Application of San Diego Gas & Electric Company (U902M) for Authority, Among Other Things, to Increase Rates and Charges for Electric and Gas Service Effective on January 1, 2012.

Application of Southern California Gas Company (U904G) for authority to update its gas revenue requirement and base rates effective on January 1, 2012.

A.10-12-005 (Filed December 15, 2010)

A.10-12-006 (Filed December 15, 2010)

Application No. 10-12-006 Exhibit No.: (SCG-27-R)

# REVISED PREPARED DIRECT TESTIMONY OF BOB WIECZOREK ON BEHALF OF SOUTHERN CALIFORNIA GAS COMPANY

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

## **JULY 2011**



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# REVISED PREPARED DIRECT TESTIMONY OF BOB WIECZOREK ON BEHALF OF SOUTHERN CALIFORNIA GAS COMPANY (DEPRECIATION)

#### I. PURPOSE OF TESTIMONY

The purpose of this testimony is to address the depreciation expense and accumulated provision (reserve) for depreciation of Gas Plant of the Southern California Gas Company ("SCG" or "SoCalGas").

#### II. SUMMARY OF REQUEST

As shown in Table SCG-BW-1, the Gas Plant depreciation expense for the Recorded Year 2009 is \$291 million, and the expense requested for Test Year ("TY") 2012 is \$370 million. As shown in Table SCG-BW-2, the accumulated provision for depreciation for the end of Recorded Year 2009 of \$5,131 million, and proposed for the end of TY 2012 is \$5,760 million. (These tables are found at the end of this testimony.)

#### III. OVERVIEW

#### A. Definitions

The Federal Energy Regulatory Commission ("FERC") defines "depreciation" in the Code of Federal Regulations 18, Parts 101 and 201:

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

The FERC further defines service value: "Service value means the difference between original cost and net salvage value of electric (gas) plant." And the FERC defines net salvage value: "Net salvage value means the salvage value of property retired less the cost of removal."

1	The following are definitions of certain terms contained in the FERC Uniform System of		
2	Accounts ("USoA") related to depreciation:		
3	1. Service value means the difference between original cost and net salvage value of		
4	utility plant.		
5	2. Original cost, as applied to utility plant, means the cost of such property to the person		
6	first devoting it to public service, as previously mentioned.		
7	3. <i>Net salvage value</i> means the salvage value of property retired less the cost of		
8	removal.		
9	4. Salvage value means the amount received from property retired, less any expenses		
10	incurred in connection with the sale or in preparing the property for sale; or, if		
11	retained, the amount at which the material recoverable is chargeable to materials and		
12	supplies, or other appropriate accounts.		
13	5. Cost of removal means the cost of demolishing, dismantling, tearing down or		
14	otherwise removing utility plant, including the cost of transportation and handling		
15	incidental thereto.		
16	6. <i>Service life</i> means the time between the date utility plant is includible in utility plant		
17	in service, or utility plant leased to others, and the date of its retirement. If		
18	depreciation is accounted for on a production basis rather than on a time basis, then		
19	service life should be measured in terms of the appropriate unit of production.		
20	The definitions above are ordered so that the depreciation concepts flow from one to the		
21	next. Service value is specifically linked to original cost. Depreciation accounting is the		
22	recovery of the original cost of assets and not the economic, market, or any other non-original		
23	cost measures of value. Under current practice, regulatory definitions require that salvage and		
24	cost of removal be considered. More importantly, the regulatory definitions are specific in their		
25	requirement that salvage and cost of removal be included at the amounts expected to be received		
26	or incurred, i.e., at the price level expected at the time of receipt or incurrence. This is evident in		
27	the wording of the definitions. "Amount received" is stated in the salvage value definition and		
28	"cost of" in the cost of removal definition. The definition implies future amounts, not current		
29	price levels or present values.		
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#### B. Methodology

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A depreciation study was conducted in preparation for this General Rate Case ("GRC"). The methods used to calculate the mortality characteristics (service lives, retirement dispersions, and net salvage rates) and to calculate the straight-line remaining life depreciation rates are consistent with Standard Practice U-4, Determination of Straight-Line Remaining Life Depreciation Accruals ("Standard Practice U-4"). The California Public Utilities Commission ("CPUC" or "Commission") issued this standard practice in 1961 as a guide for determining proper depreciation accruals and has consistently upheld its use by the California utilities in computing service lives, retirement dispersion, and net salvage rates. During the course of the depreciation study, results were reviewed and validated through a process which involved consulting the historical data for the assets as well as interacting with various operation departments to consider their observations and evaluations regarding SCG's capital assets and infrastructure. This process re-affirmed the study detail showing that existing infrastructure is lasting longer, resulting in the lengthening of lives in certain accounts. Future net salvage has increased for some accounts, while others show a decrease. In addition, factors such as new technology, continued heightened focus on safety, and the need for increased reliability of the SCG system will have impacts to the average service lives and future net salvage of assets, which are either reflected in this GRC, or are anticipated to have impacts which will be reflected in future cases. For example, new technology can have the effect of either extending or reducing the lives of various assets. Future depreciation studies will continue to be conducted to weigh the influence and evaluate those effects on utility assets.

The depreciation expense shown for Recorded Year 2009 directly results from the application of depreciation parameters<sup>1</sup> authorized by the Commission in SCG's TY 2008 GRC decision.<sup>2</sup> Beginning in TY 2012, SCG proposes depreciation expense (shown on Table SCG-BW-1) which was calculated using new depreciation rates per the depreciation study. This study used historical data to analyze and adjust, where indicated, the assigned mortality characteristics of the plant accounts. The total TY 2012 depreciation expense increased \$79 million due to plant growth (net additions) from 2009 to 2012 and the proposed lower depreciation rates. The

<sup>&</sup>lt;sup>1</sup> "Depreciation parameters" (or "mortality characteristics") refer to the average service life, retirement dispersion, and net salvage rate for a group of assets.

<sup>&</sup>lt;sup>2</sup> D. 08-07-046 (August 1, 2008), as modified by D.09-06-052 (June 18, 2009).

depreciable plant growth and the investments for the Recorded Year 2009 through the TY 2012 are addressed in rate base testimony of Garry G. Yee (Exhibit SCG-26).

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#### IV. DEPRECIABLE LIVES FOR TY 2012

Depreciable lives were studied primarily for mortality plant accounts, and in one instance for forecast accounts (i.e., FERC account 390). Mortality accounts, generally referred to as mass accounts, maintain records for related types of property grouped by vintage year without regard to specific location. Examples of such property types are gas mains (FERC account 376) or meters (FERC account 381).

Utilities often apply the mass-asset convention of accounting also, known as the "group" method, as defined by the National Association of Regulatory Utility Commissioners ("NARUC"), to certain fixed assets such as gas mains and other components of their transmission and distribution systems. These FERC accounts are too numerous to track on an individual basis given the small relative value of each individual asset. The group method is distinct from the convention of accounting known as the "unitary" method in that the unitary method considers each individual asset, regardless of size. In addition, many utilities often utilize a "composite" convention of accounting for component parts of larger assets which are impractical to separately track. As opposed to the unitary convention of accounting for fixed assets, generally neither the group nor composite convention of accounting result in the recognition of a gain or loss upon the retirement of an asset. Rather, any difference between the net book value of the assets and the value realized at retirement (salvage proceeds less removal and disposal costs) are embedded in accumulated depreciation and considered in the determination of prospective depreciation rates.

#### A.

### Simulated Plant Record ("SPR") Method of Analysis

Mortality characteristics were reviewed for the mortality accounts using historical data through 2009. Each of these accounts has been assigned a representative Iowa-type survivor curve<sup>3</sup> combined with an average service life. SCG's review indicated the need to modify the average service lives for 18 of these accounts, while all others continue to exhibit the lives agreed to in the Settlement with the Division of Ratepayer Advocates ("DRA") and approved in

<sup>&</sup>lt;sup>3</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.

SCG's TY 2008 GRC decision. The lengthening of average service lives has been the general trend for SCG assets.

The SPR analysis can be used when only annual additions, retirements and balances are available. SCG used the SPR Balances method (used for these mortality accounts) which attempts to duplicate actual balances for an account by generating simulated retirements based on vintage additions and an assumed Iowa-type retirement dispersion and average service life. An Iowa curve type is tested using varying average service lives until the actual test band balances are most closely approximated, as measured by the minimum sum of squared differences ("SSD"). This is done for all 31 curve types, which are then ranked using an Index of Variation.<sup>4</sup> Judgment is used to select the most representative Iowa curve type and service life combination.

This SPR method is used by many utilities and Commissions to determine the best fit life characteristics of property when the property records do not contain the age of the property at retirement. The SPR method selects a retirement dispersion based upon the closeness matching actual annual amounts to those that have been simulated. In this case, actual period retirements are compared. The closeness of the match is measured by the Conformance Index ("CI") or the reciprocal, the Index of Variation ("IV"). The CI and IV result from measuring the sum of squared differences between the simulated and actual amounts. A multi-curve listing will detail the CI and IV, with the highest ranked curves displaying the higher CI and conversely, the lower IV. The maturity of the account is measured by the Retirement Experience Index ("REI") assuring that a unique and specific retirement pattern is being picked up in the simulation analysis.

Different average lives for each and every curve type are considered as the SPR program simulates the data against the actual and then displays the best option for that curve type based on the parameters discussed above. The REI of 100% will indicate that a complete curve was used in the simulation event. Similar to the actuarial analysis which matches Iowa curves to survivor curves, this SPR analysis seeks a curve type which will provide the best match or is a suitable extension of the truncated / stub curves.

<sup>4</sup> Index of Variation =  $[1000 \text{ x} (SSD/years in band) ^.5]/(average actual balance).$ 

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BW-5

The individual results of the SPR for SoCalGas are included in this testimony and work papers. The Forecast method was used for General Plant Structures and Improvements. Remaining lives for each vintage of plant are calculated by dividing the area under the survivor curve to the right of its age by the ordinate at that age. The average remaining life for each account was calculated by weighting the remaining life of each vintage year with its surviving plant balance as of December 31, 2009.

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#### NET SALVAGE RATES FOR TY 2012

As stated in the NARUC Publication, *Public Utility Depreciation Practices*, "salvage and cost of removal analysis involves the determination of salvage and cost of removal as a percentage of the cost of the retired property. This percentage is referred to herein as a "factor." The techniques employed depend upon the type of property being studied and the type of data available. These techniques can involve analysis of history, the anticipated future, or both. The procedures in general use have the ability to measure the salvage and cost of removal of the original installations, but rarely do so because of data limitations. If this situation is not recognized and compensated for, selected net salvage factors will be inconsistent with selected average service lives.

Historically, most regulatory commissions have required that both gross salvage and the cost of removal be reflected in depreciation rates. The theory behind this requirement is that, since most physical plant placed in service will have some residual value at the time of its retirement, the original cost recovered through depreciation should be reduced by that amount. Closely associated with this reasoning is the accounting principle that revenues be matched with costs and the regulatory principle that utility customers who benefit from the consumption of plant pay for the cost of that plant, no more, no less. The application of the latter principle also requires that the estimated cost of removal of plant be recovered over its life."<sup>5</sup>

NARUC also adds that when property is retired, the effect of both salvage and removal costs must be considered.<sup>6</sup> The net salvage gives consideration to both of these items and represents the salvage less the removal costs. If the salvage exceeds the removal costs, the net

<sup>&</sup>lt;sup>5</sup> Public Utility Depreciation Practices, NARUC, August 1996, p. 157. <sup>6</sup>Public Utility Depreciation Practices, NARUC, August 1996, p. 157.

salvage is considered positive. When the removal costs exceed the salvage, the net salvage is negative. The effect of net salvage, whether positive or negative, must be considered in the calculation of depreciation.

In this depreciation study, the estimated net salvage rates (equal to gross salvage less cost of removal as a percentage of retired plant cost) were determined after analyzing data for the past 15 years (1995 through 2009). The analysis indicated the need to change the net salvage rates for 21 accounts, while remainder of the accounts are still consistent with the rates agreed to in the Settlement with DRA and authorized in SCG's 2008 GRC decision. The method of analysis is based on that specified in the <u>Standard Practice U-4</u>.

The prevailing trend of recent SCG studies is toward more negative net salvage rates. Generally, a change in net salvage rates is related to the change in service lives (which are lengthening at SCG) and has an offsetting impact on depreciation rates and expense. For example, when asset lives are lengthened, positive salvage values decline or become negative as the physical item continues to deteriorate and the cost to dispose of that item increases. Also, since the asset's vintage year reflects the original acquisition costs, the continually increasing cost of removal affects the ratio. Since the future net salvage estimate is expressed as a percentage of the original historical cost<sup>7</sup> of the associated retirement (a constant), the result is a more negative net salvage rate. Thus, while a lengthening life decreases the annual depreciation expense, the resulting more negative net salvage rate will increase expense.

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#### DEPRECIATION RATE CALCULATION

As stated in the NARUC's *Public Utility Depreciation Practices*, regulators are challenged by short-run and long-run interests affecting both the ratepayer and the Company. If the depreciation rates prescribed are too low, the revenue requirement in the short-run may be lower. These rates can be so low that revenue fails to recoup the capital invested by the end of asset's end life placing a burden on future ratepayers for assets that never served their interest. The situation can be reversed by placing more of the burden inappropriately on current ratepayers, while future costs are minimal or non-existent.

<sup>&</sup>lt;sup>7</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 nominal dollars.

The objective of computing depreciation then is to allocate the cost or depreciation base over the property's service life by charging the appropriate portion of the consumption of plant taking place during each accounting period. The depreciation methods incorporated by SCG achieve this objective. As these methods are applied, two estimates are required, one of average service life (or "ASL") and the other of future net salvage (or "FNS").

The SCG depreciation rates are calculated in accordance with <u>Standard Practice U-4</u> and using the straight-line method, broad group procedure, and remaining life technique. The straight-line method prorates the recovery of service value in equal annual amounts. The broad group procedure (the most widely used in the utility industry) groups assets in categories (typically plant accounts and/or subaccounts) and depreciates all assets as if they all had identical mortality characteristics, while using a single depreciation rate for the entire category. The broad group procedure also assumes that under-accruals resulting from early retirements are offset by over-accruals on assets that outlive the average service life. The remaining life technique accrues unrecovered service value over the average remaining life of the group. The remaining life annual accruals are calculated for each plant account as follows:

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

Plant balance is the original installed cost of the assets less any contributions in aid of construction. The future net salvage is the projected gross salvage for recovered materials less costs associated with retiring the assets. The future net salvage is calculated by applying the net salvage rate to the surviving plant balance (that plant yet to be retired). The reserve is the accumulation, since the inception of the plant account, of the following booked entries: depreciation accruals, plus salvage, less cost of removal, less the retirements, plus or minus any transfers in or out as provided by the FERC USoA.

The annual depreciation rates were calculated based on recorded information as of December 31, 2009, for each FERC plant account by dividing the depreciation accrual by the plant balance. These remaining life rates are self-correcting for prior over- and under-accruals as the depreciation parameters are updated in accordance with each GRC study.

The newly developed rates were then applied on a composite functional group basis to the TY 2012 depreciable plant balances to obtain the proposed depreciation expense. The

CPUC-jurisdictional composite depreciation and amortization rate, on a total plant-in-service basis,<sup>8</sup> resulting from the new study is 3.40% for the 2012 TY, compared to a rate of 3.55% for the 2009 Recorded Year.

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#### I. ACCOUNT BY ACCOUNT DETAIL FOR PROPOSED ASL AND FNS%

The following account by account detail summarizes the proposed lives and future net salvage for each FERC account. The method utilized in determining each FERC account's updated and proposed life is also specified.

Within the summary for each account, it will be noted whether the SPR or the Forecast method was used in the analysis. For those specific FERC accounts where the SPR balances method of semi-actuarial life analysis was used for this plant account, historical plant additions and historical retirements of undetermined age were captured for the analysis. Work papers detail the authorized and proposed service life, remaining life, and the calculation of the depreciation rate. Available also in the work papers is a computerized ranking of the standard Iowa curves based upon the lowest sum of squared differences between simulated balances and actual balances within the experience band.

The Forecast method is outlined in the <u>Standard Practice U-4</u>, page 28. The composite remaining life for the account is obtained by direct weighting with the dollars for each unit.

An updated 15-year historical FNS analysis was completed for these FERC accounts. This analysis was conducted in accordance with the <u>Standard Practice U-4</u> methodology. My professional judgment, as well as the review of previous 2004 Cost of Service ("COS") proceeding and GRC FNS analyses with their subsequent authorized rates, was incorporated in arriving at the FNS rates being proposed in this case. Net salvage studies for subsequent GRCs will be conducted in like manner, which may result in future adjustments (either upwards or downwards) to the FNS rates adopted in this GRC.

Account 350 – Storage Rights – Recoverable Oil – Rights-of-Way

This account includes the cost of all interests in land on which are located underground storage lines, telephone poles, their associated lines, and like property used in connection with underground gas storage operations. Recoverable oil and the right of way sub-accounts are

<sup>&</sup>lt;sup>8</sup> Total jurisdictional depreciation and amortization expense divided by total weighted-average plant in rate base.

included. The 2008 GRC authorized life/curve was 40 SQ and the 2012 study proposes the life/curve remain at 40 SQ. No change in Iowa curve type or average service life is proposed.No net salvage is currently associated with this account and its sub-accounts.

#### Account G351 – Structures and Improvements

This account includes the cost in place of structures and improvements used wholly or predominantly in connection with underground storage of natural gas.

The SPR analysis was used for this FERC account. The 2008 GRC authorized life/curve was 37 L0 and the 2012 study proposes life/curve at 41 L0. No change in Iowa curve type is proposed, but the average service life is extended four (4) years.

When major upgrades are being made, the removal costs associated with those changes are reflecting increases in negative net salvage percentages. The current 15 year historical analysis is suggesting an increase from the authorized -30% towards -55%. SCG is proposing that negative net salvage be increased to -45% for this account.

#### Account G352 – Wells

This account includes the drilling cost of wells used for injection and withdrawal of gas from underground storage projects, including wells kept open and used for observation. Specific items include bailing equipment, boilers and drives permanently connected, casings, derricks, fittings, including shut-in valves, casing heads, and tubing.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 26 L0 and the 2012 study proposes life/curve at 29 L0. No change in Iowa curve type is proposed, but the average service life is extended three (3) years.

The current 15 year historical net salvage analysis is suggesting a decrease from the authorized -60% to -45%. SCG is proposing that the negative net salvage be reduced to -45% for this account.

#### Account G353 - Lines

This account includes installed gas pipe lines used wholly or predominantly for conveying gas from point of connection with transmission or field lines to underground storage wells and from underground storage wells to the point where the gas enters the transmission or distribution system. Items can include cathodic protection equipment, field lines, including pipe, valves, fittings, and supports, line drips and separators, and line pack gas.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 40 R0.5 and the 2012 study proposes life/curve at 45 R0.5. No change in Iowa curve type is proposed, but the average service life is extended five (5) years, continuing a trend.

The current 15 year historical net salvage analysis is suggesting a decrease from the authorized -55% to -40%. SCG proposes that negative net salvage be reduced to this -40% for this account.

#### Account G354 – Compressor Station Equipment

This account includes installed compressor station equipment used wholly or predominantly for the purpose of raising the pressure of gas for delivery to underground storage or to raise the pressure of gas withdrawn from underground storage for delivery to the transmission or distribution system. Items can include boiler plant, compressed air system equipment, compressor equipment and driving units including auxiliaries, foundations, guard rails and enclosures, electric system equipment including generating equipment and driving units, power wiring, transformers, regulators, battery equipment, switchboard, gas lines and equipment including fuel supply lines, cooling tower and pond and associated equipment, dehydrators, fuel gas mixers, special pipe bends and connections, and associated scrubbers, separators, tanks, gauges and instruments.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 40 L1.5 and the 2012 study proposes life/curve at 45 R0.5. A change in the Iowa curve type is proposed, and the average service life is extended five (5) years, continuing a trend.

The current 15 year historical net salvage analysis is suggesting an increase from the authorized -5% to -10%. SCG is proposing that negative net salvage remain at -5% for this account.

#### Account G355 - Measuring and Regulating Equipment

This account includes installed equipment used wholly or predominantly for the purpose of measuring and regulating deliveries of gas to underground storage and withdrawals of gas from underground storage. Items can include automatic control equipment, boilers, heaters, foundations, gas cleaners, scrubbers, separators, dehydrators, gauges and instruments, including piping, fittings, wiring, and panel boards, meters, orifice or positive, including piping and connections, odorizing equipment and structures of a minor nature or portable type.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 30 R0.5 and the 2012 study proposes life/curve at 25 R0.5. No change in Iowa curve type is proposed, but the average service life is reduced five (5) years.

The study in the 2004 COS filing indicated a net salvage rate of -30%. The 2008 GRC net salvage study resulted in an authorized -15%. In the current 15 year study, results continue to reflect less negative net salvage. SCG is proposing a change from the currently authorized negative net salvage rate of -15% to 0%.

#### Account G356 - Purification Equipment

This account includes installed apparatus used wholly or predominantly for the removal of impurities from and the conditioning of, gas delivered to or removed from underground storage fields. Items include condensers and washer coolers, dehydrators, foundations and settings, specially constructed for and not intended to outlast the equipment for which provided, other accessory equipment, such as coolers, spray ponds, pumps, platforms, railings, stairs, piping, from inlet valve of first piece of apparatus to outlet valve of final piece of apparatus, scrubbers, sulphur removal apparatus and water supply systems.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 38 R2 and the 2012 study proposes life/curve at 37 R2. No change in Iowa curve type is proposed, but the average service life is reduced one (1) year.

The study in the 2004 COS filing indicated a net salvage rate of -55%. The 2008 GRC net salvage study indicated -25%. Using the current 15 year historical net salvage study, SCG is proposing a change from the currently authorized negative net salvage rate of -25% to -20%.

#### Account G357 - Other Equipment

This account includes installed equipment used wholly or predominantly in connection with underground storage of gas, when not assignable to any of the foregoing accounts. Items include calorimeter, cranes, odorizing units, oil foggers and other equipment.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 26 R0.5 and the 2012 study proposes life/curve at 31 R0.5. No change in Iowa curve type is proposed, but the average service life is extended five (5) years.

This FERC account is experiencing an increase in negative net salvage. The 2004 COS net salvage study resulted in a negative net salvage rate of -25%. The 2008 GRC net salvage study indicated -60%, while -50% is currently authorized. In the current 15 year study for the TY 2012 GRC, negative net salvage is moving upwards towards -200%. SCG is proposing a change from the current authorized net salvage rate of -50% to -75%

#### Account G365.29 - Rights-Of-Way

This account includes the cost of rights-of-way used in connection with transmission operations. The 2008 GRC authorized life/curve was 40 SQ and the 2012 study proposes the life/curve remain at 40 SQ. No change in Iowa curve type or ASL is proposed. No net salvage is currently associated with this account.

#### Account G366 - Structures and Improvements.

This account includes structures and improvements used in connection with transmission operations.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 47 R0.5 and the 2012 study proposes life/curve at 51 R0.5. No change in Iowa curve type is proposed, but the average service life is extended four (4) years, continuing a trend.

The current 15 year historical net salvage analysis study re-confirms the current authorized rate of -20% and SCG proposes no change to this rate.

#### Account G367 - Transmission Mains

This account includes the cost installed of transmission system mains. Assets include large high pressured gas mains of different sizes and types, cathodic protection equipment, drip lines and pots, pipe coating, pipe and fittings, pipe supports, anchors and valves.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 55 R5 and the 2012 study proposes life/curve at 57 R5. No change in Iowa curve type is proposed, but the average service life is extended two (2) years, continuing a trend.

The negative net salvage pattern in this account is staying consistently above the previously authorized negative net salvage percentage, confirmed by the 15 years of historical data. The study in the 2004 COS filing resulted in an authorized -20%. Using the 2008 study resulted in a higher rate, but the FNS rate remained at -20%. The current 15 year historical net

salvage analysis indicates negative net salvage at -45%. SCG proposes that the rate be moved up to -30%.

#### Account G368 - Compressor Station Equipment

This account includes the cost installed of compressor station equipment and associated appliances used in connection with transmission system operations. Items can include boiler plant, coal handling and ash handling equipment for steam powered compressor stations, compressed air system equipment including auxiliaries, foundations, guard rails and enclosures. Other items are electric system equipment, including generating equipment and driving units, power wiring, transformers, regulators, and battery equipment.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 41 L1 and the 2012 study proposes life/curve at 43 L1. No change in Iowa curve type is proposed, but the average service life is extended two (2) years, continuing a trend.

The 2004 COS resulted in an authorized negative net salvage rate of -35%. The 2008 GRC resulted in an authorized -15%. The current net salvage study reflects negative net salvage at -10%. SCG is proposing a change from the currently authorized net salvage rate of -15% to -10%.

#### Account G369 – Measuring and Regulating Station Equipment

This account includes the cost installed of meters, gauges, and other equipment used in measuring or regulating gas in connection with transmission system operations. Items can include automatic control equipment, boilers, odorizing equipment, heaters, gas cleaners, scrubbers, separators, dehydrators, gauges and instruments, including piping, fittings, wiring, and panel boards.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 39 R0.5 and the 2012 study proposes life/curve at 40 R0.5. No change in Iowa curve type is proposed, but the average service life is extended one (1) year, continuing a trend.

The net salvage activity has remained fairly constant and consistent over the years as reflected in the 15 years of historical data. In the current 15 year 2012 net salvage study, there is slight movement towards -15%. SCG is proposing that the negative net salvage rate be reduced from -20% to -15%.

This account includes installed equipment used in transmission system operations, when not assignable to any of the foregoing accounts.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 20 L2 and the 2012 study proposes no change in life/curve at 20 L2.

In the current 15 year study for 2012, there is slight movement in negative net salvage towards -10%. SCG is proposing that the negative net salvage rate remain authorized at -5%.

#### Account G375 – Structures and Improvements

Account G371 - Other Equipment.

This account shall include the cost in place of structures and improvements used in connection with gas distribution operations.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 29 LO and the 2012 study proposes life/curve at 31 LO. No change in Iowa curve type is proposed, but the average service life is extended two (2) years, continuing a trend.

Recent positive salvage activity is very minimal for this account as reflected in the 15 years of historical data. SCG is requesting that net salvage be reduced from +5% to 0% for this account.

#### Account G376 - Gas Mains

Typical construction costs involve pipe, fittings, and wrap. The account also includes drip lines and pots, electrolysis tests, other materials used in connection with new construction, pipe coating, as well as, rectifier and anode bed installations are included.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 53 R4 and the 2012 study proposes life/curve at 55 R4. No change in Iowa curve type is proposed, but the average service life is extended two (2) years, continuing a trend.

Removal costs may include excavation, re-compaction, vegetation removal and replacement, asbestos issues, salvage disposition of pipe, removal of pipe, slurry added to abandoned pipe, and replacement of native dirt to ensure proper compaction and support of permanent paving. Environmental issues would also be addressed by safely containing and removing brine and liquid sediment from operations, dirt sent to appropriate landfill, and proper disposal of the non-reusable pipe and fittings. The last four (4) additional historical years added to the net salvage study database does reflect a pattern at or slightly above -55% for negative net salvage. SCG proposes to lower the current authorized level from -60% to -55% for negative net salvage.

#### Account G378 – Measuring and Regulating Station Equipment

This account includes the cost installed of meters, gauges and other equipment used in measuring and regulating gas in connection with distribution system operations other than the measurement of gas deliveries to customers. Items can include automatic control equipment, gauges and instruments, governors or regulators, meters, odorizing equipment, piping and pressure relief equipment.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 31 S4 and the 2012 study proposes no change to the life/curve at 31 S4.

The current 15 year historical net salvage analysis is suggesting a decrease from the authorized -100% to just below -90%. SCG is proposing that negative net salvage be reduced to -85% for this account.

#### Account G380 – Gas Services

This account includes the cost installed of service pipes and accessories leading to the customers' premises. A complete service begins with the connection on the main and extends to but does not include the connection with the customer's meter. A stub service extends from the main to the property line, or the curb stop. Items can include curb valves and curb boxes, pipe and fittings, including saddle, tees, or other fittings utilized for main connections, pipe coating, service drips, and service valves.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 48 L2 and the 2012 study proposes life/curve at 51 L2. No change in Iowa curve type is proposed, but the average service life is extended three (3) years, continuing a trend.

The study in the 2004 COS filing substantiated and resulted in an authorized negative net salvage of -90%. The 2008 GRC resulted in an authorized -85%. In the current GRC net salvage study, the pattern for the past eight of the nine years reflects negative net salvage at or above -100%. SCG is proposing an increase in negative net salvage to -95%.

#### Account G381 – Meters and Regulators

This account includes the cost installed of meters or devices and appurtenances thereto, for use in measuring gas delivered to users, whether actually in service or held in reserve. Items can include meters, including badging by unit and type, and initial testing.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 31 S6 and the 2012 study proposes life/curve at 32 S1. A change in Iowa curve type is proposed, and the average service life is extended one (1) year.

Salvage activity has remained fairly constant and consistent for this account as reflected in the 15 years of historical data. SCG requests that overall net salvage remain at 0% for this account.

#### Account G382 – Meter Installations and Other Installations

This account includes the cost of labor and materials used, and expenses incurred in connection with the original installation of customer meters. Items can include cocks, locks, meter bars, pipe and fittings, seals, swivels and bushings.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 43 S6 and the 2012 study proposes life/curve at 41 S1. A change in Iowa curve type is proposed, and the average service life is reduced by two (2) years, continuing a trend.

The negative net salvage in this account is lower as confirmed by the 15 years of historical data. The study in the 2004 COS resulted in -70%. The 2008 GRC resulted in a lower authorized -20%. The current 15 year historical net salvage analysis reflects negative net salvage for this account now at -15%. SCG proposes a negative net salvage rate of -10%.

#### Account G382.6 – Meter Installations (Other)

This account includes the cost of labor and materials used, and expenses incurred in connection with the original installation of medium and large commercial customer meters. Items can include cocks, locks, meter bars, pipe and fittings, seals, swivels and bushings.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 15 S6 and the 2012 study proposes life/curve at 15 S6. No change in Iowa curve type is proposed, and no change in the average service life is proposed.

The negative net salvage in this account is lower as confirmed by the current 15 years of historical data. The 2008 GRC resulted in an authorized -20%. The current 15 year historical analysis reflects negative net salvage for this account now at -15%. SCG proposes negative net salvage rate of -10%.

#### Account G383 - House Regulators

This account includes the installed cost of house regulators. Items typically include house regulators, pipe, and fittings.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 31 R0.5 and the 2012 study proposes life/curve at 32 R0.5. No change in Iowa curve type is proposed, but the average service life is extended one (1) year, continuing a trend.

The current 15 year historical study continues to show net salvage at 0%. SCG proposes this 0% net salvage rate for 2012.

#### <u>Account G387 – Other Equipment</u>

This account includes the cost installed of all other distribution system equipment not provided for in the foregoing accounts, including street lighting equipment. Items can include carbon monoxide testers and indicators, explosimeters, fire extinguishers, portable pumps, recording gauges and test meters. It can also include installed CNG distribution system equipment.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 11 L1 and the 2012 study proposes life/curve at 12 L1. No change in Iowa curve type is proposed, but the average service life is extended one (1) year.

Salvage activity is currently reflecting +15% positive net salvage based on the current 15 years of historical data. SCG is requesting that positive net salvage be increased from +5% to +15% for this FERC account.

### Account G390 – Structures and Improvements

This account includes structures and improvements used for utility purposes, not properly includible in other structures and improvements accounts.

The Forecast method of analysis was used for this plant account. The 2004 COS Study authorized life was 22 years, and the 2008 GRC resulted in a life/curve at the current authorized 20 SQ. For 2012, both the life and curve are proposed to remain unchanged at 20 SQ.

The current historical 15 year salvage study is showing the negative net salvage at -25%. SCG is requesting a change increasing the negative net salvage rate from the current authorized -20% to -25%.

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#### Account G391 – Computer and Software Programs

FERC account 391 houses software programs of various forecasted lives. These can include off the wall and in-house developed software purchased and used to provide scheduling, system control, and dispatching, system planning, standards development, market monitoring, and market administration activities.

The SPR analysis was used for these seven (7) sub-accounts. The 2008 GRC authorized lives/curves for all seven (7) accounts are proposed to remain unchanged for 2012.

These accounts continue to show 0% net salvage supported by the current 15 year statistical historical net salvage study. SCG proposes that the net salvage for these accounts remain at 0%.

#### Account G39220 & G392.29 – Transportation Equipment - Trailers

These accounts include the cost of transportation vehicles used for utility purposes. Items can include tractors and trailers, and other transportation vehicles.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve for both accounts was 7 SQ and the 2012 study proposes no change in the life/curve at 7 SQ.

Salvage activity is very minimal for this account as reflected in the current 15 years of historical data. SCG is requesting that positive net salvage be reduced from +25% to +5% for this account.

#### Account G393 Stores Equipment

This account includes the cost of equipment used for the receiving, shipping, handling, and storage of materials and supplies.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 20 SQ and the 2012 study proposal remains unchanged at 20 SQ.

1	This account continues to show 0% net salvage supported by the current 15 years of
2	historical data. SCG proposes that net salvage for this account remain at 0%.
3	Account 394.13 / 394.20 Shop and Garage Equipment
4	These two (2) FERC accounts include the cost of tools, implements, and equipment used
5	in construction, repair work, general shops and garages not specifically provided for in other
6	accounts.
7	The SPR analysis was used for these two (2) FERC accounts. The 2008 GRC
8	authorized life/curve was 29 SQ and the 2012 study reflects no change for both FERC accounts
9	remaining at 29 SQ.
10	These accounts continue to show 0% net salvage supported by the 15 years of current
11	historical data. SCG proposes that net salvage for these accounts remain at 0%.
12	Account 394.19 Large Portable Tools
13	Large portable tools are included in this account, such as, battery chargers, concrete
14	mixers, portable generators, motor driven tools, and welding apparatus.
15	The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve
16	was 24 SQ and the 2012 study proposal remains unchanged at 24 SQ.
17	This account continues to show 0% net salvage supported by the current 15 years of
18	historical data. SCG requests that net salvage for this account remain at 0%.
19	Account 395 Laboratory Equipment
20	This account includes the cost of laboratory equipment used for general laboratory
21	purposes and not specifically provided for in other accounts. Items can include ammeters,
22	galvanometers, voltmeters, potentiometers, switchboards, testing panels, and other testing
23	equipment.
24	The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve
25	was 25 SQ and the 2012 study proposal remains unchanged at 25 SQ.
26	This account continues to show 0% net salvage supported by the current 15 years of
27	historical data. SCG requests that net salvage for this account remain at 0%.
28	

#### Account G396 – Construction Equipment and Power Operated Equipment

This account includes the cost of power operated equipment used in construction or repair work exclusive of equipment includible in other accounts, and the tools and accessories acquired for use with such equipment and the vehicle on which such equipment is mounted. Items can include air compressors, back filling machines, boring machines, bulldozers, cranes and hoists, pipe coating or wrapping machines and other necessary power operated equipment.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 12 SQ and the 2012 TY study proposal remains unchanged at 12 SQ.

Salvage activity is minimal for this account as reflected in the current 15 years of historical data. SCG is requesting that positive net salvage be reduced from +30% to +25% for this account.

#### Account G397 – Communication Equipment

This account includes the cost installed of telephone, telegraph, and wireless equipment for general use in connection with poles and fixtures used wholly for telephone or telegraph wire. Items can include radio transmitting and receiving sets, remote control equipment and lines, storage batteries, telephone and telegraph circuits, testing instruments, underground conduit used wholly for telephone or telegraph wires and cable wires.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 15 SQ and the 2012 study proposal remains unchanged at 15 SQ.

Salvage activity is minimal for this account as reflected in the 15 years of historical data. SCG requests that net salvage remain at 0% for this account.

#### Account G397.1 – General Equipment

Items in this account can include carrier terminal equipment including repeaters, power supply equipment, transmitting and receiving sets.

The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve was 5 SQ and the 2012 study proposal remains unchanged at 5 SQ.

Salvage activity is minimal for this account as reflected in the current 15 years of historical data. SCG requests that net salvage remain at 0% for this account.

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1	Account G397.2 – PBX and Voice Equipment
2	Items can include radio transmitting and receiving sets, remote control equipment and
3	lines, storage batteries, telephone and telegraph circuits.
4	The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve
5	was 7 SQ and the 2012 study proposal remains unchanged at 7 SQ.
6	Salvage activity is minimal for this account as reflected in the recent 15 years of
7	historical data. Technological improvements over the years have resulted in the removed and
8	retired equipment being scrapped with little value. SCG requests that positive net salvage be
9	reduced from $+15$ to $+5\%$ for this account.
10	Account G397.3 – Microwave and Radio
11	Items in this account include microwave equipment, including power supply equipment,
12	transmitters, amplifiers, paraboloids, towers, reflectors, and receiving equipment.
13	The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve
14	was 10 SQ and the 2012 study proposal remains unchanged at 10 SQ.
15	Salvage activity is minimal for this account as reflected in the current 15 years of
16	historical data. SCG requests that net salvage remain at 0% for this account.
17	Account G397.4 – Communication Structures
18	This account includes communication structures used for general use in connection with
19	poles and fixtures and housing remote control equipment and telephone equipment.
20	The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve
21	was 15 SQ and the 2012 study proposal remains unchanged at 15 SQ.
22	Salvage activity is minimal for this account as reflected in the current 15 years of
23	historical data. SCG is requesting that negative net salvage remain at -5% for this account.
24	Account G398 – Miscellaneous Equipment
25	This account includes the cost of equipment, apparatus, used and useful in gas operations,
26	which is not includible in any other account.
27	The SPR analysis was used for this plant account. The 2008 GRC authorized life/curve
28	was 20 SQ and the 2012 study proposal remains unchanged at 20 SQ.
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1	Salvage activity is minimal for this account as reflected in the current 15 years of			
2	historical data SCG requests that net salvage remain at 0% for this account			
2	instorieur dutu. Sees requests that net survige remain at 070 for this account.			
3	VIII. COMPLIANCE ITEMS			
4	In its 2008 GRC Settlement Agreement, SCG agreed to provide the following			
5	information in its next GRC filing:			
6	1) The then-current balance of pre-funded removal costs;			
7	2) A year-by-year projection of: (a) when the then-existing balance of pre-funded			
8	removal costs will be consumed, and (b) the implicit inflation rate for future asset			
9	removal costs;			
10	3) A five-year projection of the year-end balance of pre-funded removal costs, showing			
11	for each year the gross additions to the balance, gross expenditures for removal costs			
12	and the net change in the balance of pre-funded removal costs;			
13	4) A study for presentation in the next general rate cases that will separate the accrual			
14	for cost of removal from accruals for depreciation expense; and to			
15	5) Establish a regulatory liability for ratemaking purposes. <sup>9</sup>			
16	SCG has complied with these requirements. A separate depreciation study contains the			
17	information required in items $(1) - (5)$ . These documents are provided in my workpapers			
18	(Exhibit SCG-27-WP).			
19	IX. SUMMARY OF ESTIMATED EXPENSES AND RESERVES			
20	The total of the estimated 2012 TY Gas Plant depreciation expense is \$370 million as			
20	shown on Table SCG-BW-1. The total depreciation expense has increased from Recorded Year			
21	2009 to TY 2012 by \$79 million. As discussed earlier, this results from the combined impact of			
22	the net additions to plant and of the lower proposed depreciation rates			
23 24	The total estimated December 31, 2012, Gas Plant depreciation reserve is \$5,760 million			
25	The total estimated December 51, 2012, Gas Plant depreciation reserve is \$5,760 million.			
25	Account level detail for the proposed underlying depreciation rates are included in the			
20 27	Account-level detail for the proposed underlying deprectation rates are included in the			
21 20	workpapers submitted with this ming. These proposed rates have been developed in			
20				

 <sup>&</sup>lt;sup>9</sup> See D.08-07-046 (mimeo) p. 27 and Ordering Paragraph 26.
<sup>10</sup> See calculation of depreciation rates by account in workpapers SCG-27-WP

1	accordance with Standard Practice U-4, are reasonable, and should be adopted. The resulting
2	depreciation expense and reserves shown on Tables SCG-BW-1 and SCG-BW-2 should be

approved by the CPUC for use in TY 2012 for determination of revenue requirements.

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## 1 X. TABLES

### Table SCG-BW-1

# SOUTHERN CALIFORNIA GAS COMPANY TEST YEAR 2012 DEPRECIATION EXPENSE

(Thousands of Dollars)

Line		Recorded	Test Year
No.		(2009\$)	(2012\$)
1	Underground Storage	17,436	16,505
2	Transmission	24,505	32,015
3	Distribution	181,504	189,548
4	General Plant	67,368	131,593
5	Total Depreciation Expense	290,812	369,660

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2			Table SCG-BW-2	2	7
3			SOUTHERN CALIFORNIA GA TEST VEAD 201	AS COMPANY 2	(
4			END-OF-YEAR DEPRECIATIO	2 ON RESERVE	S
5			(Thousands of Dolla	rs)	
5					
6 7		Line No.		Recorded (2009\$)	Test Year (2012\$)
8				(	(= + /
9		1	Underground Storage	392,117	421,818
10		2	Transmission	657,494	709,056
11		3	Distribution	3,699,715	4,101,643
12		4	General Plant	381,840	527,294
13		5	Total Depreciation Reserves	5,131,166	5,759,811
14					
15	Thi	s conclud	es my prepared direct testimony.		

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### XI. WITNESS QUALIFICATIONS

My name is Bob Wieczorek. My business address is 8330 Century Park Court, San Diego, California 92123. I am employed by San Diego Gas & Electric Company ("SDG&E") as a Principal Accountant in the Accounting Operations Department. I have held this position since 2007. My principal duties include the preparation of depreciation estimates and special depreciation-related studies, and the monitoring of depreciation and valuation practices used by Southern California Gas Company ("SCG") and SDG&E.

I received an AA degree in Mathematics from Glendale College in 1970, a Bachelor of Science degree in Accounting from Northridge in 1979, and an MBA from National University in 2002. I am a member of the Society of Depreciation Professionals.

Prior to assuming my current position, my work experience at SoCalGas, Sempra, and SDG&E has involved physical gas field work, field accounting, depreciation accounting, various staff positions at Gas Transmission and Distribution, Organization and Compensation, Regulatory, and Human Resources.

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I have not previously testified before the California Public Utilities Commission.

# CHANGE LOG

Page	Line	Errata Item
BW-7	8	Delete "Division of Ratepayer Advocates" as previously
		defined.
BW-25		Correction to pagination, BW-25 onward.
BW-25	3	Table SCG-BW-1, change from 189,557 to 189,548.
BW-25	4	Table SCG-BW-1, change from 131,594 to 131,593.
BW-25	5	Table SCG-BW-1, change from 369,672 to 369,660.
BW-26	1	Table SCG-BW-2, change from 421,817 to 421,818.
BW-26	2	Table SCG-BW-2, change from 709,055 to 709,056.
BW-26	3	Table SCG-BW-2, change from 4,101,633 to 4,101,643.
BW-26	4	Table SCG-BW-2, change from 527,270 to 527,294.
BW-26	5	Table SCG-BW-2, change from 5,759,775 to 5,759,811.