

Company: Southern California Gas Company (U 904 G)  
Proceeding: 2016 General Rate Case  
Application: A.14-11-XXX  
Exhibit: SCG-27

**SOCALGAS**  
**DIRECT TESTIMONY OF FLORA NGAI**  
**(DEPRECIATION)**  
**November 2014**

**BEFORE THE PUBLIC UTILITIES COMMISSION**  
**OF THE STATE OF CALIFORNIA**





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## SUMMARY

I sponsor the Test Year (“TY”) 2016 depreciation and amortization expense and accumulated provision (reserve) of the Gas Plant depreciation area for the Southern California Gas Company (“SoCalGas”). The purpose of depreciation and amortization expense is to provide for recovery of the original cost of plant (less estimated net salvage) over the used and useful life of the property by means of an equitable plan of charges to operating expenses. Tangible assets, usually referred to as plant, property and equipment, are depreciated. Intangible assets, such as software and rights-of-way, are amortized. The technical definition for depreciation and related terms is provided in Section II of my testimony. The cumulative depreciation costs recovered through depreciation rates is captured in the depreciation reserve. The reserve represents the return of the investment and provides an ongoing record of one of the major deductions from rate base. Rate base is sponsored in the testimony of Garry Yee (Ex. SCG-26). As discussed in detail below, SoCalGas is requesting the adoption of proposed service lives and net salvage rates which were developed in accordance with the Standard Practice U-4. SoCalGas is also requesting approval of the resultant depreciation and amortization expense of \$410 million and accumulated provision (reserve) of \$6,871 million for the Test Year TY 2016.

**SOCALGAS DIRECT TESTIMONY OF FLORA NGAI**  
**(DEPRECIATION)**

**I. INTRODUCTION**

**A. Summary of Proposal**

As shown in Table SCG-FN-1, the Gas Plant depreciation and amortization expense for Recorded Year 2013 is \$381<sup>1</sup> million and the expense requested for TY 2016 is \$410 million. Table SCG-FN-2 shows an accumulated provision (depreciation reserve) of \$6,026 million at the end of Recorded Year 2013, and \$6,871 million at the end of TY 2016.

**TABLE SCG-FN-1**  
**Southern California Gas Company**  
**Summary of Depreciation Expense and Amortization**  
(Thousands of Dollars)

Line No.	Description	2013 Recorded (2013\$)	2016 Test Year (2016\$)
	<u>Depreciation Expense</u>		
1	Underground Storage	\$ 22,306	\$ 25,362
2	Transmission	33,492	46,180
3	Distribution	196,278	203,472
4	General Plant	74,075	60,918
5	Total Depreciation	<u>326,151</u>	<u>335,932</u>
	<u>Amortization Expense</u>		
6	Land Rights <sup>2</sup>	487	1,502
7	Software <sup>3</sup>	54,375	72,635
8	Total Amortization	<u>54,862</u>	<u>74,137</u>
9	Total Depreciation & Amortization Expense <sup>4</sup>	<u>\$ 381,013</u>	<u>\$ 410,069</u>

<sup>1</sup> Depreciation expense excludes non-GRC items (incremental projects) and depreciation expense true-up recorded in 2013 due to delay in SoCalGas' 2012 GRC Decision ("D") 13-05-010. Reconciliation is provided in Ex. SCG-27-WP, Schedule D.

<sup>2</sup> Ex. SCG-27-WP, Schedule G.

<sup>3</sup> *Id.*, Schedule H.

<sup>4</sup> *Id.*, Schedule E.

**TABLE SCG-FN-2**  
**Southern California Gas Company**  
**Summary of Year-End Depreciation and Amortization Reserves**  
(Thousands of Dollars)

Line No.	Description	2013 Recorded (2013\$)	2016 Test Year (2016\$)
<u>Depreciation Reserves</u>			
1	Underground Storage	\$ 418,829	\$ 457,319
2	Transmission	735,799	828,795
3	Distribution	4,285,618	4,757,586
4	General Plant	309,531	342,920
5	Total Depreciation	<u>5,749,777</u>	<u>6,386,620</u>
<u>Amortization Reserves</u>			
6	Land Rights <sup>5</sup>	32,595	35,032
7	Software <sup>6</sup>	243,678	449,764
8	Total Amortization	<u>276,273</u>	<u>484,796</u>
9	Total Depreciation & Amortization Reserves <sup>7</sup>	<u>\$ 6,026,050</u>	<u>\$ 6,871,416</u>

The Recorded Year 2013 depreciation and amortization expense is based on the application of depreciation parameters<sup>8</sup> authorized by the California Public Utilities Commission (“CPUC”) in SoCalGas’ 2012 General Rate Case (“GRC”) Decision (D.13-05-010).<sup>9</sup> Beginning in TY 2016, the requested expense is calculated using new depreciation rates resulting from an updated depreciation study. Generally, and as explained below in more detail, the overall TY 2016 depreciation expense increase of \$29.0 million is due to plant growth<sup>10</sup> from 2013 to 2016 (\$64.1 million expense increase) and the impact of the new depreciation rates (\$35.1 million expense reduction). The depreciable plant growth and the investments for the Recorded Year 2013 through TY 2016 are addressed in the rate base testimony of Garry Yee (Ex. SCG-26).

The increase in depreciation expense is reasonable and necessary to ensure appropriate recovery of plant and equipment costs. The depreciation study, analysis and results of the study

<sup>5</sup> *Id.*, Schedule G.

<sup>6</sup> *Id.*, Schedule H.

<sup>7</sup> *Id.*, Schedule F.

<sup>8</sup> “Depreciation parameters” (or “mortality characteristics”) refer to the average service life, retirement dispersion, and net salvage rate for a group of assets.

<sup>9</sup> D. 13-05-010, Findings of Fact Nos. 411 and 412, at p. 1083.

<sup>10</sup> Ex. SCG-27-WP, Section III, Workpapers, Asset Type: Total Utility Plant, 2014 Beg Month Plant Balance through 2016 End Month Plant Balance.

1 as described in this testimony support this increase. The accompanying workpapers (Ex. SCG-  
2 27-WP) support the underlying depreciation rates.

### 3 **B. Organization of Testimony**

4 The next section, Section II, provides key terms and definitions relevant to depreciation  
5 accounting and depreciation studies. Section III presents the depreciation study procedures and  
6 methods followed. Section IV describes the methods applied in estimating service lives. Section  
7 V defines net salvage and the method used to determine future net salvage. Section VI explains  
8 how depreciation rates are calculated. Section VII presents the results of the depreciation study  
9 by accounts grouped by functional class (i.e., Storage, Transmission, Distribution, and General  
10 Plant). Summary tables of these results and comparison of depreciation parameters are provided  
11 in Appendix A, attached below. Detailed statistical tabulations, charts and other workpapers are  
12 submitted separately in my workpapers (Ex. SCG-27-WP). Section VIII concludes with a recap  
13 of my requests. Finally Section IX summarizes my education, work experience and professional  
14 certifications.

## 15 **II. DEPRECIATION DEFINITIONS**

16 The Federal Energy Regulatory Commission (“FERC”) defines “depreciation” in the  
17 Code of Federal Regulations 18, Part 201, Uniform Systems of Account (“USofA”):

18 Depreciation, as applied to depreciable gas plant, means the loss in service value  
19 not restored by current maintenance, incurred in connection with the consumption  
20 or prospective retirement of gas plant in the course of service from causes which  
21 are known to be in current operation and against which the utility is not protected  
22 by insurance. Among the causes to be given consideration are wear and tear,  
23 decay, action of the elements, inadequacy, obsolescence, changes in the art,  
24 changes in demand and requirements of public authorities.

25 The USofA further defines service value as the difference between original cost and net salvage  
26 value of utility plant. Where net salvage value means the salvage value of property retired less  
27 the cost of removal, salvage value means the amount received from property retired and cost of  
28 removal means the cost incurred when the utility plant is retired.

29 The emphasis in utility depreciation is recovery of the original cost of assets less net  
30 salvage. This is consistent with depreciation accounting which is the process of allocating the  
31 cost of a plant asset, over its service (useful) life in a rational and systematic manner.



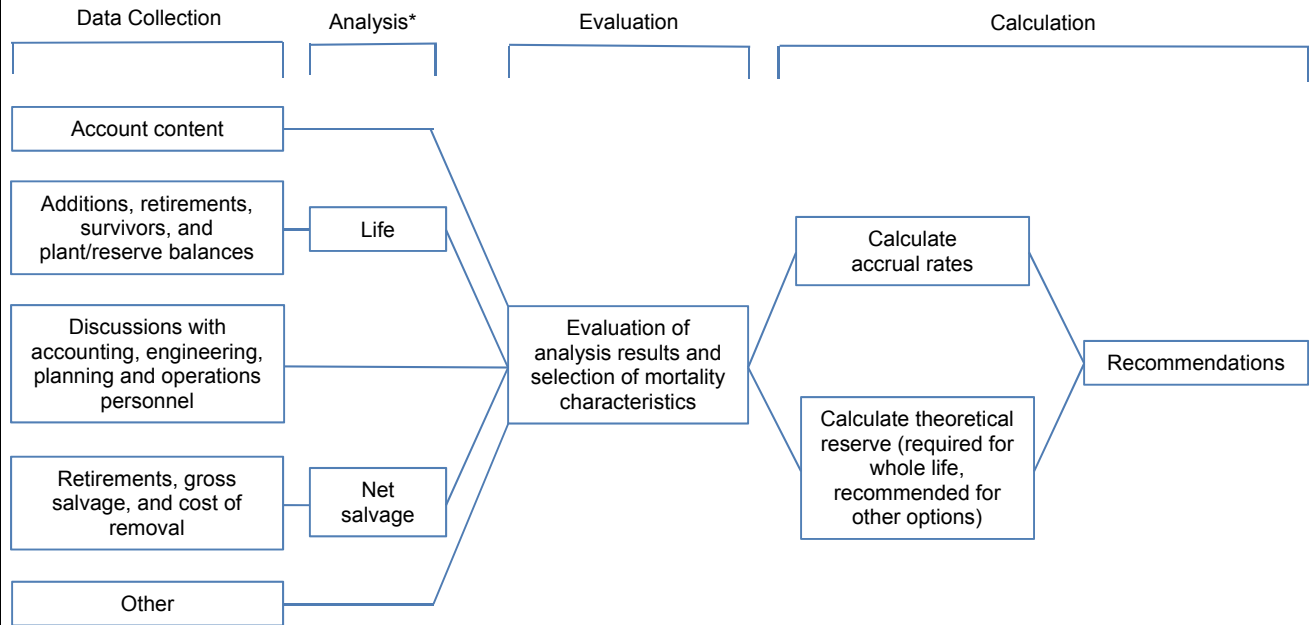
1 **III. DEPRECIATION STUDY**

2 The purpose of a depreciation study is to determine depreciation rates that will allow for  
3 full recovery of the cost of assets, adjusted for net salvage, over the life of these assets. The  
4 procedures and methods used in arriving at SoCalGas' proposed depreciation rates are consistent  
5 with those described in professional and technical depreciation manuals.<sup>11</sup>

6 **A. Depreciation Study Process**

7 I performed the depreciation study in four phases: (1) data collection, (2) analysis, (3)  
8 evaluation, and (4) calculation. During the course of a depreciation study, it may be necessary to  
9 re-perform steps of a prior phase. The depreciation was organized in a manner consistent with  
10 the process flow shown in Introduction to Depreciation for Public Utilities and Other Industries,  
11 published by AGA and EEI 2013, and is diagrammed below.

12 **DIAGRAM SCG-FN-1**  
13 **Depreciation Study Process Flow**



26 Source: Public Finance  
27 & Accounting: A Reader  
(Modified)

\*Although not specifically noted, the mathematical analysis may need some level of input from other sources (for example, to determine analysis bands for life and adjustments to data used in all analysis.)

<sup>11</sup> Introduction to Depreciation For Public Utilities and Other Industries, AGA and EEI, 2013; Public Utility Depreciation Practices, NARUC, 1996; Depreciation Systems, Wolf and Fitch, 1992; and Determination of Straight-Line Remaining Life Depreciation Accruals (Standard Practice U-4), CPUC, 1961.

1  
2 During Phase 1, historical data was compiled from continuing property records and  
3 general ledger accounts stored in SAP.<sup>12</sup> The data required for the depreciation study (i.e.,  
4 retirement transactions, plant balances, and asset transfers) were extracted from SAP for each  
5 utility FERC account, reviewed, and validated against plant and reserve ledgers for 1999 through  
6 2013. To gain a better understanding of the company's assets and their functions, and as part of  
7 data collection, discussions were held with accounting, engineering, planning, and operations  
8 personnel. The information gained from these discussions was incorporated in the life and  
9 salvage evaluation phase.

10 During Phase 2, the detailed property records in Phase 1 were compiled to develop  
11 mortality summaries, observed life tables, and survivor curves for analysis.<sup>13</sup> Historical gross  
12 salvage, cost of removal and retirements were compiled by account for net salvage analysis.<sup>14</sup>  
13 Life analysis, a critical part of a depreciation study, is discussed below in the Depreciable Lives  
14 section of this testimony. Net salvage analysis, another aspect of the depreciation study is  
15 discussed in the Net Salvage Rates section.

16 Phase 3 is the evaluation phase where the life and net salvage analyses, together with  
17 other information obtained during Phase 1 lead to the final selection of lives and net salvage  
18 parameters. Evaluation of reasonableness of recommended lives and net salvage requires use of  
19 judgment, prior studies, studies of other utilities, input from company personnel and at times  
20 re-examination of data and processes.

21 Finally, Phase 4 involves the calculation of accrual rates, making recommendations, and  
22 documentation. The annual depreciation rate calculation is discussed in the Depreciation Rate  
23 Calculation section of this testimony. The current and proposed rates calculation can be found in  
24 my workpapers, Ex. SCG-27-WP, Schedules A and B.

## 25 **B. Methodology**

26 The methods used to calculate the mortality characteristics (i.e., service lives, retirement  
27 dispersions, and net salvage rates) and to calculate the straight-line remaining life depreciation

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<sup>12</sup> SAP is the enterprise software used by Sempra Energy, SoCalGas and SDG&E to manage several business functions including financial accounting such as the general ledger and fixed assets.

<sup>13</sup> Best-fit curve results based on observed life tables and survivor curves are provided in my workpapers, by account, Ex. SCG-27-WP, Section VI Mortality Studies.

<sup>14</sup> Salvage data and statistics are provided in workpapers, Ex. SCG-27-WP, Section VII Salvage Studies.

1 rates are consistent with Standard Practice U-4, Determination of Straight-Line Remaining Life  
2 Depreciation Accruals (“Standard Practice U-4”). The CPUC issued this standard practice in  
3 1961.

#### 4 **IV. DEPRECIABLE LIVES FOR TY 2016**

5 Depreciable lives were studied for four plant categories: (1) mortality accounts, (2)  
6 forecast accounts, (3) general plant amortization accounts, and (4) intangible assets. Mortality  
7 accounts, generally referred to as mass accounts, maintain records for related types of property  
8 grouped by vintage without regard to specific location. Examples of these property types are  
9 mains or services (FERC account 376 and 380). Forecast accounts are those for which  
10 accounting records are maintained by specific locations that will normally be retired as a single  
11 unit at one time. An example of this property type is structures and improvements (FERC  
12 account 390). General plant amortization accounts relate to FERC accounts 391 through 398,  
13 which consist of large volume low dollar value items. These assets are maintained and  
14 depreciated at a group vintage level, as opposed to an individual asset level. Examples of these  
15 property types are furniture and computer equipment (FERC account 391.1 and 391.2). As  
16 mentioned above, intangible assets, such as software and rights-of-way, are amortized. These  
17 assets are maintained and amortized at an individual asset level. The methods employed for  
18 estimating average service lives for these four plant categories are described below.

##### 19 **A. Mortality Accounts – Actuarial Analysis**

20 SoCalGas used the Simulated Plant Record Balances<sup>15</sup> method for mortality accounts to  
21 estimate average service lives in the 2012 and 2008 GRCs. Simulated Plant Record analysis is  
22 used when only annual plant additions, retirements (without vintage data), and balances are  
23 available. At the end of 2013, analysis and evaluation of SAP plant accounting records  
24 demonstrated adequate historical data (15 years) with sufficient retirement activity, in general, to  
25 move from the Simulated Plant Record to the retirement rate method of actuarial analysis<sup>16</sup> for  
26 this GRC. Actuarial analysis yields more reliable results than other life analysis methods, i.e.  
27 simulation, but requires considerably more detailed data. For example, aged retirement data

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<sup>15</sup> Simulated Plant Record Balances method is a trial and error procedure that attempts to duplicate the annual balances of a plant account by generating simulated retirements based on vintage additions and an assumed Iowa-type retirement dispersion and average service life.

<sup>16</sup> Actuarial analysis method uses statistics and probability to analyze retirements that take place at various ages in relationship to the property exposed to the risk of retirement.

1 (knowing both the transaction year and the original vintage year) and exposures to retirement are  
2 required.

3 Under the actuarial analysis method, the retirements of a specified range of vintages  
4 (placement band) within a specified band of transactional calendar years (experience band) are  
5 identified, along with the age of each retirement. The retirements occurring at like-age intervals  
6 are grouped, with the same being done for the amounts exposed to retirements at the beginning  
7 of each age interval. These “exposures” were appropriately adjusted for any transfers between  
8 accounts. A survival rate is calculated for each age group by first dividing the retirements by the  
9 beginning exposures for a given age interval (to get a retirement rate) and then subtracting it  
10 from one. The survival rates (which represent the conditional probability of surviving the entire  
11 age interval) are multiplied successively, beginning with 100% at age zero, to arrive at percent  
12 surviving for the beginning of each age interval. These percentages are plotted and matched to  
13 standard survivor curves (Iowa-type survivor curves). The use of standard curves provides an  
14 excellent means of extrapolating incomplete survivor curves (known as “stub curves”). Average  
15 service lives are represented by the area under the survivor curve divided by the ordinate at age  
16 zero (100%). Selection of appropriate average service life and curve dispersion for each plant  
17 account is a combination of statistical analyses, visual matching of Iowa curves, informed  
18 judgment and expectations about the future.

19 Remaining lives for each vintage of plant account are calculated by dividing the area  
20 under the survivor curve to the right of its age by the ordinate at that age. The average remaining  
21 life for each account was calculated by weighting the remaining life of each vintage year with its  
22 surviving plant balance as of December 31, 2013. For SoCalGas, mortality characteristics were  
23 reviewed for 22 depreciation groups (or plant accounts) consisting of 44 FERC subaccounts. For  
24 example, depreciation group 376 consists of the following subaccounts: 376.1 steel mains, 376.2  
25 plastic mains, and 376.5 deep well anodes. Plant subaccounts with similar life characteristics or  
26 operational functions may be combined to form a single account. Actuarial analysis was applied  
27 to depreciable tangible plant accounts in underground storage, transmission, distribution (except  
28 account 386.2), and general plant structures and improvements (account 390.0). Each of these

1 accounts has been assigned a representative Iowa-type survivor curve<sup>17</sup> combined with an  
2 average service life. The depreciation study indicated the need to modify the average service  
3 lives for all 22 accounts. Lengthening of average service lives has been the general trend for  
4 SoCalGas' mortality accounts.<sup>18</sup>

#### 5 **B. Forecast Accounts – Life Span Method**

6 Forecast accounts, as mentioned above, are those for which accounting records are  
7 maintained by specific locations that will normally be retired as a single unit. These accounts  
8 have service lives that are directly estimated individually, and then composited by plant account.  
9 In SCG's 2012 GRC, the forecast method, also known as life span method, was applied to FERC  
10 account 390.0 Structures and Improvements, consisting of 12 locations and varying life spans  
11 resulting in a composited average service life of 20 years. For TY 2016, the calculated estimated  
12 forecasted composite average service life is 15 years and a remaining average service life is 5  
13 years. Communication with company facilities personnel provided no information to support the  
14 current estimated probable retirement date for each location. Based on these facts and my  
15 informed judgment, the forecast method produces an average service life and remaining service  
16 life which are too short for this account where there continues to be substantial construction  
17 activity for several of the larger locations. Thus, I am proposing use of the actuarial analysis  
18 method for TY 2016 for account 390.0. However, a new subaccount, 390.1 Gas Company  
19 Tower ("GCT") Leasehold Improvements was created in 2011. SoCalGas recommends the  
20 forecast method for this subaccount because assets are tied to a terminable lease. The GCT lease  
21 agreement expires in 2026.

#### 22 **C. Vintage Group Accounting**

23 SoCalGas follows vintage group amortization for tangible general plant accounts 391  
24 through 398. As described in FERC Accounting Release 15,<sup>19</sup> vintage group accounting is  
25 appropriate for accounts representing a small portion of total depreciable gas plant and consisting  
26 of numerous units of low value items. Assets that reach the average service life of the group are

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<sup>17</sup> Iowa-type survivor curves plot the percent surviving (from an original asset placement group) versus the age of the group. The age is typically expressed as a percentage of average service life. The Iowa curves were developed from empirical industrial data, and are the most widely-used standardized survivor curves in the utility industry.

<sup>18</sup> Schedule J - Summary of Life and Survivor Curve (IOWA), Ex. SCG-27-WP.

<sup>19</sup> FERC Accounting Release 15 provided in Appendix A of my workpapers, Ex. SCG-27-WP.

1 retired. The average remaining life for each account was calculated by weighting the remaining  
2 life of each vintage year with its surviving plant balance as of December 31, 2013.

### 3 **D. Amortization – Intangible Assets**

4 SoCalGas requests that intangible assets (storage rights, land rights, and software) be  
5 amortized, less any residual value, on a straight-line, remaining life, unit basis while retaining the  
6 average service lives authorized by the Commission in SoCalGas' TY 2012 GRC decision  
7 (Decision No. 13-05-010). Accruals are accumulated each month on the unit record.

8 Re-appraisals using the remaining life principle are applied such that any reserve adjustments are  
9 amortized over the remaining life of each unit. If the unit is retired ahead of its life expectancy,  
10 the deficiency is charged to depreciation expense. If the unit outlives its expected useful life,  
11 where accruals equal the full cost less net salvage, no further accruals are made for that unit.

### 12 **V. NET SALVAGE RATES FOR TY 2016**

13 Net salvage, as defined earlier, is the difference between gross salvage that will be  
14 received when the asset is disposed of and the cost of retiring it. Positive net salvage occurs  
15 when gross salvage exceeds cost of retirement, and negative net salvage occurs when cost of  
16 retirement exceeds gross salvage. Net salvage is expressed as a percentage of plant retired and is  
17 calculated by dividing the net salvage dollars by the dollars of the original plant retired. As  
18 stated in the definition of depreciation, the objective of accounting for net salvage is to allocate  
19 the net cost of an asset, allowing for net salvage, over its useful life.

20 The method of future net salvage analysis is based on that specified in the Standard  
21 Practice U-4, and is a method consistent with nearly all other regulatory jurisdictions in the  
22 United States. An estimate of past experience is first determined before arriving at the final  
23 future net salvage estimate. Events in past experience that may cause deviations in future  
24 estimates are considered along with input from operations personnel regarding future  
25 expectations on salvage, removal and retirements.

26 For TY 2016, analysis of gross salvage, cost of removal and net salvage, presented as a  
27 percentage of annual retirements was performed for the past 15 years (1999 through 2013).<sup>20</sup>  
28 Although emphasis was placed on a 15-year average, examination of trends over time, such as  
29 net salvage rates for rolling five-year bands and 10-year shrinking bands were considered along

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<sup>20</sup> Summary and historical data for future net salvage can be found in Ex. SCG-27-WP, Section VII  
Salvage Studies.

1 with input from company personnel. Accordingly, informed judgment is used in determining a  
2 historical and future net salvage rate for each asset group or account. Ultimately, the analysis  
3 indicated the need to change the net salvage rates for 22 asset groups, while the results of the  
4 remaining 24 groups continue to be consistent with those approved in the 2012 GRC decision  
5 (Decision No. 13-05-010).

6 Generally, a change in net salvage rates is related to the change in service lives (which  
7 are lengthening at SoCalGas) and has an offsetting impact on depreciation rates and expense.  
8 For example, when asset lives are lengthened, reuse salvage values decline because assets are  
9 older at retirement and cost of removal increases due to the increases in labor and non-labor costs  
10 over time. Since the future net salvage estimate is expressed as a percentage of the original  
11 historical cost<sup>21</sup> of the associated retirement (a constant), the result is a more negative net salvage  
12 rate. Thus, while a lengthening life decreases the annual depreciation expense, the resulting  
13 more negative net salvage rate will increase depreciation expense.

#### 14 **VI. DEPRECIATION RATE CALCULATION**

15 Annual depreciation rates were calculated for TY 2016 in accordance with Standard  
16 Practice U-4 using the straight-line method, broad group procedure, and remaining life technique  
17 for depreciable tangible assets.<sup>22</sup> The straight-line method prorates the recovery of service value  
18 in equal annual amounts. The broad group procedure (widely used by utilities)<sup>23</sup> groups assets in  
19 categories (typically plant accounts and/or subaccounts) and depreciates all assets as if they all  
20 had identical mortality characteristics, while using a single depreciation rate for the entire  
21 category. The broad group procedure also assumes that under-accruals resulting from early  
22 retirements are offset by over-accruals on assets that outlive the average service life. The  
23 remaining life technique accrues unrecovered service value over the average remaining life of  
24 the group. The remaining life annual accruals are calculated for each plant account as follows:

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<sup>21</sup> The future net salvage parameter is expressed as a percentage of the original historical cost because the ultimate depreciation rate is applied to the historical cost of surviving plant. All values (plant cost, cost of removal, gross salvage, and reserve) used in the depreciation rate computations are in nominal dollars.

<sup>22</sup> Refer to Section IV.C. regarding general plant amortization and Section IV. D. for amortization of depreciable intangible assets.

<sup>23</sup> Public Utility Depreciation Practices, NARUC, 1996, p. 62.

1 *(plant balance - future net salvage - reserve) / average remaining life*

2 Plant balance is the original installed cost of the assets less any contributions in aid of  
3 construction. The future net salvage is the projected gross salvage for recovered materials less  
4 costs associated with retiring the assets. The future net salvage is calculated by applying the net  
5 salvage rate to the surviving plant balance (that plant yet to be retired). The reserve is the  
6 accumulation, since the inception of the plant account, of the following booked entries:  
7 depreciation accruals (credit), plus salvage (credit), less cost of removal (debit), less the  
8 retirements (debit), plus or minus any transfers in or out. The accumulated reserve balance  
9 represents the costs recovered-to-date, of the plant investment.

10 The annual depreciation rates were calculated based on recorded information as of  
11 December 31, 2013, for each FERC plant account by dividing the annual depreciation accrual by  
12 the plant balance. These remaining life rates are self-correcting for prior over- and under-  
13 accruals as the depreciation parameters are updated in accordance with each GRC study. The  
14 newly developed rates were then applied on a composite functional category (asset ID)<sup>24</sup> basis to  
15 the TY 2016 depreciable plant balances to obtain the proposed depreciation expense. The  
16 composite depreciation and amortization rate, on a total plant-in-service basis, resulting from the  
17 new study is 3.51% for the 2016 TY, compared to a rate of 3.79% for the 2013 Recorded Year.<sup>25</sup>  
18 The next section discusses the depreciation parameters for each account that contribute to this  
19 total composite rate.

## 20 **VII. RESULTS OF DEPRECIATION STUDY**

21 The proposed life and curve dispersion and net salvage rates by account, grouped by  
22 functional class, are presented below. Documentation in support of these results is found in my  
23 workpapers, Ex. SCG-27-WP. The service life and curve dispersion selections and estimated net  
24 salvage rates for each account were derived from statistical analyses of historical data, visual  
25 matching to Iowa curves, combined with informed judgment and expectations about the future  
26 projection of life and dispersion curve and net salvage.

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<sup>24</sup> Schedule C – Summary of Depreciation Rates by Functional Category, Ex. SCG-27-WP.

<sup>25</sup> Depreciation rates calculation provided in workpapers, SCG-27-WP, Section I.



1           **A. Underground Storage Plant**

2           Underground storage plant balance including storage rights, at December 31, 2013, was  
3 \$752 million. The accumulated reserve was \$436 million. Generally, the overall TY 2016  
4 depreciation expense increase of \$3.0 million is due to plant growth<sup>26</sup> from 2013 to 2016 (\$4.4  
5 million expense increase) and the impact of the new depreciation rates (\$1.4 million expense  
6 reduction).

7                   **1. Account 350 Rights-of-Way**

8           This account includes the cost of all interests in land on which are located underground  
9 storage lines, telephone poles, their associated lines, and like property used in connection with  
10 underground gas storage operations. Storage rights, recoverable oil and rights-of-way are  
11 subaccounts within this account. The current life/curve is 40 SQ. Discussion with field  
12 personnel indicates a 40 year life is reasonable for this account. I recommend moving from a  
13 group life procedure to unit life procedure because these are intangible long-lived assets with few  
14 retirements. Individual assets within this group will remain on the books until retired but will  
15 stop depreciating when fully amortized. There is no net salvage associated with this asset group.  
16 The depreciation expense and accumulated reserve schedule for the individual assets in this  
17 account are provided in my workpapers, Ex. SCG-27-WP, Section IV Amortization, Workpapers  
18 Land Rights.

19                   **2. Account 351 Structures and Improvements**

20           This account includes the cost of structures and various improvements in connection with  
21 underground storage plant. Compressor station structures and other structures are subaccounts  
22 included in this account. The average age for this account is 16 years. The current life/curve is  
23 41 L0. Besides long-lived assets such as buildings, this account consists of many short-lived  
24 assets such as roofs, generators, fencings, lightings, fixtures, generators and other items. Thus,  
25 the 48 R1.5 life and dispersion curve is recommended for this account, ranked fourth on the best  
26 fit curve results. The 15-year historical average for net salvage shows a net salvage rate of -70%.  
27 Thus, SoCalGas recommends increasing negative net salvage from -45% to -70%.

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<sup>26</sup> Ex. SCG-27-WP, Section III Workpapers, Asset Type: Total Underground Storage, 2014 Beg Month Plant Balance through 2016 End Month Plant Balance.

1                   **3. Account 352 Wells**

2                   This account includes the drilling cost of wells used for injection and withdrawal of gas  
3 from underground storage projects, including wells kept open and used for observation. This  
4 account is comprised of over 300 wells at four major locations with vintages ranging from 40 to  
5 80 years. On average, components for wells require replacement every 10 years. The average  
6 age for this account is 17 years. The current life/curve is 29 L0. The 49 R2.5 life and dispersion  
7 curve is recommended for this account, ranked third on the best fit curve results. The basis for  
8 this selection is due to components having an average service life of 10 years per input from field  
9 personnel. The other two higher ranked curves produce average service lives in excess of 20  
10 years. The 15-year historical average for net salvage shows a net salvage rate of -75%. Per  
11 discussion with field personnel, cost to remove/abandon wells is expected to be twice the cost of  
12 original installation. The increase in higher negative salvage is attributable to higher labor and  
13 equipment costs. SoCalGas recommends increasing negative net salvage from -45% to -70%  
14 giving consideration to the rolling five-year band statistics and potential lagging retirements.

15                   **4. Account 353 Lines**

16                   This account includes installed gas pipe lines used for conveying gas from point of  
17 connection with transmission or field lines to underground storage wells and from underground  
18 storage wells to the point where the gas enters the transmission or distribution system. The  
19 average age for this account is 22 years. The current life/curve is 45 R0.5. The depreciation  
20 study indicates a 54 R3 life and dispersion curve for this account. The 15-year historical average  
21 for net salvage shows a net salvage rate of -40%. SoCalGas recommends retaining the current  
22 net salvage rate of -40%.

23                   **5. Account 354 Compressor Station Equipment**

24                   This account includes installed compressor station equipment used for the purpose of  
25 raising the pressure of gas for delivery to underground storage or to raise the pressure of gas  
26 withdrawn from underground storage for delivery to the transmission or distribution system. The  
27 average age for this account is 16 years. The current life/curve is 45 R0.5. The depreciation  
28 study indicates a 41 L0.5 life and dispersion curve for this account. The 15-year historical  
29 average for net salvage shows a net salvage rate of -15%. SoCalGas recommends increasing the  
30 current net salvage rate from -5% to -15%.

1                   **6. Account 355 Measuring and Regulating Equipment**

2                   This account includes installed gas pipe lines used for the purpose of measuring and  
3                   regulating deliveries of gas to underground storage and withdrawals of gas from underground  
4                   storage. The average age for this account is 11 years. The current life/curve is 25 R0.5. The  
5                   depreciation study indicates a 22 L0 life and dispersion curve for this account. Per input from  
6                   field personnel, a decrease in average service life for this account may be attributed to a shift  
7                   from mechanical to electronic devices, which have a shorter life. The 15-year historical average  
8                   for net salvage shows a net salvage rate of 5%. Thus, SoCalGas recommends increasing the  
9                   current net salvage rate from 0% to 5%.

10                   **7. Account 356 Purification Equipment**

11                   This account includes installed apparatus used for the removal of impurities from and the  
12                   conditioning of, gas delivered to or removed from underground storage fields. The average age  
13                   for this account is 14 years. The current life/curve is 37 R2. The depreciation study indicates a  
14                   39 R2.5 life and dispersion curve for this account. The 15-year historical average for net salvage  
15                   shows a net salvage rate of -35%. Based on input from field personnel, cost of removal has  
16                   increased in recent years and the currently authorized net salvage rate seems low. Thus,  
17                   SoCalGas recommends conservatively increasing the current net salvage rate from -20%  
18                   to -30%.

19                   **8. Account 357 Other Equipment**

20                   This account includes installed equipment used in connection with underground storage  
21                   of gas, when not assignable to any of the foregoing accounts. The current life/curve is 31 R0.5.  
22                   Given the average age of this account is 7 years and the average age of band retirements is 9  
23                   years, the 37 R2.5 life and dispersion curve, ranked tenth on the best fit curve results, is  
24                   recommended. The 15-year historical average for net salvage shows a net salvage rate of -205%.  
25                   SoCalGas recommends increasing the current net salvage rate from -75% to -100%, when  
26                   compared to the actual showing of -205%.

27                   **B. Transmission Plant**

28                   Transmission plant balance including rights-of way, at December 31, 2013, was \$1,691  
29                   million. The accumulated reserve was \$751 million. Generally, the overall TY 2016

1 depreciation expense increase of \$12.8 million is due to plant growth<sup>27</sup> from 2013 to 2016 (\$8.2  
2 million expense increase) and the impact of the new depreciation rates (\$4.6 million expense  
3 increase).

#### 4 **1. Account 365.29 Rights-of-Way**

5 This account includes the cost of rights-of-way used in connection with transmission  
6 operations. The current life/curve is 40 SQ. SoCalGas recommends moving from a group life  
7 procedure to unit life procedure and maintaining the 40 year life because these are intangible  
8 long-lived assets with few retirements. Individual assets within this group will remain on the  
9 books until retired but will stop depreciating when fully amortized. There is no net salvage  
10 associated with this asset group. The depreciation expense and accumulated reserve schedule for  
11 the individual assets in this account are provided in my workpapers, Ex. SCG-27-WP, Section IV  
12 Amortization, Workpapers Land Rights.

#### 13 **2. Account 366 Structures and Improvements**

14 This account includes the cost of structures and various improvements in connection with  
15 transmission plant. Compressor station structures, measuring and regulating structures, and other  
16 structures are subaccounts included in this account. The average age for this account is 22 years.  
17 The current life/curve is 51 R0.5. The depreciation study indicates a 47 R2 life and dispersion  
18 curve for this account. The 15-year historical average for net salvage shows a net salvage rate of  
19 -40%. Thus, SoCalGas recommends increasing the current net salvage rate from -20% to -40%.

#### 20 **3. Account 367 Mains**

21 This account includes the cost of installed transmission system mains. Assets include  
22 large high pressured gas mains of different sizes and types, cathodic protection equipment, drip  
23 lines and pots, pipe coating, pipe and fittings, pipe supports, anchors and valves. The average  
24 age for this account is 18 years. The current life/curve is 57 R5. Lengthening of average service  
25 life is expected for this account due to technological advances, higher grade of pipe, i.e. thicker  
26 walls, and better maintenance practices. Thus, the 64 R3 life and dispersion curve for this  
27 account is recommended, ranked 14<sup>th</sup> on the best fit curve results. The 15-year historical average  
28 for net salvage shows a net salvage rate of -75%. Thus, SoCalGas recommends increasing the  
29 current net salvage rate from -30% to -60%, giving consideration to the rolling-five year band

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<sup>27</sup> Ex. SCG-27-WP, Section III Workpapers, Asset Type: Total Transmission, 2014 Beg Month Plant Balance through 2016 End Month Plant Balance.

1 which shows a net salvage rate approximating -50% from 2009 through 2011, and negative net  
2 salvage rates in excess of -90% for the most recent two years.

#### 3 **4. Account 368 Compressor Station Equipment**

4 This account includes the cost of installed compressor station equipment and associated  
5 appliances used in connection with transmission system operations. The average age for this  
6 account is 18 years. The current life/curve is 43 L1. Per input from company personnel,  
7 compressor station equipment may have a longer average service life than measuring and  
8 regulating equipment from an maintenance standpoint; however, due to higher pressure used at  
9 compressor stations, replacement of engines, gas turbines, and compressors may occur after 15  
10 years. Based on this information and given the average age of band retirements is 21 years, the  
11 50 R1 life and dispersion curve for this account is recommended and ranked third on the best fit  
12 curve results. The 15-year historical average for net salvage shows a net salvage rate of -15%.  
13 Thus, SoCalGas recommends increasing the current net salvage rate from -10% to -15%.

#### 14 **5. Account 369 Measuring and Regulating Station Equipment**

15 This account includes the cost of installed meters, gauges, and other equipment used in  
16 measuring or regulating gas in connection with transmission system operations. The average age  
17 for this account is 17 years. The current life/curve is 40 R0.5. As mentioned above, measuring  
18 and regulating station equipment is expected to have a shorter life than compressor station  
19 equipment (account 368). Given the proposed average service life for account 368 is 50 years  
20 the 46 S0 life and dispersion curve for this account is recommended and ranked third on the best  
21 fit curve results. The 15-year historical average for net salvage shows a net salvage rate of -60%.  
22 SoCalGas recommends increasing the current net salvage rate from -15% to -50% due to lower  
23 5-year rolling bands prior to 2011, despite higher negative rates in the most recent three years.

#### 24 **6. Account 371 Other Equipment**

25 This account includes installed equipment used in transmission system operations, when  
26 not assignable to any of the foregoing accounts. The average age for this account is 13 years.  
27 The current life/curve is 20 L2. The depreciation study indicates a 21 L0.5 life and dispersion  
28 curve for this account. The 15-year historical average for net salvage shows a net salvage rate of  
29 -10%. SoCalGas recommends increasing the current net salvage rate from -5% to -10%.

1           **C. Distribution Plant**

2           Distribution plant balance including land rights, at December 31, 2013, was \$6,878  
3 million. The accumulated reserve was \$4,286 million. Generally, the overall TY 2016  
4 depreciation expense increase of \$8.1 million is due to plant growth<sup>28</sup> from 2013 to 2016 (\$28.7  
5 million expense increase) and the impact of the new depreciation rates (\$20.6 million expense  
6 decrease).

7                   **1. Account 374.2 Land Rights**

8           This account includes the cost of land rights used in connection with distribution  
9 operations. This account has a plant balance of \$2.7 million and had been treated as a non-  
10 depreciable account in prior GRCs. As these are intangible assets similar to storage rights and  
11 rights-of-way, SoCalGas recommends amortization of this account over 40 years on a unit basis  
12 beginning with TY 2016. Individual assets within this group will remain on the books until  
13 retired but will stop depreciating when fully amortized. There is no net salvage associated with  
14 this asset group. The depreciation expense and accumulated reserve schedule for the individual  
15 assets in this account are provided in my workpapers, Ex. SCG-27-WP, Section IV  
16 Amortization, Workpapers Land Rights.

17                   **2. Account 375 Structures and Improvements**

18           This account includes the cost of structures and improvements used in connection with  
19 distribution operations. The average age for this account is 13 years. The current life/curve is 31  
20 L0. Besides long-lived assets such as buildings and structures, this account consists of many  
21 short-lived assets such as roofs, interior office improvements, wiring upgrades, and other items.  
22 Thus the 40 S0 life and dispersion curve for this account is recommended and ranked second on  
23 the best fit curve results. The 15-year historical average for net salvage shows a net salvage rate  
24 of -15%. SoCalGas recommends increasing the current net salvage rate from 0% to -10%.

25                   **3. Account 376 Mains**

26           This account includes the cost of installed distribution system mains. Steel mains, plastic  
27 mains and deep well anodes are subaccounts included in this account. The current life/curve is  
28 55 R4. Per input from gas engineering, the design life of plastic mains, which makes up nearly  
29 60 percent of the \$3.4 billion asset balance, has a design life of 50 years, although actual service

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<sup>28</sup> Ex. SCG-27-WP, Section III Workpapers, Asset Type: Total Distribution, 2014 Beg Month Plant Balance through 2016 End Month Plant Balance.

1 life is expected to be longer. Based on the average age of this account (21 years) and the average  
2 age of band retirements (25 years), the 68 R2.5 life and curve dispersion is recommended for this  
3 account and ranked ninth on the best fit curve results. The 15-year historical average for net  
4 salvage shows a net salvage rate of -95%. Thus, SoCalGas recommends increasing the current  
5 net salvage rate from -55% to -80%, considering the rolling five-year bands with net salvage  
6 rates below -80% for the periods 2006 through 2011 and above -100% in the most recent two  
7 years.

#### 8 **4. Account 378 Measuring and Regulating Equipment**

9 This account includes the cost of installed meters, gauges and other equipment used in  
10 measuring and regulating gas in connection with distribution system operations other than  
11 measurement of gas deliveries to customers. The average age of the surviving plant is 12 years.  
12 The current life/curve is 31 S4. The depreciation study indicates a 47 S0.5 life and curve  
13 dispersion for this account. The 15-year historical average for net salvage shows a net salvage  
14 rate of -100%. Thus, SoCalGas recommends increasing the current net salvage rate from -85%  
15 to -95%.

#### 16 **5. Account 380 Services**

17 This account includes the cost of installed service pipes and accessories leading to  
18 customers' premises. The current life/curve is 51 L2. Based on the average age of this account  
19 (21 years) and the average age of band retirements (22 years), the 67 R2 life and dispersion curve  
20 for this account is recommended, ranked sixth on the best fit curve results. The 15-year  
21 historical average for net salvage shows a net salvage rate of -120%. Per discussion with field  
22 personnel, removal activity has increased over repair activity, especially in the recent five years.  
23 Net salvage studies in the 2008 and 2012 GRCs show results of -100% and -110%, respectively.  
24 Thus, SoCalGas recommends increasing the current net salvage rate from -95% to -115%.

#### 25 **6. Account 381 Meters**

26 This account includes the cost of installed meters or devices and appurtenances thereto,  
27 for use in measuring gas delivered to users, whether actually in service or held in reserve. The  
28 average age of the surviving plant is 11 years. The current life/curve is 32 S1. The depreciation  
29 study indicates a 25 S0.5 life and dispersion curve for this account. The 15-year historical  
30 average for net salvage shows a net salvage rate of 5%. Thus, SoCalGas recommends increasing  
31 the current net salvage rate from 0% to 5%.

1                   **7. Account 382 Meter Installations**

2                   This account includes the cost of labor and materials used, and expenses incurred in  
3 connection with the original installation of customer meters. The average age of the surviving  
4 plant is 13 years. The current life/curve is 41 S1. The depreciation study indicates a 30 S1 life  
5 and dispersion curve for this account. The decrease in average service life is consistent with the  
6 change for account 381 meters. The 15-year historical average for net salvage shows a net  
7 salvage rate of -10%. Thus, SoCalGas recommends retaining the current net salvage rate  
8 of -10%.

9                   **8. Account 382.6 Meter Installation-Other**

10                  This account includes the cost of the installed Gas Energy Measurement Systems  
11 (“GEMS”) which are automated metering devices attached to customer’s meters. The average  
12 age of the surviving plant is 7 years. The current life/curve is 15 SQ. Due to large volume low  
13 value items in this account, these assets are automatically retired when the average service life is  
14 attained. Based on input from field personnel, these devices advance quickly and are upgraded  
15 over a 15-year life cycle. SoCalGas requests to keep the existing life/curve of 15 SQ. The  
16 15-year historical average for net salvage shows a net salvage rate of 0%. Thus, SoCalGas  
17 recommends decreasing the current net salvage rate of -10% to 0%.

18                  **9. Account 383 House Regulators**

19                  This account includes the cost of installed house regulators, whether actually in service or  
20 held in service. The average age of the surviving plant is 16 years. The current life/curve is 32  
21 R0.5. The depreciation study indicates a 33 L5 life and dispersion curve for this account. The  
22 15-year historical average for net salvage shows a net salvage rate of 5%. Thus, SoCalGas  
23 recommends increasing the current net salvage rate from 0% to 5%.

24                  **10. Account 387 Other Equipment**

25                  This account includes the cost of installed distribution system equipment not provided for  
26 in the foregoing accounts, including street lighting equipment. The average age of the surviving  
27 plant is 13 years. The current life/curve is 12 L1. The depreciation study indicates a 21 SC life  
28 and dispersion curve for this account. The 15-year historical average for net salvage shows a net  
29 salvage rate of 5%. Thus, SoCalGas recommends decreasing the current net salvage rate from  
30 15% to 5%.



1           **D. General Plant**

2           The general plant balance, including land rights and software, as of December 31, 2013,  
3 was \$1.110 billion. The accumulated reserve was \$553 million. Generally, the overall TY 2016  
4 depreciation expense increase of \$3.3 million is due to plant growth<sup>29</sup> from 2013 to 2016 (\$21.0  
5 million expense increase) and the impact of the new depreciation rates (\$17.7 million expense  
6 decrease).

7           **1. Account 389.2 Land Rights**

8           This account includes the cost of general plant land rights used for utility purposes, the  
9 cost of which is not properly includible in other land rights accounts. This account has a plant  
10 balance of \$.074 million and had been treated as a non-depreciable account in prior GRCs. As  
11 these are intangible assets similar to distribution land rights, SoCalGas recommends amortization  
12 of this account over 40 years on a unit basis beginning with TY 2016. Individual assets within  
13 this group will remain on the books until retired but will stop depreciating when fully amortized.  
14 There is no net salvage associated with this asset group. The depreciation expense and  
15 accumulated reserve schedule for the individual assets in this account are provided in my  
16 workpapers, Ex. SCG-27-WP, Section IV Amortization, Workpapers Land Rights.

17           **2. Account 390.0 Structures and Improvements**

18           This account includes the cost in place of structures and improvements used for utility  
19 purposes. The average age of the surviving plant is 13 years. The current life is 20 years based  
20 on the forecast method when combined with subaccount 390.1. As explained above, the  
21 actuarial method is used for TY 2016. The depreciation study indicates a 33 R1.5 life and curve  
22 dispersion. The 15-year historical average for net salvage shows a net salvage rate of -15%.  
23 Thus, SoCalGas recommends decreasing the current net salvage rate from -25% to -15%.

24           **3. Account 390.1 GCT Leasehold Structures and Improvements**

25           This account includes the cost in place of structures and improvements used for utility purposes  
26 for the Gas Company Tower. The current life is 20 years based on the forecast method when  
27 combined with subaccount 390.0. As explained above regarding forecast accounts, subaccount  
28 390.1 will use the forecast method for TY 2016 because the assets in this account are tied to the  
29 GCT lease which expires in the year 2026. A life span of 15 years is recommended for this

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<sup>29</sup> Ex. SCG-27-WP, Section III Workpapers, Asset Type: Total General Plant, 2014 Beg Month Plant Balance through 2016 End Month Plant Balance.

1 subaccount, which has a beginning vintage year of 2011. Thus, SoCalGas recommends a net  
2 salvage rate of -15%, consistent with subaccount 390.0.

#### 3 **4. Accounts 391.3-391.6 Software Amortization**

4 These accounts include costs of installed software programs of various estimated useful  
5 lives, as determined by information technology operations staff. Software programs may include  
6 shelf software and self-developed software used for accounting, customer accounts, workforce  
7 scheduling, dispatching, and mapping, among others. Amortization periods include average life  
8 spans of 3, 6, 10, 15 and 20 years. These assets are amortized on a straight-line remaining life,  
9 unit basis. With advances in technology, the tendency is towards an increase in shorter lived  
10 software. Generally, enterprise-wide software will have an estimated life span of 10 or more  
11 years. SoCalGas recommends no changes in amortization of software accounts. There is no net  
12 salvage associated with software accounts. The depreciation expense and accumulated reserve  
13 schedules for the individual assets for software are provided in my workpapers, Ex. SCG-27-WP,  
14 Section IV Amortization, Workpapers Software.

#### 15 **5. Accounts 391 through 398 Vintage Group Amortization**

16 As discussed above under Depreciable Lives for Vintage Group Amortization, SoCalGas  
17 follows FERC Accounting Release 15. Assets that reach the average service life of the group are  
18 automatically retired, with the exception of account 392 Transportation Equipment.  
19 Confirmation with fleet services is first obtained before assets are retired from this group.  
20 However, amortization will cease on accounts fully accrued. Vintage group accounting is  
21 applied to the following accounts:

<b>Account</b>	<b>Description</b>	<b>Current Life/Curve</b>
391.1	Office Furniture and Eq	14 SQ
391.2	Computer Hardware	5 SQ
392	Transportation Eq	7 SQ
393	Stores Eq	20 SQ
394.13 & 394.2	Shop and Garage Eq	29 SQ
394.19	Large Portable Tools	24 SQ
395	Laboratory Eq	25 SQ
396	Construction Eq	12 SQ
397	Communication Eq	15 SQ
397.1	General Network Eq	5 SQ
397.2	PBX and Voice Eq	7 SQ
397.3	Microwave and Radio Eq	10 SQ
397.4	Communication Structures	15 SQ
398	Miscellaneous Eq	20 SQ

2 SoCalGas recommends retention of the average service lives authorized in the 2012  
3 GRC. Discussions with company personnel either confirmed appropriateness of current average  
4 service lives or offered no indications for revising the current average service lives. Net salvage  
5 studies were performed on all accounts. Retention of 0% net salvage rate is recommended for all  
6 accounts with the following exceptions:

7 Account 392 Transportation continues to exhibit a net salvage rate of 5% as authorized in  
8 the 2012 GRC. Thus, SoCalGas recommends retaining the current net salvage of 5% based on  
9 historical data and confirmation with company personnel.

10 Account 396 Construction Equipment shows a net salvage rate of 50%. The rolling  
11 5-year band and shrinking band results are inconclusive due to timing differences between  
12 recording of salvage and retirements. Thus, a wider band of 23 years<sup>30</sup> was used which suggests  
13 a net salvage of 25%. SoCalGas recommends retaining the current net salvage of 25%.

14 Account 397.2 PBX and Voice Equipment net salvage study shows a 5% net salvage.  
15 SoCalGas recommends decreasing the current net salvage from 5% to 0%, based on zero gross  
16 salvage activity in the past 11 years.

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<sup>30</sup> Data taken from SoCalGas' 2008 and 2012 GRC filings, Exs. SCG-16-WP and SCG-27-WP, respectively.

1 Account 397.4 Communication Structures net salvage study shows a net salvage rate  
2 of -30%. The rolling 5-year band and shrinking band results are inconclusive due to timing  
3 differences between recording of salvage and retirements. SoCalGas recommends retaining the  
4 current net salvage rate of -5%.

5 **VIII. CONCLUSION**

6 The proposed service lives and net salvage rates were developed in accordance with the  
7 Standard Practice U-4, are reasonable and should be adopted. The resulting depreciation  
8 expense and reserves on Tables SCG-FN-1 and SCG-FN-2, as shown above, should be approved  
9 by the CPUC for use in TY 2016 for determination of revenue requirements.

10 The estimated depreciation expense increase of \$29.0 million for TY 2016, when  
11 compared to Recorded Year 2013, represents the combined impact of plant growth (\$64.1  
12 million expense increase) and lower proposed depreciation rates (\$35.1 million expense  
13 reduction). The proposed level of depreciation expense should be adopted to ensure customers  
14 are charged an appropriate cost allocation related to consumption of plant assets and that  
15 SoCalGas recovers an appropriate amount of plant invested.

16 Account-level detail workpapers<sup>31</sup> (historical data, statistical tables and charts) are  
17 submitted separately with this testimony in support of the proposed underlying depreciation  
18 rates.

19 This concludes my prepared direct testimony.

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<sup>31</sup> Ex. SCG-27-WP.

1 **IX. WITNESS QUALIFICATIONS**

2 My name is Flora Ngai. My work address is 555 W. Fifth Street, Los Angeles, CA. I am  
3 employed by SoCalGas as a Principal Accountant in the Financial and Rate Base Services  
4 Department. I am responsible for depreciation analysis, rate calculations, depreciation estimates,  
5 monitoring of depreciation and valuation practices and special projects.

6 Prior to my current role, I held a number of positions at SoCalGas, SDG&E and Sempra  
7 Corporate in the areas of Gas Accounting, Financial Accounting, Health Management Services,  
8 Capital Asset and Management Accounting, Financial Reporting, Business Policies and  
9 Controls, and Credit and Collections. My 20 years of experience at Sempra and involvement  
10 with several company-wide initiatives (e.g., SOX, records retention, in-housing of worker's  
11 compensation) have enriched my knowledge of the company and utility business. My  
12 experience outside of Sempra include working as a Financial and Reporting Systems Manager  
13 for Beckman Coulter, a clinical diagnostics firm in Orange County from 2000-2004; and as a  
14 registered nurse from 1984-1990, licensed by the state of California.

15 I earned my Bachelor of Science in Business Administration with an option in  
16 Accounting and my Masters in Business Administration with an option in Finance, both from the  
17 California State University, Los Angeles. I am a Certified Public Accountant and a Certified  
18 Management Accountant. I am a member of the American Institute of Certified Public  
19 Accountants, the Institute of Management Accountants and the Society of Depreciation  
20 Professionals (SDP). I attended depreciation training programs sponsored by SDP in 2011,  
21 2013, and 2014 and have met all the requirements to become a Certified Depreciation  
22 Professional.

23 I have not previously testified before the Commission.

**APPENDIX A**

**Southern California Gas Company  
Comparison of Authorized vs Proposed Depreciation Parameters  
(Life-Years / Net Salvage-Percent)**

Account	Account Description	2012 Authorized		2016 Proposed		Depreciation Parameters Difference	
		Life/ Curve (1)	Net Salvage (2)	Life/ Curve (3)	Net Salvage (4)	Life (3)-(1)	Net Salvage (4)-(2)
<b>Underground Storage Plant</b>							
G350X	Rights-of-Way	40 SQ	0	40 Amort <sup>a</sup>	0	0	0
G351X	Structures and Improvements	41 L0	(45)	48 R1.5	(70)	7	(25)
G352X	Wells	29 L0	(45)	49 R2.5	(70)	20	(25)
G353X	Lines	45 R0.5	(40)	54 R3	(40)	9	0
G3540	Compressor Station Equipment	45 R0.5	(5)	41 L0.5	(15)	(4)	(10)
G3550	Meas and Reg Equipment	25 R0.5	0	22 L0	5	(3)	5
G356X	Purification Equipment	37 R2	(20)	39 R2.5	(30)	2	(10)
G357X	Other Equipment	31 R0.5	(75)	37 R2.5	(100)	6	(25)
<b>Transmission</b>							
G3652	Rights-of-Way	40 SQ	0	40 Amort <sup>a</sup>	0	0	0
G366X	Structures and Improvements	51 R0.5	(20)	47 R2	(40)	(4)	(20)
G367X	Mains	57 R5	(30)	64 R3	(60)	7	(30)
G368X	Compressor Station Equipment	43 L1	(10)	50 R1	(15)	7	(5)
G3690	Meas and Reg Equipment	40 R0.5	(15)	46 S0	(50)	6	(35)
G371X	Other Equipment	20 L2	(5)	21 L0.5	(10)	1	(5)
<b>Distribution</b>							
G3742	Land Rights <sup>a</sup>		0	40 Amort <sup>a</sup>	0		0
G3750	Structures and Improvements	31 L0	0	40 S0	(10)	9	(10)
G376X	Mains	55 R4	(55)	68 R2.5	(80)	13	(25)
G3780	Meas and Reg Equipment	31 S4	(85)	47 S0.5	(95)	16	(10)
G380X	Services	51 L2	(95)	67 R2	(115)	16	(20)
G381X	Meters	32 S1	0	25 S0.5	5	(7)	5
G382X	Meter Installations	41 S1	(10)	30 S1	(10)	(11)	0
G3826	Meter Installations (Other)	15 S6	(10)	15 SQ	0	0	10

Account	Account Description	2012 Authorized		2016 Proposed		Depreciation Parameters Difference	
		Life/ Curve (1)	Net Salvage (2)	Life/ Curve (3)	Net Salvage (4)	Life (3)-(1)	Net Salvage (4)-(2)
G3830	House Regulators	32 R0.5	0	33 L5	5	1	5
G387X	Other Equipment	12 L1	15	21 SC	5	9	(10)
<b>General Plant</b>							
G3892	Land Rights <sup>a</sup>		0	40 Amort <sup>a</sup>	0		0
G390X	Structures and Improvements	20 EL	(25)	33 R1.5	(15)	13	10
G3901	Gas Company Tower Lease	20 EL	(25)	15 EL	(15)	(5)	10
G3911	Office Furniture & Equipment	14 SQ	0	14 SQ	0	0	0
G3912	Computer Equipment	5 SQ	0	5 SQ	0	0	0
G3913	Software-3yr ASL	3 SQ	0	3 Amort <sup>b</sup>	0	0	0
G3914	Software-6yr ASL	6 SQ	0	6 Amort <sup>b</sup>	0	0	0
G3915	Software-10yr ASL	10 SQ	0	10 Amort <sup>b</sup>	0	0	0
G39155	Software-15yr ASL	15 SQ	0	15 Amort <sup>b</sup>	0	0	0
G3916	Software-20yr ASL	20 SQ	0	20 Amort <sup>b</sup>	0	0	0
G392X	Transportation Equipment	7 SQ	5	7 SQ	5	0	0
G3930	Stores Equipment	20 SQ	0	20 SQ	0	0	0
G394X	Shop and Garage Equipment	29 SQ	0	29 SQ	0	0	0
G3941	Large Portable Tools	24 SQ	0	24 SQ	0	0	0
G3950	Laboratory Equipment	25 SQ	0	25 SQ	0	0	0
G3961	Construction Equipment	12 SQ	25	12 SQ	25	0	0
G3970	Communication Equipment	15 SQ	0	15 SQ	0	0	0
G3971	General Network Equip-5yr ASL	5 SQ	0	5 SQ	0	0	0
G3972	PBX and Voice Equip-7yr ASL	7 SQ	5	7 SQ	0	0	(5)
G3973	Microwave and Radio-10yr ASL	10 SQ	0	10 SQ	0	0	0
G3974	Communication Structures	15 SQ	(5)	15 SQ	(5)	0	0
G3980	Miscellaneous Equipment	20 SQ	0	20 SQ	0	0	0

a) Not previously amortized.

b) Amortization on a unit basis as opposed to group basis.

**APPENDIX B**  
**Glossary of Terms**

Below is a list of acronyms and its definition used in this testimony.

Amort: Amortization

ASL: Average Service Life

CPUC: California Public Utilities Commission

FERC: Federal Energy Regulatory Commission

GCT: Gas Company Tower

GRC: General Rate Case

SCG: Southern California Gas Company

SoCalGas: Southern California Gas Company

USofA: Uniform Systems of Account