

Application No: A.14-12-
Exhibit No.: _____
Witness: Sim-Cheng Fung

Triennial Cost Allocation Proceeding Phase 1
Application of Southern California Gas Company
(U 904 G) and San Diego Gas & Electric Company
(U 902 G) for Authority to Revise their Natural Gas
Rates Effective January 1, 2016

A.14-12-_____
(Filed December 18, 2014)

PREPARED DIRECT TESTIMONY OF
SIM-CHENG FUNG
SOUTHERN CALIFORNIA GAS COMPANY AND
SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

December 18, 2014

TABLE OF CONTENTS

I.	PURPOSE	1
II.	DATA SOURCE FOR EMBEDDED COST STUDY	1
III.	SOCALGAS STORAGE EMBEDDED COST STUDY	1
	A. Capital-Related Cost of Service	1
	B. Gas Operation and Maintenance Expenses	4
IV.	2016-2019 STORAGE COSTS	6
V.	QUALIFICATIONS	8
VI.	APPENDIX A	A-1
VII.	APPENDIX B	B-1

1 3. Federal and state income taxes, property taxes

2 **1. Depreciation expense**

3 The cost of utility plant is recovered in rates through an annual depreciation expense over
4 the book life of the investment. The annual depreciation expense of a utility plant is specific to
5 the type of facility or equipment in service. SoCalGas' Plant Accounting Department provided
6 the annual depreciation expense and total accumulated depreciation by FERC account category
7 for 2013 in Table 1 in Appendix A. Total underground storage depreciation of \$18.3 million
8 includes approximately \$15.3 million from storage plant plus \$3 million¹ from general plant
9 allocated based on a labor factor.

10 **2. Return on Rate Base**

11 The second capital-related expense is the annual authorized rate of return on rate base.
12 These charges are designed to cover the utility's cost of capital (the cost of debt and equity) paid
13 to bondholders and shareholders to finance the investments made in utility plant and equipment.
14 SoCalGas' weighted average rate base of \$3,510 million in 2013 is provided by Plant
15 Accounting as shown in Table 1.

16 The 2013 average recorded rate base of \$3,510 million is multiplied by the authorized
17 8.02 percent return on investment specified in D.12-12-034.² This rate of return is used to
18 calculate the return on rate base for each investment category. The total return on equity and
19 cost of debt are \$282 million based on SoCalGas' recorded rate base of \$3,510 million in 2013
20 (\$3,510 million x 8.02% = \$282 million).

21 Table 1 shows the components of SoCalGas' rate base based on the percentage of each
22 category's net book value to total SoCalGas net book value: underground storage plant which is

¹See Appendix B, Footnote 1.

²D.12-12-034, Ordering Paragraph 3.

1 recorded in FERC Accounts 117.1 through 358 is \$241 million; storage's return on rate base is
 2 \$19.4 million based on storage's 2013 rate base of \$241 million shown in Table 1 (\$241 million
 3 x 8.02% = \$19.4 million). \$0.5 million³ from general plant return is allocated to storage based
 4 on labor factor, resulting in total storage return of \$19.9 million. Table 2 summarizes return on
 5 rate base.

Table 2					
2013 SoCalGas Return on Rate Base					
	(A)	(B)	(C)= (A)x(B)	(D)	(E)= (C)+(D)
	Rate Base	Rate of Return	Return on Rate Base	Allocated General Plant Return	Total Return
	(\$MM)	(%)	(\$MM)	(\$MM)	(\$MM)
Total SoCalGas	3,510	8.02%	281.8	N/A	281.8
Storage	241	8.02%	19.4	0.5	19.9

6 **3. Federal and State Income Taxes, Property Taxes**

7 In 2013, SoCalGas' capital-related taxes (comprised of federal, state and property taxes)
 8 were \$12 million.⁴ These taxes are allocated to storage as follows: \$12 million x 7%⁵ = \$0.84
 9 million. Taxes related to general plant of \$0.02 million are allocated to storage resulting in a
 10 total of \$0.86 million of storage capital-related taxes.

11 Therefore, 2013 total capital-related costs for storage are \$39.1 million, as shown in
 12 Table 3 below.

13
 14
 15

³See Appendix B, Footnote 2.

⁴ 2013 SoCalGas FERC Form 2, p. 263a, Federal Income Tax-\$65,416,558(refund of prepaid taxes), Line 2 + Calif Corp Franchise Tax \$33,528,894, Line 9 + Property Tax 43,628,909, Line 14.

⁵ Storage's percent of total SoCalGas NBV from Appendix A, Table 1.

Depreciation ⁶	18.3
Return ⁷	19.9
FIT, SIT & Property Taxes	0.9
Total	39.1

B. Gas Operation and Maintenance Expenses

1. Storage O&M Expenses

In 2013, storage O&M expenses (recorded in FERC Accounts 814 - 837) were \$51.5 million, including payroll taxes. This total excludes \$3.4 million in storage compressor station fuel in FERC Account 819, since these costs are recovered in a storage in-kind fuel charge.

Details of storage O&M costs by FERC Account are shown in Table 4 in Appendix A.

2. Miscellaneous Revenues

Miscellaneous revenues clearly associated with the storage function are \$13.5 million⁸ in 2013 and are credited directly to Storage expenses. The other \$52.3 million⁹ of miscellaneous revenues are derived from common technology-related equipment and other assets. These revenues are credited in the same manner that Administrative and General expenses are allocated.

3. Administrative and General Expenses

A&G expenses are recorded in FERC Accounts 920 through 932. 2013 recorded A&G expenses plus A&G-related payroll taxes totaled \$365 million, which exclude \$45 million of

⁶ Source: Appendix A, Table 1; Appendix B, Footnote 1.

⁷ Source: Table 2.

⁸ Crude oil sales of \$12.1 million, Goleta storage emission credit of \$1.0 million, rental fees of \$0.4 million.

{Source:A.14-11-004,Exhibit No: (SCG-32-WP), pages 22, 25, 27,39}

⁹ Revenue from shared computer hardware, software, and communication equipment of \$49.3 million, amortization of gain on sale of property of \$3 million.

{Source: Source:A14-11-004, Exhibit No: (SCG-32-WP), pages 24,42}

1 franchise fees recorded in FERC Account 927 because these costs are accounted for in the
 2 franchise and uncollectible factor in the rate design process. A&G details are shown in Table 5
 3 in Appendix A.

4 A&G costs are allocated based on the approach adopted in D.09-11-006.¹⁰ Pursuant to
 5 D.09-11-006, 50% of A&G expenses are allocated to end users. Since labor is the best single
 6 factor that explains A&G costs, the remaining \$183 million of A&G is allocated to the storage
 7 function based on labor factors shown in Table 6. Table 6 shows storage has 4.2% of SoCalGas'
 8 labor costs, therefore \$7.6 million of A&G (.042 x 183 million) are allocated to storage. A
 9 similar methodology will be applied to develop the embedded transmission cost in Phase 2 of
 10 this cost allocation proceeding.

Table 6			
2013 SoCalGas Labor Factors to Allocate A&G			
	Labor Costs ¹¹	Labor %	Allocated A&G Costs
	(\$MM)		(\$MM)
Storage	15.8	4.2%	7.6
Transmission	31.6	8.3%	15.2
Distribution, Customer Accounts/Service & Information	332.3	87.5%	160.2
Total	379.7	100.0%	183.0

11 Table 7 summarizes the O&M, A&G expenses and miscellaneous revenues for SoCalGas'
 12 storage function.

¹⁰ D.09-11-006, 2009 BCAP Phase 2 Settlement Agreement, Attachment 3.

¹¹ 2013 SoCalGas FERC Form 2, p. 355, lines 52-57, col. (b).

1

Table 7	
2013 Storage O&M, A&G, Miscellaneous Rev.	
	(\$MM)
O&M Expenses ¹²	51.5
A&G Expenses ¹³	7.6
Miscellaneous Rev.	(14.6)
Total	44.5

2

Table 8 summarizes SoCalGas' 2013 Embedded Storage Costs.

Table 8	
2013 Embedded Storage Costs	
	(\$MM)
Capital-related Costs ¹⁴	39.1
O&M, A&G Expenses ¹⁵	44.5
Total	83.6

3

IV. 2016-2019 STORAGE COSTS

4

In addition to the embedded costs in Table 8, SoCalGas and SDG&E will recover

5

additional costs in 2016-2019. In 2016, the projected under-collected Honor Rancho Storage

6

Memorandum Account (HRSMA) balance of \$12.6 million as of December 31, 2015,¹⁶ will be

7

recovered in rates as part of embedded storage cost, as shown in Table 9 below. Any residual

8

difference between the projected under-collected HRSMA balance included in rates and the

9

recorded balance as of the implementation date of 2016 TCAP will be transferred to the Core

10

Fixed Cost Account and Noncore Fixed Cost Account and at that time, the HRSMA will be

¹² Source: Appendix A, Table 4.

¹³ Source: Table 6.

¹⁴ Source: Table 3.

¹⁵ Source: Table 7.

¹⁶ Source: Appendix A, Table 10.

1 closed. The Aliso Canyon turbine replacement project (Aliso) is expected to be placed in service
 2 in early 2017. As shown in Table 9, from 2017-2019 incremental annual revenue requirement
 3 associated with Aliso will be recovered per D.13-11-023.¹⁷ The \$27 million figure shown in
 4 Table 9 is the average of the first three years' revenue requirements as shown in Table 2¹⁸ of
 5 D.13-11-023.¹⁹ This revenue requirement is based on a total capital cost of \$200.9 million for
 6 Aliso.²⁰ SoCalGas and SDG&E recommend that the total storage cost be maintained at the level
 7 shown in Table 9 until another embedded cost study is performed for the next TCAP.

Table 9				
SoCalGas Embedded Storage Cost (\$MM)				
	2016	2017	2018	2019
Capital-related Costs	39.1	39.1	39.1	39.1
O&M, A&G Expenses	44.5	44.5	44.5	44.5
Total Existing Storage	83.6	83.6	83.6	83.6
HRSMA or Aliso Replacement	12.6 ²¹	27.0 ²²	27.0 ²³	27.0 ²⁴
Total Embedded Storage Cost	96.2	110.6	110.6	110.6

¹⁷ D.13-11-023, Ordering Paragraphs 9 and 10.

¹⁸ Source: Appendix A, Table 11.

¹⁹ Per Ordering Paragraph 10 of D. 13-11-023, SoCalGas will incorporate the associated revenue requirement into rates by a Tier 2 advice letter after the project is completed and becomes operational.

²⁰ The Commission established a maximum cost of \$200.9 million for Aliso, SoCalGas' estimated total capital costs. D.13-11-023, mimeo., at 33. Per the Commission, these capital costs "are stated in nominal dollars using a base year of 2009." Id. At footnote 39. Costs exceeding this amount will be recorded in a memorandum account for SoCalGas to seek future recovery of such costs in the general rate case following completion of the Aliso project. The Aliso Project would also be rolled into the overall rate base of the utility in a subsequent general rate case.

²¹ See Footnote 16.

²² D.13-11-023, Ordering Paragraphs 9 and 10.

²³ D.13-11-023, Ordering Paragraphs 9 and 10.

²⁴ D.13-11-023, Ordering Paragraphs 9 and 10.

1 **V. QUALIFICATIONS**

2 My name is Sim-Cheng Fung. My business address is 555 West Fifth Street, Los
3 Angeles, California 90013-1011. I am employed by SoCalGas as a Senior Market Advisor II in
4 the Energy Markets and Capacity Products Department.

5 I graduated with a Bachelor of Arts degree from Wellesley College and a Master of
6 Business Administration degree in Finance from the University of California, Los Angeles. I
7 have been employed by SoCalGas since 1981, and have held positions of increasing
8 responsibility in the Treasury, Strategic Planning, Gas Supply, Operations Staff, Gas Acquisition
9 and Energy Markets & Capacity Products departments. I have been a Senior Market Advisor
10 since 1998 and am responsible for providing analytical support to the Capacity Products Group.

11 I have previously testified before the California Public Utilities Commission.

12 This concludes my prepared direct testimony.

VI. APPENDIX A
Selected SoCalGas Tables
Table 1



SOUTHERN CALIFORNIA GAS COMPANY
 2013 Utility Gas Plant in Service
 By FERC Account for FERC Form 2
 (Thousands of Dollars)

ACCOUNT	ACCT NO.	As of December 31, 2013			12/31/13		For the Year Ended 2013
		INVESTMENT	ACCUM DEP	NET BOOK VALUE	Book Value Allocator	Weighted Avg Rate Base	DEPRECIATION EXPENSE
Intangible							
	301	76	-	76			-
	302	569	-	569			-
Total Intangible		646	-	646	0.0%	324	-
Gas Production							
	325	15	-	15			-
	330	5,557	(1)	5,556			-
	331	455	(0)	455			-
	332	1,731	-	1,731			-
	334	536	-	536			-
	336	485	-	485			-
Total Gas Prod		8,780	(1)	8,778	0.1%	4,408	-
Underground Storage							
	117.1	58,549	-	58,549			-
	350	22,501	-	22,501			-
	351	41,641	(19,759)	21,882			1,239
	352	279,338	(167,005)	112,333			6,987
	353	105,718	(93,440)	12,278			776
	354	137,678	(63,501)	74,177			1,444
	355	6,217	(1,738)	4,479			250
	356	129,485	(66,034)	63,451			3,111
	357	28,975	(7,356)	21,619			1,528
	358	49,599	39,431	89,030			-
Montebello							2,005
Total Underground Storage		859,700	(379,402)	480,298	6.9%	241,200	17,340
Transmission							
	365	24,528	(15,077)	9,451			446
	366	35,154	(20,867)	14,287			465
	367	1,361,164	(578,873)	782,292			30,174.71
	368	206,667	(106,710)	99,957			2,712
	369	63,176	(26,635)	36,541			1,332
	371	5,181	(2,714)	2,466			203
	372	43,448	121,081	164,530			-
Total Transmission		1,739,319	(629,795)	1,109,523	15.9%	557,189	35,333
Distribution							
	374	31,685	(12)	31,673			-
	375	243,599	(68,529)	175,070			6,810
	376	3,385,953	(1,974,040)	1,411,913			79,275
	378	87,964	(59,343)	28,621			4,394
	380	2,210,344	(1,833,257)	377,087			71,454
	381	560,595	(128,520)	432,075			15,229
	382	341,940	(146,975)	194,965			5,906
	383	134,134	(56,722)	77,411			3,188
	387	31,642	(21,024)	10,618			(180)
	388	520,445	1,477,531	1,997,976			-
Total Distribution		7,548,301	(2,810,891)	4,737,410	67.8%	2,379,069	186,076
General Plant							
	389	1,417	-	1,417			-
	390	182,426	(153,701)	28,725			22,547
	391	832,683	(335,532)	497,151			98,919
	392	574	(6)	568			87
	393	101	(29)	72			5
	394	54,237	(25,246)	28,990			2,300
	395	5,469	(3,360)	2,109			259
	396	12	11	23			3
	397	142,888	(51,404)	91,485			19,471
	398	3,305	(148)	3,157			469
	399.1	544	(936)	(392)			-
Total General Plant		1,223,656	(570,350)	653,306	9.3%	328,082	144,061
Other Storage Plant		-	-	-			-
Total Utility Gas Plant In Service		11,380,401	(4,390,440)	6,989,961	100.0%	3,510,272	382,810

APPENDIX A (cont'd)

Source: FERC Form 2

Table 4	
2013 SoCalGas Storage O& M Expenses	
Storage	(\$MM)
814 UndStr Op-Supervision & Engineering (Incl. Payroll Taxes)	12.560
815 UndStr Op-Maps & Records	0.024
816 UndStr Op-Wells Expenses	5.483
817 UndStr Op-Lines Expense	0.488
818 UndStr Op-Compressor Station Expense	4.388
819 UndStr Op-Compress Station Fuel & Power (Excluded from base margin)	0.000
820 UndStr Op-Meas & Reg Station Expenses	0.005
821 UndStr Op-Purification Expenses	1.006
823 UndStr Op-Gas Losses (Excluded from base margin)	0.000
824 UndStr Op-Other Expenses	8.172
825 UndStr Op-Storage Well Royalties	1.352
826 UndStr Op-Rents	0.176
830 Maintenance Supervision & Engineering	0.003
831 UndStr Mnt-Structures & Improvements	0.539
832 UndStr Mnt-Reservoirs & Wells	4.813
833 UndStr Mnt-Lines	4.393
834 UndStr Mnt-Compressor Station Equipment	4.890
835 UndStr Mnt-Meas & Reg Station Equipment	0.751
836 UndStr Mnt-Purification Equipment	1.228
837 UndStr Mnt-Other Equipment	1.286
	51.557

Source: FERC Form 2

Table 5	
2013 SoCalGas A&G Expenses	
A&G FERC Account	(\$MM)
920 AdmGen Op-Salaries (Incl. Payroll Taxes)	51.447
921 AdmGen Op-Office Supplies & Expenses	14.520
922 AdmGen Op-(Less) Administrative Exp Transferred	(6.349)
923 AdmGen Op-Outside Services Employed – General	72.630
924 AdmGen Op-Property Insurance	3.256
925 AdmGen Op-Injuries & Damages	34.068
926 AdmGen Op-Employee Pensions & Benefits	142.537
927 AdmGen Op-Franchise Requirements	0.000
928 AdmGen Op-Regulatory Commission Expenses	5.205
930.2 A&G Op-MiscGen Exp(Exclude Public Purpose RDD)	9.391
931 AdmGen Op-Rents	17.483
932 AdmGen Mnt-General Plant	21.243
	365.432

Source: FERC Form 2

APPENDIX A (cont'd)
Table 10

SOUTHERN CALIFORNIA GAS COMPANY
HONOR RANCHO STORAGE MEMORANDUM ACCOUNT (HRMA)
SUMMARY OF PCR AND O&M SUBACCOUNTS
(Over) / Under Collection

	SAP Account Number 1150557												
	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Total
	fcst	fcst	fcst	fcst	fcst	fcst	fcst	fcst	fcst	fcst	fcst	fcst	
Beginning Balance	12,240,161	12,266,844	12,293,536	12,320,237	12,346,947	12,373,667	12,400,396	12,428,570	12,456,754	12,484,947	12,520,200	12,562,516	12,240,161
Prior Period Adjustment	-	-	-	-	-	-	-	-	-	-	-	-	-
Adjusted Beginning Balance	12,240,161	12,266,844	12,293,536	12,320,237	12,346,947	12,373,667	12,400,396	12,428,570	12,456,754	12,484,947	12,520,200	12,562,516	12,240,161
Costs:													
O&M Costs													-
Capital-related costs - Cushion Gas	52,058	52,058	52,058	52,058	52,058	52,058	53,494	53,494	53,494	60,543	67,593	67,593	668,559
Transfer to NSBA													-
Other Capital Costs:													-
Depreciation													-
Property Taxes													-
Income Taxes													-
Return													-
Total Costs	52,058	52,058	52,058	52,058	52,058	52,058	53,494	53,494	53,494	60,543	67,593	67,593	668,559
Revenues:													
Cushion Gas Revenue Requirement	29,561	29,561	29,561	29,561	29,561	29,561	29,561	29,561	29,561	29,561	29,561	29,561	354,732
Incremental Oil Revenues													-
Amortization													-
Total Revenues	29,561	29,561	29,561	29,561	29,561	29,561	29,561	29,561	29,561	29,561	29,561	29,561	354,732
Net Cost / (Revenue)	22,497	22,497	22,497	22,497	22,497	22,497	23,933	23,933	23,933	30,982	38,032	38,032	313,827
Current Month Interest**:	4,186	4,195	4,204	4,213	4,223	4,232	4,241	4,251	4,260	4,271	4,284	4,299	50,859
Current Month Activity	26,683	26,692	26,701	26,710	26,720	26,729	28,174	28,184	28,193	35,253	42,316	42,331	364,686
Ending Balance	12,266,844	12,293,536	12,320,237	12,346,947	12,373,667	12,400,396	12,428,570	12,456,754	12,484,947	12,520,200	12,562,516	12,604,847	12,604,847
** Interest applied to average monthly balance as follows: ((Beg. Bal. +(Current Month Adjustment/2))*(Int.Rate/12))													
Interest rate:	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%

Table 11

TABLE 2 (D.13-11-023)					
Revenue Requirement (\$ thousands)					
	2013	2014	2015	2016	2017
Capital benefits – net	(59)	(156)	(299)	(299)	(367)
O&M benefits – net	(443)	(443)	(443)	(443)	(443)
Property Taxes	1,695	2,300	2,185	2,077	1,976
Preferred Equity Interest	432	587	557	530	504
Interest Expense	4,447	6,033	5,732	5,450	5,185
Depreciation Expense	3,978	5,304	5,304	5,304	5,304
Federal Tax Expense	4,674	5,642	5,549	5,271	5,020
State Tax Expense	757	493	576	632	682
Return on Equity	7,275	9,871	9,379	8,917	8,483
Revenue Requirement	22,756	29,630	28,611	27,439	26,344

VII. APPENDIX B
Selected SoCalGas Footnotes

Footnotes:

General/Common Plant are primarily comprised of office furniture & equipment, structures & improvement, tools and communication equipment, all of which are directly linked to labor. As such, allocation of general/common plant costs is consistent with that of administrative and general (A&G) expenses described in Section IV.B.4.

Footnote		50% General Plant Depreciation (\$MM)	% of Labor	Allocated General Plant Depreciation (\$MM)
1	SCG Storage	\$72	4	\$3

Footnote		50% General Plant Return(\$MM)	% Labor	Allocated General Plant Return(\$MM)
2	SCG Storage	\$13.4	4	\$0.5