

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
(A.15-09-013)
(DATA REQUEST ORA-17)
Date Requested: June 24, 2016
Date Responded: July 11, 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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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 for the Pipeline Safety & Reliability Project by PWC

QUESTION 1:

At page 22 of the above subject entitled “Cost Effectiveness Analysis for the Pipeline Safety & Reliability Project” prepared by PWC1, the document states “The estimated costs for the Proposed Project and the Alternatives include contingency.” The document further states: Per the AACE, contingency is defined as “a cost element of the estimate used to cover the uncertainty and variability associated with a cost estimate, and unforeseeable elements of cost within the defined project scope.’ Including a contingency allows for uncertain cost elements to be included in the project budget, even though the exact contingency-related expenditures and unforeseen events are currently unknown. Table 6 at p. 25 of Mr. Navin’s Testimony presents the Proposed Line 3602 Contingency for the Estimated Direct Cost. Table 6 shows different contingency percentages ranging from 8.0% for company labor to 30.0% for environmental costs, with 4 other percentages in-between 8% - 30% for materials, construction, engineering & design, and other project execution activities. Table 7 at p.25 of Mr. Navin’s Testimony presents the Line 1600 De-Rate Contingency for the Estimated Direct Cost. Table 7 shows different contingency percentages ranging from 18.7% for company labor to 19.9% for environmental costs, with 4 other percentages in-between 18.7% and 19.9% for materials, construction, engineering & design, and other project execution activities.

- a) Regarding the Contingency percentages shown in Table 6, please provide a detailed explanation showing how the contingency percentages were derived and include any and all copies of supporting workpapers and calculations relied on to determine the (i) 30% for environmental, (ii) 12.5% for other project execution activities, (iii) 11.1% for construction, (iv) 10.1% for engineering & design, (v) 9.1% for materials, and (vi) 8% for company labor.
- b) Regarding the Contingency percentages shown in Table 7, please provide a detailed explanation showing how the contingency percentages were derived and include any and all copies of supporting workpapers and calculation relied on to determine the (i) 19.9% for environmental, (ii) 19.8% for other project execution activities, (iii) 19.7% for materials, (iv) 19.4% for engineering & design, (v) 19.0% for construction, and (vi) 18.7% for company labor.
- c) Please state and describe the extent of the uncertainty and variability associated with the cost estimate for each of the direct cost components for the Proposed Line 3602 in terms of the unforeseen elements of cost for: (i) materials, (ii) construction, (iii) engineering & design, (iv) environmental, (v) other project execution activities, and (vi) company labor.

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- d) Please state and describe the extent of the uncertainty and variability associated with the cost estimate for each of the direct cost components for the Line 1600 De-Rate in terms of the unforeseen elements of cost for: (i) materials, (ii) construction, (iii) engineering & design, (iv) environmental, (v) other project execution activities, and (vi) company labor.

RESPONSE 1:

- a) Please see the Prepared Direct Testimony of Neil Navin Attachment A, San Diego Gas & Electric and Southern California Gas Co. Pipeline Safety & Reliability Project Report, section 7.0: Contingency for a discussion on the methodology for developing contingencies.
https://www.sdge.com/sites/default/files/regulatory/A.15-09-013%20Prepared%20Direct%20Testimony%20of%20N.%20Navin%203-21-16_0.pdf

Please refer to SDG&E and SoCalGas' response to ORA DR 3 for the confidential workpapers showing the detailed direct cost estimates with contingency identified by line item (reference folder Attachment A- PSRP Report file name: *Attach VI_Cost Estimate Confidential.xlsx*).

- b) Please see the Prepared Direct Testimony of Neil Navin page 24 for a discussion of how contingency was calculated for Line 1600 De-Rate.

Please refer to SDG&E and SoCalGas' response to ORA DR 3 for the confidential workpapers showing the Line 1600 De-Rate detailed direct cost estimates with contingency calculations (reference folder Attachment A- PSRP Report file name: *Attach VI_Cost Estimate Confidential.xlsx*).

- c) See below for a discussion of uncertainty and variability associated with the following direct cost elements:
- i. Material cost variability may occur due to reroutes, design changes, minor pricing changes, and uncertainty of final design.
 - ii. Construction activities contain uncertainty and variability of detailed design, permitting requirements and conditions, subterranean conditions, and labor availability.
 - iii. Engineering & Design contains uncertainty and variability due to maturity of the design, potential redesigns and reroutes required by CEQA/NEPA and/or local permitting agencies, and redesigns and reroutes due to subterranean conditions.
 - iv. Environmental uncertainty arises as a result of the level of inter-agency coordination efforts, mitigation requirements for impacts to sociological and natural resources analyzed through the CEQA and NEPA permitting processes.

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- v. Other project execution activities may involve uncertainty surrounding land acquisition, significant delays due to environmental and/or regulatory review, and local community intervention.
 - vi. Company labor uncertainty and variability arises from or may involve resources necessary for potential redesigns, alternative review, regulatory delays, and additional effort due to variability and uncertainty with the other major components discussed.
- d) See response to part “c” of this question.

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QUESTION 2:

At page 9 of the above subject, the document states:

The Ruling requires the Applicants to conduct an analysis that will apply quantifiable data to define the relative costs and benefits of the Proposed Project and a range of Alternatives. To comply with the requirement to apply quantifiable data to define the relative costs of the projects, PwC reviewed the Applicants' estimates of both the fixed cost for constructing the Proposed Project and the Alternatives and the on-going estimated costs for operating and maintaining them. Additionally, PwC and the Applicants identified certain avoided costs applicable to the Proposed Project and the Alternatives. PwC and the Applicants then quantified the impact of those avoided costs on the Proposed Project and the Alternatives over time to derive the "net cost" associated with the Proposed Project and each Alternative.

- a) Has PwC performed a comparison of the Applicants' cost estimates to any other sources? If yes, please provide a copy of all comparisons performed. If not, please explain whether it was the Applicants or another entity who performed a comparison of the Applicants' cost estimates to any other sources. If no comparisons of the Applicants' cost estimates to any other sources were made by PwC, the Applicants, or by any other entity, then please clearly state the reasons why no cost comparisons were made.
- b) Has PwC performed a comparison of the Applicants' cost estimates to 2015 (or most recent available) industry costs for materials, construction, and engineering services for pipeline replacements or for pressure testing as they relate to transmission and distribution pipes? If yes, please provide a copy of all documents and calculations used in the comparisons. If no, please provide a detailed explanation and clearly state the reasons why no cost comparisons were made.
- c) Has PwC performed a comparison of the Applicants' cost estimates versus the Applicants' recorded costs for materials, construction, and engineering services for pipeline replacements or for pressure testing as they relate to transmission and distribution pipes such as those undertaken in the Sempra Pipeline Safety Enhancement Plan authorized in D.14-06-007? If yes, please provide a copy of all documents and calculations used in the comparisons. If no, please provide a detailed explanation and clearly state the reasons why no cost comparisons were made.

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RESPONSE 2:

- a) No, PwC has not compared Applicants' cost estimates to other sources. SDG&E and SoCalGas conducted comparisons of the Proposed Project and alternatives with publicly available information along with comparison to SDG&E / SoCalGas PSEP information. Below is a summary of the comparisons to third party project information and SDG&E/SoCalGas PSEP information.
- Pipeline Projects (Proposed Projects, Alternatives C1-C7, D, J, K): were compared against PSEP material and construction costs. Costs per mile were compared against PG&E PSEP costs and PG&E Vintage Pipe Replacement Program unit costs. Direct comparison with PG&E projects is difficult due to level of detail that is publicly available. Based on estimate classification accuracy levels proposed project and alternatives are consistent with cost estimates from other sources.
 - Alternative B: was compared against PSEP cost per mile to hydrotest and reviewed by PSEP Subject Matter Experts (SME).
 - Alternatives E/F: were scaled off of actual projects / project estimates: Gasoducto Sonora Project, TransCanada's North-South alternative, and Samalayuca-Sasabe project.
 - Alternative G: was scaled off of actual projects: Energia Costa Azul. It was compared to KBR, Fortis Mount Hayes, and GNA Wyoming LNG facilities.
 - Alternatives H1/H2: No grid-scale battery project available for comparison. Cost per kWh of storage was obtained from a Blomberg New Energy Finance report "EV Lithium-Ion Battery Packs: Historical Cost Reductions" from November, 2015.
 - Alternative I: No off-shore pipeline project of this size (36") was available for comparison. Estimate was developed with input from a third-party construction vendor with previous off-shore pipeline experience.
- b) No, PwC has not compared Applicants' cost estimates to 2015 industry costs as they relate to distribution or transmission pipelines. See response to a).
- c) No, PwC has not compared Applicants' cost estimates to Applicants' recorded costs as they related to distribution or transmission pipelines. See response to a).

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QUESTION 3:

Please provide the estimated annual direct capital expenditures of the Proposed Line 3602 and the Line 1600 De-rate for each year from the starting date of the project disbursement through the project in-service date, excluding contingency. Please provide in an excel spreadsheet.

RESPONSE 3:

Estimated PSRP Project Annual Direct Capital Expenditures (In Millions of Dollars)
excluding contingency

	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Proposed L3602	\$3.3	\$6.7	\$5.8	\$13.0	\$86.5	\$95.8	\$167.3	\$4.0	\$0.0	\$382.4
L1600 De-rate	\$0.0	\$0.0	\$0.0	\$0.7	\$2.4	\$0.4	\$7.2	\$1.9	\$0.1	\$12.7
Total	\$3.3	\$6.7	\$5.8	\$13.7	\$88.9	\$96.2	\$174.4	\$5.9	\$0.1	\$395.1

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QUESTION 4:

Please provide the estimated annual direct capital expenditures of the Proposed Line 3602 and the Line 1600 De-rate for each year from the starting date of the project disbursement through the project in-service date, including contingency. Please provide in an excel spreadsheet.

RESPONSE 4:

Please refer to Prepared Direct Testimony of Neil Navin Table 1 found on page 2.

https://www.sdge.com/sites/default/files/regulatory/A.15-09-013%20Prepared%20Direct%20Testimony%20of%20N.%20Navin%203-21-16_0.pdf