duration of system-wide curtailments? Emergency OFOs? Other metrics?]

- (e) To ensure that expectations regarding the achievement or attainment of “System Reliability” are based on demonstrated results based on the Applicants’ modelling efforts, please confirm the Applicants use of computerized gas flow modelling¹ of its entire gas transmission and storage system on an ongoing basis and for purposes of planning for the Proposed Project and comparing and the Alternatives for “System Reliability.” **[Note: we ask about the use of computerized models because we want to make sure the expectations about system reliability have at least some basis demonstrated in modelling results.]**
- (f) As used by the Applicants, please clarify reference to “having sufficient supply to meet demand” in the above statements. **[Note: Does “sufficient supply” refer to “sufficient short term supply” or to “ long term gas supply” or to both short term and long term? Does “demand” refer to “average daily demand, intra-day demand, and/or peak demand” or to something else?]** Please explain your response.
- (g) As described above, please briefly explain the key steps necessary for a utility to have “sufficient supply to meet demand.”
- (h) Please explain whether the Applicants have taken all the steps described in item (g) above to have “sufficient supply to meet demand.”
- (i) As described above, please briefly explain the key steps necessary in order for a utility to have “sufficient pipeline and storage capacity.”
- (j) Please explain whether the Applicants have taken all the steps described in item (i) above to have “sufficient pipeline and storage capacity.”
- (k) Please explain the reference to “Using modern design standards and state-of-the-art materials and technology” in the above statements. If this is in reference to the code of federal regulations, then please so state and specify the relevant code section.

¹ In Comments dated Nov.20, 2006 filed in A.04-12-004 which requests authority to integrate their gas transmission rates, establish firm access rights, and provide off-system gas transmission services, SoCalGas/SDG&E indicate on page 4 that “hydraulic flow models of the SDG&E and SoCalGas gas transmission system are highly complex and requires extensive knowledge of the system to properly perform an analysis. This knowledge includes operating parameters of all of the utilities’ facilities, such as minimum and maximum operating pressures, design conditions, modes of operation and much more.” The hydraulic models are utility gas flow models that “contain voluminous customer-specific information including individual customer consumption data and usage patterns.

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
(A.15-09-013)
(DATA REQUEST ORA-30)**

**Date Requested: August 11, 2016
Date Responded: August 25, 2016**

-
- (l) Regarding the three main distinctions in assessing the impacts to reliability/redundancy described above, please explain in specific terms the distinctions being made among “No change to system reliability/redundancy,” versus “Increased system reliability/redundancy” or “Decreased system reliability/redundancy.” **[Note: For instance, could “no change” possibly refer to status quo or no expected changes to the current indicators on the frequency and duration of curtailments, the number of Emergency OFOs, etc. versus an expected bump up in “increased system reliability” of x%? Or, conversely, an expected x% degradation in system reliability? We need to understand how the scoring mechanism works based on results of computerized modelling in Question 2(e).]**

RESPONSE 2:

- a. “System” in the context of this Application refers to the SDG&E natural gas transmission system.
- b. System reliability is not limited to a specific time or function. SDG&E and SoCalGas (Applicants) have an obligation to provide safe, consistent, and continuous service at all times, recognizing that SoCalGas Rule No. 23 and SDG&E Gas Rule No. 14 describe Commission-approved curtailment procedures to maintain service to core customers when demand exceeds our capability to provide.
- c. Please refer to the response to question 1 above.
- d. Metrics that provide a relative measurement of change in system reliability as it relates to the existing gas transmission system, the Proposed Project and the project alternatives are described in the CEA at pages 42-45.
- e. Applicants object to this subpart as vague, ambiguous and potentially overbroad. Subject to and without waiving their objections and as best as Applicants understand the question, Applicants respond as follows. The comparison of relative effectiveness for reliability of the Proposed Project and its alternatives was based upon engineering judgment and not upon hydraulic modeling.
- f. Sufficient supply must be available at all times (short term, long term, and continuously) in order to provide reliable and continuous service to customers. Supply may come from interstate pipelines, local California producers, storage, or linepack. Supply and demand must be continuously in balance throughout the operating day.
- g. SDG&E and SoCalGas cannot ensure that sufficient supply will always be available to meet demand. SDG&E and SoCalGas procure supply only for the retail/bundled core

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
(A.15-09-013)
(DATA REQUEST ORA-30)**

**Date Requested: August 11, 2016
Date Responded: August 25, 2016**

market segment, and rely upon its balancing rules and associated penalties to compel noncore and core aggregation transportation (CAT) customers to deliver supply. SDG&E and SoCalGas plan for sufficient capacity on its system to meet the demand forecasts under the Commission's design standards for core and noncore customers. SDG&E and SoCalGas also have filed this Application for authority to enhance reliability by increasing resiliency of the system under certain events and providing operational flexibility to address fluctuations in demand.

- h. SDG&E and SoCalGas object to this request on the ground that it is vague, overbroad and unduly burdensome. Subject to and without waiving their objections, SDG&E and SoCalGas respond as follows. The SDG&E system capacity is currently sufficient to meet the current 1-in-10 year cold day and 1-in-35 year peak day design standards, albeit with a capacity loss and adverse operational flexibility impacts resulting from the reduced operating pressure of Line 1600. See SDG&E's and SoCalGas' comments on Draft Resolution No. SED-1 served on August 8, 2016.

The SDG&E semi-annual report on its gas system capacity planning and demand forecasts, submitted to the Commission on April 29, 2016, also found that the SDG&E system has "sufficient capacity to meet the 1-in-35 year peak day design standard and the 1-in-10 year cold day design standard through the forecast period." This report was prepared prior to the SED order to lower the operating pressure of Line 1600; the impact of that will be included in the next semi-annual report.

- i. Planning for pipeline and storage improvements involves an examination of long-term demand forecasts, market demand for products and services, failure assessment, and regulatory constraints.
- j. SDG&E and SoCalGas object to this request on the ground that it is vague, overbroad and unduly burdensome. Subject to and without waiving their objections, SDG&E and SoCalGas respond as follows. SDG&E and SoCalGas consider all factors identified in Response 2(i) above when assessing its gas transmission systems capabilities.
- k. A description of "modern design standards and state-of-the-art materials and technology" can be found in the Prepared Direct Testimony of Deanna Haines.
- l. Applicants object to this subpart as vague and ambiguous. Subject to and without waiving their objections and as best as Applicants understand the questions, Applicants respond as follows. The distinctions were made based upon whether there was no change, a decrease or an increase.

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
(A.15-09-013)
(DATA REQUEST ORA-30)
Date Requested: August 11, 2016
Date Responded: August 25, 2016**

QUESTION 3:

Page 42 of the CEA states:

“The increased reliability benefits of the respective scoring criteria are described below.”

Item 2.1 “Redundancy to natural gas transmission system” on page 42 of the CEA states: “Ability for a project to provide redundancy to the natural gas system should an unplanned event occur and place any of the two primary gas transmission assets (Line 3010 and Moreno Compression Station) out of service. The scale for scoring the projects against this benefit is:

1. Reduced Level of System Redundancy
 2. Existing Level of System Redundancy
 3. Increased System Redundancy
 4. Complete Redundancy for Line 3010
 5. Complete Redundancy for Line 3010 or Moreno Compressor Station
- (a) Is the Proposed Project Line 3602 considered a backbone gas transmission pipeline on the SDG&E gas transmission system?
- (b) If the Proposed Project is built as proposed, then would the SDG&E backbone transmission capacity be increased from its current level? If so, please state the total capacity at current level and the expected total backbone capacity after the Proposed Project is built.
- (c) Please provide the actual recorded demand on the gas transmission system based on the most current data available.
- (d) Please provide the expected forecast demand on the gas transmission system based on the latest available forecast data or the forecast data relied upon by the Applicants which indicates a forecasted need for the Proposed Project.
- (e) Please describe how the response to item (b) above regarding the amount of expected total capacity after the Proposed Project is built compares to the amount of expected forecast demand in item (d). If there is an indication of excess backbone transmission capacity on the system, please explain.
- (f) Based on your response to item (e) above, if there is no indication of excess backbone transmission capacity on the system, then please explain how this is consistent with SoCalGas advice letter 4662 filed in July 2014 (about 14 months before A.15-09-013), where SoCalGas explains that it continues to hold adequate backbone transmission

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
(A.15-09-013)
(DATA REQUEST ORA-30)**

**Date Requested: August 11, 2016
Date Responded: August 25, 2016**

capacity and has a reserve margin of backbone capacity consistent with Commission policy. Based on AL 4662 (copy attached), SoCalGas expects to hold a reserve margin of 37% in 2014 and to retain an average reserve margin of 39% through 2030.²

- (g) Do the Applicants recommend “system redundancy” as a strategy to attain the goal of System Reliability for the gas transmission system described in your response to Question 2(a)?
- (h) Are there any circumstances when redundancy to natural gas transmission system is better avoided? Please explain your response. **[Note: When there is not enough demand forecast such that building the additional pipes would result in under-utilization of either existing or incremental pipeline capacity, it would make sense to avoid overbuilding and redundancies.]**
- (i) With respect to the scale for scoring the projects against this benefit described in item 2.1, please explain the “existing level of system redundancy” and cite the reference documents where this “existing level of system redundancy” is discussed in the Application.
- (j) Please explain the specific criteria that provides a distinction between “Increased System Redundancy” and “Complete Redundancy for Line 3010” versus “Complete Redundancy for Line 3010 or Moreno Compressor Station.” **[Note: We need to be assured that the model results can demonstrate the superiority of “Complete Redundancy for Line 3010 or Moreno Compressor Station” in terms of attaining System Reliability.]**

RESPONSE 3:

- a. Yes, the proposed Line 3602 would be considered a backbone asset of the SoCalGas and SDG&E gas transmission system.
- b. “Backbone transmission capacity” refers to the capacity of the SoCalGas/SDG&E system to receive and transport supply delivered from interstate pipelines and local California producers, as per SoCalGas AL 4662. Line 3602 does not increase the SoCalGas/SDG&E backbone transmission capacity in this manner. Line 3602 does, however, increase the capacity of the SDG&E system to serve demand in San Diego; please refer to the Prepared Direct Testimony of David Bisi, page 10. With Line 1600 currently derated to 512 psig, the SDG&E system capacity is 595 MMcfd.
- c. Daily and hourly demand data for SDG&E in 2015, and the daily system capacity, are provided in the attached spreadsheet.

² SoCalGas AL 4662, p.2.

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
(A.15-09-013)
(DATA REQUEST ORA-30)
Date Requested: August 11, 2016
Date Responded: August 25, 2016**

- d. Please refer to Response 2h of this data request.
- e. Please refer to Response 2h and 3b of this data request.
- f. Please refer to Response 3b of this data request.
- g. As indicated in Response 1b of this data request, the proposed Line 3602 would be a component of the SDG&E transmission system that would allow derating Line 1600 to 320 psig. Line 3602 would not be a separate redundant system; it is a component of the entire system that provides redundancy to either Line 3010 or Moreno Compressor Station, and therefore reliability.
- h. Applicants object to this subpart as vague, ambiguous and calling for speculation as to “any circumstances.” Applicants further object to the ORA’s assertion as to what “would make sense” as it does not address the loss of a system component.
- i. The scale for scoring projects for CEA 2.1 Redundancy to the natural gas transmission system is based on the systems existing capabilities to meet customer demand in the event of an outage planned or unplanned on Line 3010. “Existing system redundancy” is not defined in the application specifically, however, Mr. Bisi’ testimony, pages 6 and 7, describes Line 1600 capacity and capabilities in meeting customer demand in the event of outage, planned or unplanned, on Line 3010.
- j. Applicants object to this subpart as vague and ambiguous. Subject to and without waiving their objections and as best Applicants understand the question, Applicants respond as follows. The distinction between “Increased System Redundancy” and “Complete Redundancy for Line 3010” versus “Complete Redundancy for Line 3010 or Moreno Compressor Station” is the extent of customer service following a reduction in service of Line 3010, a loss of service of Line 3010, and a loss of service for either Line 3010 or Moreno Compressor Station.

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
(A.15-09-013)
(DATA REQUEST ORA-30)
Date Requested: August 11, 2016
Date Responded: August 25, 2016**

QUESTION 4:

In Item 2.2 “Curtailed impact to core gas customers” on page 42 through item 2.5 “Curtailed impact to electric customers” on page 44 of the CEA, the Applicants describe different “outage scenario analysis” performed to model the impact of the Alternatives on overall system reliability. Item 2.3 is “Curtailed impact to electric generation (EG) gas customers” while item 2.4 is “Curtailed impact to non-core, non-EG gas customers.” The footnotes reference Section H of the CEA for a detailed description of the scenario analysis performed. In Section H “Supporting Analysis” first describes the approach and methodology used to estimate the impact of the various project Alternatives on overall system reliability.

The Applicants explain that Davies Consulting, LLC, performed the analysis and states:

“Davies Consulting, LLC, with input and data from the Applicants, analyzed the potential failure rates for the existing Line 1600, the Proposed Project, and two proposed Alternatives: the 30” diameter pipeline (Alternative C5) and the 42” diameter pipeline (Alternative C6).”

- (a) Please state whether Davies Consulting was engaged by the Applicants or by PwC for the sole purpose of the “outage scenario analysis” in the CEA.
- (b) Based on item (a), please describe the specific role and scope of work of Davies Consulting for this engagement.
- (c) Please describe the instructions provided by either the Applicants and PwC to Davies Consulting for purposes of the “outage scenario analysis.”
- (d) Please state whether both the Applicants and also PwC provided any communications or documentation to Davies Consulting beyond the scope of the “outage scenario analysis” regarding the other aspects of the CEA that suggested a preferred outcome for the analysis. Please provide all such communications provided between Applicants and Davies Consulting; and between PwC and Davies Consulting.
- (e) Please provide all instructions, communications, and documentation from the Applicants and PwC to Davies Consulting related to the assignment on the “outage scenario analysis,” including the inputs and assumptions relevant to the assignment.

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
(A.15-09-013)
(DATA REQUEST ORA-30)**

**Date Requested: August 11, 2016
Date Responded: August 25, 2016**

RESPONSE 4:

SDG&E and SoCalGas object to this request insofar as it is over-broad, vague, compound, and burdensome. It seeks an expansive amount of information, most of which would not be relevant and, additionally, would be impossible to compile. SDG&E and SoCalGas further object to this request, whether broadly or more narrowly construed, to the extent it calls for production of any privileged internal documents of Applicants. A request for such records is unreasonable and unduly burdensome in light of the work product doctrine and other privileges protecting such internal documents from discovery. Subject to and without waiving these objections, SDG&E and SoCalGas respond as follows:

- a. Davies Consulting, LLC (Davies) was retained by Brownstein Hyatt Farber Schreck (BHFS), SDG&E's and SoCalGas' outside counsel, to assist BHFS in its representation and advisement of SDG&E and SoCalGas with respect to compliance with the Assigned Commissioner and Administrative Law Judge's joint ruling directing the Applicants to file and serve an Amended Application including a cost analysis that compares the relative costs and benefits of the Proposed Project and various project alternatives.
- b. Davies, with input and data from the Applicants, analyzed the potential failure rates for the existing Line 1600, the Proposed Project, and two proposed Alternatives: the 30" diameter pipeline (Alternative C5) and the 42" diameter pipeline (Alternative C6). Davies' analysis is presented in Section H.1 of the Cost Effectiveness Analysis (Pipeline Failure Analysis).
- c. All written information, documentation, and data provided by SDG&E and SoCalGas to Davies and relied upon by Davies for Pipeline Failure Analysis is included in the Cost Effectiveness Analysis itself or in the direct testimony and workpapers made available on SDG&E and SoCalGas' websites: <http://www.sdge.com/regulatory-filing/15786/pipeline-safety-reliability-project>

Davies was retained by BHFS, SDG&E's and SoCalGas' outside counsel, to assist BHFS in its representation and advisement of SDG&E and SoCalGas. Work performed by Davies was done under the direction of and overseen by BHFS, and documentation and communication was made by and through legal counsel. Accordingly, all documentation and communications, other than materials relied upon by Davies in preparing its section of the CEA, are protected by the attorney/client and attorney work product privileges. (Cal. Evid. Code §§ 952, 954; Cal. Code Civ. Proc. § 2018.030; *Costco Wholesale Corp. v. Superior Court (Randall)* (2009) 47 Cal.4th 725, 732; *Gordon v. Superior Court* (1997) 55 Cal.App.4th 1546, 1557 ["[T]he [attorney-client] privilege is absolute and disclosure may not be ordered, without regard to relevance, necessity or any particular circumstances peculiar to the case."]; *Citizens for Ceres v. Superior Court* (2013) 217

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
(A.15-09-013)
(DATA REQUEST ORA-30)
Date Requested: August 11, 2016
Date Responded: August 25, 2016**

Cal. App. 4th 889, 912 [explaining that work produced by an attorney's agents and consultants is protected by the attorney work product doctrine.]

- d. The Pipeline Failure Analysis in Section H.1 of the Cost Effectiveness Analysis is an objective analysis. While the Applicants provided Davies with the data necessary to conduct such analysis, Applicants did not direct the outcome or provide communications or instructions for Davies to reach a certain conclusion.
- e. Please see response to Question 4(c) above.

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
(A.15-09-013)
(DATA REQUEST ORA-30)
Date Requested: August 11, 2016
Date Responded: August 25, 2016**

QUESTION 5:

Page 46 of the CEA states:

“The Proposed Project will provide significant benefits in system reliability and resiliency.”

“The Proposed Project will provide complete redundancy to Line 3010 or Moreno Compressor Station in the event of a loss of either facility.”

“Based on a detailed outage and curtailment scenario analysis, the Proposed Project is expected to be amongst the projects that are estimated to result in the least amount of potential curtailment of customers across curtailment priorities defined by SDG&E Gas Rule 14.¹⁰¹”

ORA notes that Footnote 101 cites reference to the Prepared Direct Testimony of Gwen Marelli in this proceeding dated March 21, 2016.

Further, the same page 46 of the CEA states “Hydrotesting Line 1600 does not provide any significant additional benefits to system reliability to what is currently available to the gas system.”

“Based on a detailed outage and curtailment scenario analysis, the Proposed Project is expected to be amongst the projects that are estimated to result in the greatest amount of potential curtailment of customers across curtailment priorities defined by SDG&E Gas Rule 14.”

- (a) Please provide the definition of “resiliency” in the above statement and explain how that term is used with respect to “system reliability.”
- (b) Do the Applicants recommend pursuing “complete redundancy” to Line 3010 as a system planning strategy for purposes of achieving system reliability? Please respond with a yes or no, and then explain your response.
- (c) Please confirm the name of the SoCalGas witness on the “detailed outage and curtailment scenario analysis” described above if the witness is other than Ms. Gwen Marelli whose name was referenced in footnote 101.
- (d) Please briefly describe the “detailed outage and curtailment scenario analysis” methodology and identify all the relevant project inputs and assumptions in the analysis where “the Proposed Project is expected to be amongst the projects that are estimated to result in the least amount of potential curtailment...by SDG&E Gas Rule 14.”

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
(A.15-09-013)
(DATA REQUEST ORA-30)
Date Requested: August 11, 2016
Date Responded: August 25, 2016**

- (e) Please provide the results of the “detailed outage and curtailment scenario analysis” showing “the Proposed Project is expected to be amongst the project that are estimated to result in the least amount of potential curtailments” based on the methodology, inputs, and assumptions described in your response to item (d) above.
- (f) Regarding hydro testing of Line 1600, please describe the reference in the above statements to “significant additional benefits to system reliability” relative to “what is currently available on the gas system.”
- (g) Regarding hydro testing of Line 1600, please provide the results of the “detailed outage and curtailment scenario analysis” showing “the Proposed Project is expected to be amongst the project that are estimated to result in the greatest amount of potential curtailments” based on the methodology, inputs, and assumptions described in your response to item (d) above.

RESPONSE 5:

Please note that there is a typographical error on page 46 of the CEA as quoted above. As stated on page 46 under a) Proposed Project: “the Proposed Project is expected to be amongst the projects that are estimated to result in the least amount of potential curtailment of customers” Under b) Hydrotest, it should say “the **hydrotest alternative** is expected to be amongst the projects that are estimated to result in the greatest amount of potential curtailment of customers”

- a. Please refer to Amended Application (A.15-09-013) at page 5, footnote 7.
- b. Yes, this is one of the factors that SDG&E and SoCalGas considered when proposing its project in this Application. SDG&E and SoCalGas do not believe that it is prudent to be so dependent upon a single pipeline for the majority of its gas supply for customers in San Diego County.
- c. Applicants object that this question is vague and ambiguous. The CEA, pages 42-45, footnotes 89, 92, 95 and 98 advise the reader: “See Section H for a detailed description of the scenario analysis performed.” The CEA analysis of potential outages and curtailment is supported by the prepared testimony of Jani Kikuts, David Bisi, S. Ali Yari, Deanna Haines, Travis Sera and Gwen Marelli. ORA may review such testimony to determine the relevant witness for specific facts and opinions.

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
(A.15-09-013)
(DATA REQUEST ORA-30)**

**Date Requested: August 11, 2016
Date Responded: August 25, 2016**

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- d. The outage and curtailment scenario analysis involved a comparison of SDG&E's natural gas supply and customer demand under six seasonal demand conditions (CEA p. 67). The inputs into the scenario analysis are listed below.

Gas Inputs

- Natural gas customer demand – core demand, electric generation (EG) demand, and non-core, non-EG demand.
- Natural gas supply capacity (millions of cubic feet per day – “mmcf”) for the Proposed Project and the Alternative projects.
- Line 3010 parameters – 80% supply and complete outage.
- Otay Mesa supply variables (mmcf).

Electric Inputs

- Date ranges for seasonal demand conditions.
- Peak electric demand.
- Electric supply – natural gas fired electric generator; other in-basin electric generator; and electric import capacity.

(See Workpapers supporting CEA, Scenario Analysis, Tab “Gas”, lines 4-41 and Tab, “Elec”, lines 3-14)

The relevant assumptions are listed in the “notes” section of the scenario analysis model. See Workpapers supporting CEA, Scenario Analysis, Tab “Gas”, lines 43-71 and Tab, “Elec”, lines 16-25.

- e. The results of the scenario analysis are summarized in the CEA on page 71, Table 37. Table 37 shows that the Proposed Project, along with certain Alternatives, receives the highest score (5), reflecting the lowest curtailment severity.

The detailed results of the scenario analysis are provided in the Workpapers supporting CEA, Scenario Analysis, Tab “Scoring.” Line 6 is the results of the analysis for the Proposed Project.

- f. Page 47 of the CEA summarizes the results of the curtailment scenario analysis for the Line 1600 Hydrotest option stating, “[h]ydrotesting Line 1600 does not provide any significant additional benefits to system reliability to what is currently available to the gas system.”

The results of the curtailment analysis indicate that hydrotesting Line 1600 will not result in additional benefits in terms of potential curtailment based on available gas supply. The

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
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**Date Requested: August 11, 2016
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same number of customers would be curtailed if Line 1600 were hydrotested as would be curtailed if Line 1600 were not hydrotested.

Whereas the Proposed Project and other Alternatives (Alternatives A, C5, C6, C7, E/F, J1, J2, J3, K and I) will provide additional benefits by reducing the number of customers who would be curtailed.

- g. The results of the scenario analysis are summarized in the CEA on page 71, Table 37. Table 37 shows that the Line 1600 During Hydrotest Alternative receives the lowest score (1), reflecting the highest curtailment severity, for all customer classes. The Line 1600 Pre/Post Hydrotest Alternative receives scores of 2, 3 and 5 depending on customer class.

Both Line 1600 Hydrotest Alternative scenarios (pre/post hydrotest and during hydrotest) are among the lowest scoring of the different alternatives and, therefore, are considered among the worst performing alternatives based on outage curtailment scenarios.

The detailed results of the scenario analysis are provided in the Workpapers supporting CEA, Scenario Analysis, Tab "Scoring." Lines 4 and 5 are the results of the analysis for the Proposed Project.