APPLICATION FOR APPROVAL OF THE FORECASTED REVENUE REQUIREMENT ASSOCIATED WITH CERTAIN PIPELINE SAFETY ENHANCEMENT PLAN PROJECTS, ASSOCIATED RATE RECOVERY AND AUTHORITY TO MODIFY AND CREATE CERTAIN BALANCING ACCOUNTS

(A.17-03-021)

(ORA DATA REQUEST DR-02)

Date Requested: January 29, 2018 Date Responded: February 13, 2018

QUESTION 1:

On page 15 of the Rebuttal Testimony of Ronn Gonzalez, SCG/SDG&E state, "SoCalGas and SDG&E believe that the majority of PG&E's hydrotest projects were conducted in flat locations, i.e., very different in terrain and elevation change than the two pressure test projects included in this Application."

Please provide all facts and/or evidence supporting the belief that "the majority of PG&E's hydrotest projects were conducted in flat locations."

RESPONSE 1:

SoCalGas and SDG&E understand from discussions with our knowledgeable engineering/design and construction contractors that a majority of PG&E's hydrotest projects were located in flat areas. Separately we understand that many of their projects are in the San Joaquin and Sacramento Valleys, which we know to be relatively flat in nature.

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Date Requested: January 29, 2018 Date Responded: February 13, 2018

QUESTION 2:

On page 13 of the Rebuttal Testimony of Ronn Gonzalez, SCG/SDG&E state, "Whereas the completed SoCalGas and SDG&E projects are primarily in densely populated areas, SoCalGas and SDG&E believe that a greater proportion of PG&E's projects are in less populated/congested, more rural areas where it generally is less costly to complete projects."

a. Please define "congested."

b. Please provide all facts and/or evidence supporting the belief that "a greater proportion of PG&E's projects are in less populated/congested, more rural areas."

RESPONSE 2:

- a. Congested has two meanings related to pipeline construction work. Above-ground congestion generally refers to the existence of a lot of buildings and/or high occupancy buildings adjacent to the street, and therefore, a lot of driveways and/or traffic. Above-ground congestion impacts construction of projects because permit issuing agencies frequently limit working hours to non-rush hour traffic times or only allow work to occur at night. Below-ground congestion refers to the density of underground substructures. Crossing and/or going under or around other substructures can be complicated and generally slows construction.
- b. SoCalGas and SDG&E understand from discussions with our knowledgeable engineering/design and construction contractors that a majority of PG&E's replacement projects were located in less populated areas. In reviewing the public information regarding PG&E's early PSEP projects, many of the locations listed (Newberry, Bakersfield, Arvin, Tehachapi, Barstow, Kettleman City) are in desert and central valley areas. Based on this information it is reasonable to extrapolate that much of the replacements were constructed in areas that had little surface and subsurface congestion.

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QUESTION 3:

On page 2 of Attachment A to the Rebuttal Testimony of Ronn Gonzalez, SCG/SDG&E's consultant KPMG states, "Preliminary observations and variances that were identified by KPMG led to recalculation of the project cost estimates, with the new cost estimates being within acceptable range of expected variances."

Please describe the methodology KPMG used to quantify the expected variance of the cost estimates. Please provide supporting documentation and the "preliminary observations and variances" identified.

RESPONSE 3:

KPMG used the "Expected Accuracy Range" as defined by the American Association of Cost Engineers International ("AACE") Recommended Practice No. 56R-08, Cost Estimate Classification System applied for the Building and General Construction Industries as the methodology for quantifying whether the variances identified during the assessment were within the acceptable range for a Class 3 Estimate, as summarized in Table 1 below.

Refer to Table 2 below for a summary of preliminary observations and variances identified as part of KPMG's PSEP project estimate review. Based on KPMG's review of source documentation provided by SoCalGas to support the cost estimates, the variance amounts identified were within the expected accuracy range for an AACE Class 3 Estimate.

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Table 1: Cost Estimate Classification Matrix for Building and General Construction Industries

	Primary Characteristic		Secondary Charact	eristic
ESTIMATE CLASS	MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES Expressed as % of complete definition	END USAGE Typical purpose of estimate	METHODOLOGY Typically estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high ranges ¹
Class 3	10% to 40%	Design development, budget authorization, feasibility	Semi-detailed unit costs with assembly level line items	L: -5% to -15% H: +10% to +20%

¹ The state of construction complexity and availability of applicable reference cost data affect the range markedly. The +/- value represents typical percentage variation of actual cost from the cost estimate after application of contingency (typically at a 50% level of confidence) for given scope. Source: AACE International Recommended Practice No. 56R-08, Cost Estimate Classification System – As Applied for the Building and General Construction Industries, Rev. December 5, 2012.

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Table 2: Phase 1B Estimate Review – Preliminary Observations and Variances

Α	В	С	D	E = D - C	F = E/C	G = C x -85%	$H = C \ge 80\%$	Ι
#	Line	Original Amount	Revised Amount	Variance (Over)/Under	Variance %	AACEi Expected Acc Low: -15%		Summary of Observations
1	36-37 Section 11	\$ 56,301,087	\$ 56,267,582	\$ (33,505)	-0.06%	\$ 47,855,924	\$ 67,561,305	 Small bore piping allowance: Incorrect Risk % applied due to miscoded line item (over \$259) Design allowance: Formula omitted cells in calculation (under \$231K) Procurement allowance: Formula error accounted for contractor material costs and incorrect Risk % applied due to miscoded line item (over \$334K) Material allowance: Formula error accounted for contractor material costs and incorrect Risk % applied due to miscoded line item (over \$103K) SoCalGas - PSEP Project Engineers: Duplicated line item (over \$14K) Land Services: Original estimate contained Land Services tab for wrong project (38-556). Land Services tab for correct project provided by Estimator on 12/15 (under \$192K). In addition, Land Services Cost Estimate spreadsheet to support costs has not been provided. Surveying Services: Survey backup provided by SoCalGas upon 2nd Review showed less cost than what was on the original estimate (over \$30k) 'Other Non-Labor' and 'GMA': Adjusted costs resulting from revised amounts above (over \$8K).
2	38-143	\$ 24,779,520	\$ 24,646,798	\$ (132,722)	-0.54%	\$ 20,949,778	\$ 29,576,158	 Construction Contractor (10-Pipeline Installation-Unimproved Areas): Error within Construction Estimate (under \$779) Weather and Design Allowance: Adjusted cost resulting from adjustment to Construction Estimate (under \$45)

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Α	В	С	D	E = D - C	F = E/C	G = C x - 85%	$H = C \ge 80\%$	I
		Original	Revised	Variance	Variance	AACEi		
#	Line	Amount	Amount	(Over)/Under	%	Expected Acc Low: -15%	uracy Range High: +20%	Summary of Observations
						2011 2013		 Procurement Allowance: Formula error accounted for contractor material costs (over \$118k) SoCalGas - PSEP Project Engineers: Duplicated line item (over \$9K) SoCalGas - Inspectors / CA's: Calculation was missing line item in Engr tab (under \$4k) Blow Down Pipeline: Updated increase in psi in General Ref tab results in cost adjustment to line item (under \$1k) Other Non-Labor' and 'GMA': Adjusted costs resulting from revised amounts above (over \$12K)
3	36-1032 Section 14	\$ 15,514,198	\$ 15,327,352	\$ (186,845)	-1.20%	\$ 13,187,068	\$ 18,617,037	 revised amounts above (over \$12K) Contractor Estimate Costs: Initial Contractor Estimate tab did not provide accurate roll-up of Contractor Estimate costs ; revised to align with correct Subtotals from revised Contractor Estimate (under \$46K) Small Bore Piping Allowance: Corrected % applied to line item cost (over \$6K) Weather Allowance: Variance based on cost adjustments in line items above (over \$508) Design Allowance: Formula corrected to include all purchased material and contractor estimate costs (under \$24K) Procurement Allowance: Formula corrected to only include purchased materials and not contractor estimate costs (over \$84K) Material Allowance: Formula corrected to include all purchased materials and contractor estimate costs (under \$27K) SoCaslGas - PSEP Project Engineers: Duplicate line item removed (over \$13K) SoCalGas - Inspectors / CA's: Line item missing Engr tab labor cost (under \$5K) PM Services: Linkages to Engr tab corrected to include accurate costs (over \$169K)

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Α	В	С	D	E = D - C	F = E/C	G = C x -85%	H = C x 80%	I
#	Line	Original Amount	Revised Amount	Variance (Over)/Under	Variance %	AACEi Expected Acc Low: -15%		Summary of Observations
							8	- Other Non-Labor' and 'GMA' : Adjusted costs resulting from revised amounts above (over \$17K)
4	38-101	\$ 36,744,203	\$ 36,655,417	\$ (88,786)	-0.24%	\$ 31,232,572	\$ 44,093,043	 Contractor Estimate - Site Preparation: Added labor costs to align with 10-hr days stated in BOE (under \$313) Purchased Materials: Incorrect \$/UOM applied to two items (under \$36K) Small Bore Piping: Adjustment due to purchased materials line items (under \$2K) Weather, Material, and Design Allowance: Adjustment due to changes in line items above (under \$4K) Procurement Allowance: Formula corrected to only include purchased material costs (over \$127K) SoCalGas - Inspectors / CA's: Line item missing link to Engr tab cost (under \$4K) Other Non-Labor' and 'GMA': Adjusted costs resulting from revised amounts above (over \$8K)
5	38-514 Section 3	\$ 8,297,553	\$ 8,250,386	\$ (47,167)	-0.57%	\$ 7,052,920	\$ 9,957,063	 Weather & Design Allowances: Risk % not initially applied to line item (under \$6K) Procurement Allowance: Corrected missing Risk % and corrected formula to only include purchased materials and not contractor estimate costs (over \$41K) Material Allowance: Risk % not initially applied to line item (under \$4K) SoCalGas - PSEP Project Engineers: Duplicate line item removed (over \$14K) Surveying Services: Revised line item to align with backup (under \$3K) Other Non-Labor' and 'GMA': Adjusted costs resulting from revised amounts above (over \$5K)

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Α	В	С	D	E = D - C	F = E/C	G = C x -85%	$H = C \ge 80\%$	Ι
		Original	Revised	Variance	Variance	AACEi	Class 3	
#	Line	Amount	Amount	(Over)/Under	variance %	Expected Acc		Summary of Observations
		Amount	Amount	(Over)/Onder	70	Low: -15%	High: +20%	
6	38-556	\$ 15,342,865	\$ 15,384,072	\$ 41,207	0.27%	\$ 13,041,435	\$ 18,411,438	 Design Allowance: Formula error did not capture entire purchased materials section (under \$52K) Procurement Allwoance: Incorrect Risk % applied and formula error captured contractor estimate costs (over \$63K) Material Allowance: Incorrect Risk % applied and formula error did not capture entire purchased materials section (under \$59K) SoCalGas - PSEP Project Engineers: Duplicate cost associated with this line item (over \$14K) Blow down Pipeline: Cost added to line item based on BOE (under \$4K) GMA: Adjusted costs resulting from revised amounts above (under \$4K)
7	38-960	\$ 21,618,495	\$ 21,784,508	\$ 166,013	0.77%	\$ 18,375,721	\$ 25,942,194	 Procurement Allowance: Formula error accounted for contractor material costs and incorrect Risk % applied (over \$63K) Material Allowance: Incorrect Risk % applied (under \$12K) SoCalGas - PSEP Project: Missing proper link to labor costs in Engr and CM tabs (over \$1K) SoCalGas - PSEP Project Manager: Missing link to Engr tab labor (under \$94K) SoCalGas - Engineering Services: Missing link to labor from Engr tab (under \$3K) SoCalGas - Inspectors / CA's: Missing link to labor from Engr tab (under \$64K) SoCalGas - Other Departments: Missing link to labor from Engr tab (under \$125K) Geotechnical Services: Adjusted line item cost to reflect backup (over \$4K) Surveying Services: Duplicate line item removed (over \$93K) Trucking Costs: Line item removed per SCG Response that is was already included in material costs (over \$10K)

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Α	В	С	D	E = D - C	F = E/C	G = C x - 85%	$H = C \ge 80\%$	I
#	Line	Original Amount	Revised Amount	Variance (Over)/Under	Variance %	AACEi Expected Acc Low: -15%		Summary of Observations
								- Other Non-Labor' and 'GMA': Adjusted costs resulting from amounts above and revised Risk % (under \$38K)
8	36-9-09 Section 12	\$ 10,767,820	\$ 9,630,227	\$ (1,137,593)	-10.56%	\$ 9,152,647	\$ 12,921,383	 Purchased Materials: Risk % change on 7 of the line items resulted in a minor cost adjustment (over \$56) Procurement Allowance: Formula error accounted for contractor material costs (over \$13K) SoCalGas - Inspectors / CA's: Missing line item in cost calculation that originates in the Engr tab (under \$43K) Environmental Services (to include SoCalGas -Environmental Services, Mitigation, Abatement/IH Services, Hazardous Materials, and Permits): Updated Environmental forecast tool with relevant project details (over \$882K) Engineering & Design Services (Stage 3 & Stage 5-7): Double count of cells linked to Engr tab (over \$172K) Geotechnical Services: Cost adjusted per backup provided (over \$13K) Blow Down Pipeline: Update of psi in General Ref tab based on BOE caused cost adjustment to line item (under \$1K) Other Non-Labor' and 'GMA': Adjusted costs resulting from revised amounts above (over \$110K)
9	36-9-09 Section 14	\$ 21,952,409	\$ 19,869,349	\$ (2,083,060)	-9.49%	\$ 18,659,547	\$ 26,342,890	 Construction Contractor Section: Correct values incorporated into Revised Estimate; original Estimate contained costs from a previous estimate (over \$1.9M) Weather and Design Allowance: Adjusted cost resulting from adjustment to Construction Estimate section (over \$117K) Procurement Allowance: Formula error accounted for contractor material costs; Variance also due to Contruction Estimate section variances (over \$52K) SoCalGas - Inspectors / CA's: Calculation was missing line item in Engr tab (under \$42K)

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Α	В	С	D	E = D - C	F = E/C	G = C x -85%	$H = C \ge 80\%$	Ι
		0.1.1	Destand	T 7 •		AACEi	Class 3	
#	Line	Original Amount	Revised Amount	Variance (Over)/Under	Variance %	Expected Accuracy Range		Summary of Observations
		Allount	Amount	(Over)/Under	70	Low: -15%	High: +20%	
								 - Surveying Services: Cost adjusted to align with backup (under \$162K) - Other Non-Labor' and 'GMA': Adjusted costs resulting from revised amounts above (over \$187K)
10	36-1032 Section 12	\$ 29,252,917	\$ 29,124,967	\$ (127,951)	-0.44%	\$ 24,864,980	\$ 35,103,500	 - Contractor Estimate: Direct Cost Report missing activities and Field Overhead personnel corrected to align with BOE (under \$9K) - Weather, Material, and Design Allowance: Adjusted cost resulting from adjustment to Construction Estimate section (under \$700) - Procurement Allowance: Formula adjusted to include only purchased materials and no contractor estimate costs (over \$135K) - SoCalGas - Inspectors / CA's: Line item missing link to Engr tab cost (under \$9K) - Other Non-Labor' and 'GMA': Adjusted costs resulting from revised amounts above (over \$12K)
11	38-1102	\$ 3,090,536	\$ 3,108,601	\$ 18,065	0.58%	\$ 2,626,956	\$ 3,708,644	 Small Bore Piping Allowance: Incorrect % applied in original estimate (over \$447) Purchased Materials: Updated line items to separate 8" and 12" pressure control costs per PEP (under \$12K) Design Allowance: Variance due to change in purchased materials line items (under \$656) Procurement Allowance: Formula adjusted to include only purchased materials and no contractor estimate costs (over \$5K) Material Allowance: Adjusted cost resulting from revised purchased materials line items (under \$696) SoCalGas - PSEP Project (Field Management): Line item missing costs from CM tab (under \$46K) SoCalGas - Inspectors / CA's: Line item missing costs from CM tab (under \$51K)

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#	Line	Original Amount	Revised Amount	Variance (Over)/Under	Variance %	AACEi Expected Acc		Summary of Observations
		Amount	Amount	(Over)/Onder	70	Low: -15%	High: +20%	
								CM tab (under \$21K)
								- CM / Inspection Services: Line item missing costs from CM tab
								(under \$884)
								- Construction Permits: Updated linkage in line item to include
								Land Services costs (under \$6K)
								- Environmental Permits: Line item contained duplicate link to
								cost in Environmental tab (over \$25K)
								- Land Services - Project Services, Easements, & Pre-Land
								Acquisitions: Incorrect line item linkages to Land Services tab (over
								\$10K)
								- Other Non-Labor' and 'GMA': Adjusted costs resulting from
								revised amounts above (under \$18K)
								- SoCalGas - GMA Actuals: Updated formula in cell to link
								properly with Actuals tab (over \$97K)
	TOTAL	\$ 243,661,602	\$ 240,049,259	\$ (3,612,343)	-1.48%	\$ 207,112,361	\$ 292,393,922	

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Date Requested: January 29, 2018 Date Responded: February 13, 2018

QUESTION 4:

Regarding Attachment A to the Rebuttal Testimony of Ronn Gonzalez:

- a. Beyond the 11 projects listed on page 2 of Attachment A, were any additional project estimates reviewed by KPMG? If so, please provide a list of all other project estimates evaluated.
- b. Was a similar evaluation or classification as the one described in Attachment A completed for hydrotest estimates using the same or similar estimation method as those listed in this Application? If so, please describe and provide supporting documentation.
- c. If an evaluation or classification was completed for hydrotest project estimates using the same or similar estimation method as this Application, please provide the result or conclusion regarding the expected variance of the estimate.

RESPONSE 4:

SoCalGas initially retained KPMG to perform an analysis of all the projects included in this Application. Upon receipt of a request by KPMG for an extension of time to complete the analysis, SoCalGas learned KPMG may not have been able to complete its analysis of all projects by the date requested – which was tied to the date rebuttal testimony was ordered to be submitted in this proceeding. Rather than approve KPMG's request for an extension, SoCalGas instructed KPMG to complete its analysis by the date requested, even if this meant completing its analysis on a subset of projects. KPMG completed analysis of the 11 projects covered in the report by the date requested. It is our understanding that KPMG initiated a review of the following eight projects, but the analysis for these eight projects was not able to be completed by the deadline, and therefore, was not included in the KPMG report:

- 36-9-09 Section 15
- 36-9-09 Section 16
- 36-37 Section 12
- 36-1002
- 36-1032 Section 11
- 36-1032 Section 13
- 43-121
- 127

a. No.

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b. Not applicable.