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October 15, 2019

The Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

**Re: San Diego Gas & Electric Company's Annual Filing of Revised Costs and
Accruals for Post-Employment Benefits Other than Pensions,
Docket No. ER19-___**

Dear Ms. Bose:

Pursuant to Section 205 of the Federal Power Act,¹ Section 35.13 of the Federal Energy Regulatory Commission's ("FERC" or "Commission") regulations,² and San Diego Gas & Electric Company's ("SDG&E") Fifth Transmission Owner ("TO") Formula rate mechanism ("TO5" or "TO5 Formula"),³ SDG&E submits this "single-issue" Post-Employment Benefits Other than Pensions ("PBOP") filing ("Filing") to the Commission to recover the PBOP costs recorded in 2018.

This Filing updates SDG&E's change in PBOP expense contained in the TO5 Cycle 1⁴ to reflect the change in expense for 2018, which is the TO5 Cycle 2 Base Period.

¹ 16 U.S.C. § 824d.

² 18 C.F.R. § 35.13.

³ The TO5 Formula rate, filed on October 30, 2018, in docket ER19-221, is set for hearings. *See* ER19-221, *Order of Chief Judge Terminating Settlement Judge Procedures, Designating Presiding Administrative Law Judge, and Establishing Track III Procedural Time Standards* (July 10, 2019).

⁴ The term "Cycle" refers to the specific Information Filing (or annual filing) submitted under the TO5 Formula. The term "TO5 Cycle 1" refers to the first Informational Filing submitted in the TO5 Formula. The capitalized terms have the meaning ascribed to them in SDG&E's TO Tariff or in this Filing.

The proposed impact of the revised PBOP expense on the Base Transmission Revenue Requirements (“BTRR”) will be reflected in the TO5 Cycle 2 Formula Rate Informational Filing, which will be filed on or before December 1, 2019, to become effective January 1, 2020.

As discussed in greater detail below, SDG&E submits this filing for approval of its 2018 costs and accruals for PBOP, as recorded in FERC Uniform System of Accounts No. 926 (“Employee Pensions and Benefits”) (“Account No. 926”).

I. NATURE AND PURPOSE OF FILING

SDG&E is making this single-issue filing in accordance with Section D.1. of the TO5 Formula Rate Protocols, which provides:

If the expense levels for SDG&E’s Post-Employment Benefits Other than Pensions (“PBOP”), as recorded in FERC Account No. 926, Employee Pensions and Benefits, change from those expense levels contained in SDG&E’s TO5 Filing submitted in connection with SDG&E’s TO5 Formula rate tariff filing in Docket No. ER19-221, then:

- a. SDG&E may make a single-issue filing under Section 205 of the FPA, to recover such changed PBOP expense pursuant to the TO5 Formula; or
- b. Any person may exercise its rights under Section 206 of the FPA to request that the Commission direct SDG&E to reflect any changed PBOP expense pursuant to the TO5 Formula.
- c. SDG&E and/or any other person shall retain full rights to oppose such filings under the FPA and in accordance with the Commission’s Rules of Practice and Procedure.
- d. If there is a change from the PBOP expense levels contained in SDG&E’s TO5 Filing and SDG&E elects not to make a filing, SDG&E will provide notice of the change to the Service List as part of its Draft Informational Filing.

This PBOP treatment is consistent with earlier Commission orders requiring utilities that provide service under formulaic “cost of service” rates to file PBOP costs, accrual estimates and funding commitments for Commission review prior to including such amounts in the formula rates.⁵ The PBOP costs will be reflected in SDG&E’s TO5 Cycle 2 Informational Filing, which will be filed on or before December 1, 2019.

⁵ See *Boston Edison Co.*, 70 FERC ¶61,222 (1995); *Maine Yankee Atomic Power Co.*, 68 FERC ¶ 61,375, pp. 62,252-53, *Order on Clarification*, 68 FERC ¶ 61,190, pp. 61,958-59 (1994).

II. LIST OF DOCUMENTS SUBMITTED

This filing consists of the following documents:

1. Transmittal Letter;
2. Exhibit No. SDG-1 – Willis Towers Watson Actuarial Valuation Report Dated January 2019 for 2018 recorded PBOP costs;
3. Exhibit No. SDG-1-1 – “Section 1: Summary of Key Results – Benefit Cost, Assets, & Obligations” – (Excerpt from Exhibit No. SDG-1);
4. Exhibit No. SDG-2 – Derivation of 2018 Costs Used to Support the Annual FERC PBOP Costs for the TO5 Cycle 2 Informational Filing; and
5. Exhibit No. SDG-2-1 – Work papers for Exhibit SDG-2.

III. SDG&E’S 2018 PBOP FILING

The Willis Towers Watson annual Actuarial Report (“Report”) reflects the recorded PBOP costs for 2018 and is attached as Exhibit No. SDG-1. SDG&E’s total year-end PBOP expense per the actuarial valuation is \$1,640,805, as shown in Exhibit No. SDG-1-1, page 000057, under Employer Contributions.

Additionally, Exhibit No. SDG-2 demonstrates how PBOP costs are derived and assigned to SDG&E’s Electric Transmission Division. To illustrate, after adjusting for capitalized costs and billings to others, \$1,091,580 of PBOP costs are charged to Account No. 926 to support both Electric and Natural Gas operations. From this total, approximately \$802,420 gets allocated to the Electric Division, as shown on line 15. The \$802,420 then gets multiplied by the Transmission Wages and Salary ratio of 19.46% to derive the amount applicable to the Transmission function. This totals approximately \$156,151, as shown on line 19. Footnote 1 of work paper AH-2 in the TO5 Cycle 2 Informational Filing discloses both the expense amount specific to the Electric Division and the amount allocated to transmission service.

IV. REQUEST FOR WAIVER OF FILING AND NOTICE REQUIREMENTS

SDG&E submits this filing for the limited purpose of securing Commission approval of funded and projected PBOP costs. It does not propose, by this filing, to amend, supersede or, in any manner, change the provisions of SDG&E’s TO5 Formula. This filing does not in and of itself change, in any respect, SDG&E’s transmission rates. Given the limited scope of this filing, SDG&E does not believe Part 35 of the Commission’s regulations,⁶ including Section 35.13,⁷ is

⁶ 18 C.F.R. Part 35.

⁷ *Id.* at §35.13.

applicable to this filing. In the event the Commission disagrees, however, SDG&E respectfully requests waiver of such requirements and other relief as may be necessary.

V. COMMUNICATIONS

Correspondence and other communications concerning this filing should be addressed to the following individuals:

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SDG&E requests waiver of Rule 203(b)(3) of the Commission's Rules of Practice and Procedure,⁸ to the extent necessary to permit each of the individuals identified above to be placed on the Commission's official service list in this proceeding.

A copy of this letter has been served on all parties to Docket No. ER19-221. In addition, this letter and enclosures have been served on the CPUC and the CAISO.

⁸ 18 C.F.R. §385.203 (b)(3).

VI. CONCLUSION

SDG&E respectfully requests that the Commission review and approve the funded and projected PBOP costs reflected in this filing, consistent with the terms of SDG&E's TO5 Formula. SDG&E will include the approved 2018 PBOP costs in the TO5 Cycle 2 Informational Filing on or before December 1, 2019, to become effective January 1, 2020.

Respectfully submitted,

/s/ Ross R. Fulton

Ross R. Fulton

Attorney for

San Diego Gas & Electric Company

October 15, 2019

CERTIFICATE OF SERVICE

I hereby certify that I have this day served an electronic copy of the foregoing document upon each person designated on the official service list compiled by the Secretary in Docket No. ER19-221-000. In addition, I certify that I have also caused the foregoing to be served by overnight delivery upon the following:

Arocles Aguilar (via Overnight Mail)
General Counsel
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Anthony Ivancovich (via Overnight Mail)
Deputy General Counsel
California Independent System Operator Corporation
250 Outcropping Way
Folsom, CA 95630

Dated at San Diego, California, this 15th day of October, 2019.

/s/ Jenny Norin

Jenny Norin
8330 Century Park Court, CP32D
San Diego, CA 92123
(858) 654-1716

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San Diego Gas & Electric Company

Exhibit No. SDG-1

**Willis Towers Watson Actuarial
Valuation Report Dated January
2019 for 2018 recorded PBOP costs**



San Diego Gas & Electric Company (SDG&E)

Retiree Combined Group Health and Welfare Program

Actuarial Valuation Report
Postretirement Welfare Cost for Fiscal Year
Ending December 31, 2018
Employer Contributions for Plan Year
Beginning January 1, 2018

January 2019

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Purposes of valuation

Sempra Energy engaged Willis Towers Watson US LLC (“Willis Towers Watson”) to value the Company’s other postretirement benefit plan.

As requested by Sempra Energy (the Company), this report provides the following information for the SDG&E Retiree Combined Group Health and Welfare Program for U.S. employees of Sempra Energy (the Plan):

1. The value of benefit obligations as of January 1, 2018 and Net Periodic Postretirement Benefit Cost/(Income) (Benefit Cost), in accordance with FASB Accounting Standards Codification Topic 715 (ASC 715) for the fiscal year beginning January 1, 2018. It is anticipated that a separate report will be prepared for year-end financial reporting and disclosure purposes.
2. Plan reporting information in accordance with FASB Accounting Standards Codification Topic 965 (ASC 965).
3. Expected contributions under the plan sponsor’s funding policy for the 2018 plan year.
4. The estimated maximum tax-deductible contribution for the tax year in which the 2018 plan year ends as allowed by the Internal Revenue Code. The maximum tax deductible contribution should be finalized in consultation with Sempra Energy’s tax advisor.

Limitations

This valuation has been conducted for the purposes described above and may not be suitable for any other purpose. In particular, please note the following:

1. The expected contribution to the other postretirement benefits plan(s) has been set as described in this report. Note that any significant change in the amounts contributed or expected to be contributed in 2018 will require disclosure in the interim financial statements, but should not affect the expected return on plan assets absent a remeasurement for another purpose.
2. There may be certain events that have occurred since the valuation date that are not reflected in the current valuation. See Subsequent Events in the Basis for Valuation section below for more information.
3. This report does not determine liabilities on a plan termination basis, for which a separate extensive analysis would be required. No funded status measure included in this report is intended to assess, and none may be appropriate for assessing, the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligations, as all such measures differ in some way from plan termination obligations.

4. The comparisons of accounting obligations to assets presented in this report cannot be relied upon to determine the need for nor the amount of required future contributions to the plan. Nevertheless, such comparisons may be useful to assess the need for future contributions because they reflect current interest rates at the measurement date in determining benefit obligations. However, asset gains and losses, claims costs and demographic experience different from assumed, changes in interest rates and trend rates, future benefit accruals and other factors will all affect the need for and amount of future contributions. In addition, because this plan is not required by law to be funded, benefit payments may also be paid as they come due directly from employer assets.

Section 1: Summary of key results

Benefit cost, assets & obligations

All monetary amounts shown in US Dollars

Fiscal Year Beginning		01/01/2018	01/01/2017
Benefit Cost/ (Income)	Net Periodic Postretirement Benefit Cost/(Income)	(782,967)	4,913,778
	Immediate Recognition of Benefit Cost/(Income) due to Special Events ¹	2,541,947	0
	Total Benefit Cost/(Income)	1,758,980	4,913,778
Measurement Date		01/01/2018	01/01/2017
Plan Assets	Fair Value of Assets (FVA)	194,105,124	168,700,969
	Market-Related Value of Assets (MRVA)	194,105,124	168,700,969
Benefit Obligations	Accumulated Postretirement Benefit Obligation (APBO)	(182,067,722)	(191,340,813)
Funded Status	Funded Status	12,037,402	(22,639,844)
Accumulated Other Comprehensive (Income)/Loss	Net Prior Service Cost/(Credit)	7,303,083	11,068,114
	Net Loss/(Gain)	(56,656,965)	(25,821,336)
	Total Accumulated Other Comprehensive (Income)/Loss	(49,353,882)	(14,753,222)
Assumptions	Discount Rate	3.65%	4.15%
	Expected Long-term Rate of Return on Plan Assets ²	4.00%/7.00%	4.00%/7.00%
		<u>Pre-65</u> <u>Post-65</u>	<u>Pre-65</u> <u>Post-65</u>
	Current Health Care Cost Trend Rate	7.00% 5.00%	8.00% 5.50%
	Ultimate Health Care Cost Trend Rate	5.00% 4.50%	5.00% 4.50%
	Year of Ultimate Trend Rate	2022 2022	2022 2022
Participant Data	Census Date	January 1, 2018	January 1, 2017
Plan Reporting (ASC 965) for Plan Year Ending		12/31/2017	12/31/2016
	Present value of accumulated benefits	182,067,722	191,340,813
	Market value of assets	194,105,124	168,700,969
	Plan reporting discount rate	3.65%	4.15%
	Census Date	January 1, 2018	January 1, 2017

¹ A health reimbursement account in the amount of \$100,000 was offered to employees who accepted the 2018 Voluntary Retirement Enhancement Program window.

² Assumed pre-tax rate of 7.00% for the 401(h) trust and Union (post 7/1/2008) VEBA and post-tax rate of 4.00% for the Non-Union and Union (pre 7/1/2008) VEBAs.

Employer Contributions		Plan Year 2018	Plan Year 2017
Cash Flow¹	Funding policy trust contributions ²	1,758,980	3,403,400
	Maximum tax-deductible contributions		
	Pay-as-you-go (PAYG) ³	231,479	1,510,378
	Non-Union VEBA	1,074,157	1,025,157
	Union VEBA (pre 7/1/2008)	335,169	347,714
	Union VEBA (post 7/1/2008)	0	0
	401(h)	0	4,700,221
	Total	1,640,805	7,583,470
	Expected benefit payments and expenses net of participant contributions	9,277,493	10,250,651

¹ 401(h) is trust designated to pre-fund non-union retiree health benefits, union health benefits from 2018 onward for pre 7/1/2008 retirees and Non-Union VREP HRA benefits. The Union VEBA (post 7/1/2008) is designated to pre-fund union health benefits from 2018 onward for retirees on and after 7/1/2008 and HRA and Union VREP HRA benefits. The Non-Union VEBA is designated to pre-fund non-union life insurance benefits, until the trust is exhausted. The Union VEBA (pre 7/1/2008) is designated to pre-fund union health benefits through the end of 2017 and union life insurance benefits, until the trust is exhausted.

² Actual 2018 contributions were \$1,640,805, comprised of \$231,479 PAYGO and \$1,409,326 to trusts.

³ 2017 and 2018 are actual benefit payments made from Company assets as provided by Semptra.

Employer contributions

Employer contributions are the amounts paid by Sempra Energy to provide for postretirement benefits, net of participant contributions. Sempra Energy's funding policy is to contribute to the trusts an amount equal to the postretirement benefit cost less plan benefit costs paid directly by the Company (such as, benefits paid to key employees), not to exceed the maximum tax-deductible contributions. Sempra Energy maximizes its contribution to the 401(h) account and Union post 7/1/2008 VEBA, then contributes the remainder, if any, to the Non-Union VEBA and Union pre 7/1/2008 VEBA. Sempra Energy may deviate from this policy, as permitted by its terms, based on cash, tax or other considerations. The actual contributions made during Fiscal 2018 per the funding policy were \$1,640,805, which is comprised of \$1,409,326 to the trusts with the remainder of \$231,479 being benefits paid from Company assets.

Comments on results

The cost of the postretirement welfare plan is determined in accordance with generally accepted accounting principles in the U.S. ("U.S. GAAP"). The Fiscal 2018 postretirement welfare benefit cost for the plan is 1,758,980, which includes a one-time charge of \$2,541,947 for 2018 VREP (Voluntary Retirement Enhancement Program).

Under U.S. GAAP, the funded position (fair value of plan assets less the projected benefit obligation, or "APBO") of each postretirement welfare plan at the plan sponsor's fiscal year-end (measurement date) is required to be reported as a liability. The APBO is the actuarial present value of benefits attributed to service rendered prior to the measurement date, taking into consideration expected future pay increases for pay-related plans. The plan's overfunded (underfunded) APBO as of January 1, 2018 was \$12,037,402 based on the fair value of plan assets of \$194,105,124 and the APBO of \$(182,067,722).

Fiscal year-end financial reporting information and disclosures are prepared before detailed participant data and full valuation results are available. Therefore, the postretirement benefit asset (liability) at December 31, 2017 was derived from a roll forward of the January 1, 2017 valuation results, adjusted for the year-end assumptions, including discount rate, and asset values, as well as significant changes in plan provisions and participant population. The next fiscal year financial reporting information will be developed based on the results of the January 1, 2018 valuation, projected to the end of the year and similarly adjusted for the year-end assumptions, including discount rate, and asset values, as well as significant changes in plan provisions and participant population.

Change in net periodic cost and funded position

The postretirement welfare cost/(income) decreased from \$4,913,778 in Fiscal 2017 to \$1,758,980, including special termination charges of \$2,541,947, in Fiscal 2018 and the funded position improved from \$(22,639,844) on January 1, 2017 to \$12,037,402 on January 1, 2018.

Significant reasons for these changes include the following:

- Expected future claims costs as of January 1, 2018 are lower than those expected based on the January 1, 2017 valuation, which decreased the postretirement welfare cost and improved the funded position.
- The discount rate decreased 50 basis points as of January 1, 2018 compared to the prior year, which deteriorated the funded position. However, greater than expected return on fair value of plan assets offset the impact of the discount rate change. The net effect was to decrease the postretirement welfare cost and improve the funded position.
- Mortality assumption change decreased the postretirement welfare cost and improved the funded position.
- Assumed drawdown of \$1,000 for regular HRAs and \$5,000 for VREP HRAs based on the experience study conducted in 2017 decreased the postretirement welfare cost and improved the funded position.
- A health reimbursement account in the amount of \$100,000 was offered to employees who accepted the 2018 VREP offer. A special termination benefit cost in the amount of \$2,541,947 was recognized in the 2018 benefit cost to reflect this special event.

Effects of health care reform

In March 2010, the Patient Protection and Affordable Care Act (PPACA) and Health Care and Education Reconciliation Act (HCERA) were enacted. The key aspects of the Acts as amended by the Tax Cuts and Jobs Act affecting the Company's benefit obligation and cost of providing retiree medical benefits are:

- Changes to the Prescription Drug Plan and Medicare Advantage programs beginning in 2011, and extending through 2020
- Estimated excise ("Cadillac") tax on high-cost plans beginning in 2022

This valuation reflects our understanding of the relevant provisions of PPACA and HCERA, as amended by the Tax Cuts and Jobs Act, and including amendments made to the ACA in January 2018 to delay the excise tax effective date to 2022, suspend the medical device excise tax for 2018 and 2019, suspend the tax on health insurance issuers for 2019 and fund the Children's Health Insurance Program for six years. The IRS has yet to issue final guidance with respect to many aspects of these laws. It is possible that future guidance may conflict with our understanding of these laws based on

currently available guidance and could therefore affect the results shown in this report. The valuation does not anticipate the effects of any possible future changes to PPACA or HCERA.

Basis for valuation

Appendix A summarizes the assumptions and methods used in the valuation. Appendix B summarizes our understanding of the principal provisions of the plan being valued. The most recent plan change reflected in this valuation was effective in 2016 and first reflected in the valuation as of January 1, 2017. Unless otherwise described below under Subsequent Events, assumptions were selected based on information known as of the measurement date.

Changes in assumptions and actuarial methods

- Pre-retirement mortality was changed from the RP-2016¹ Employee table with MP-2016 generational projection scale to the RP-2017² Employee table with MP-2017 generational projection scale.
- Post-retirement mortality projection scale was changed from MP-2016 to MP-2017.
- The discount rate was updated from 4.15% to 3.65%.
- Healthcare claims assumptions were updated to reflect 2018 renewal rates, migration, and retiree cost shift factors.
- HRA/VREP usage was updated to assume drawdown of \$1,000 for regular HRAs and \$5,000 for VREP HRAs based on the experience study conducted in 2017.
- Interest credit on Health Reimbursement Accounts was updated from 2.86% to 2.80%.

Changes in estimation techniques

There have been no changes in estimation techniques.

Benefits not valued

All benefits described in the Plan Provisions section of this report were valued. Willis Towers Watson has reviewed the plan provisions with Sempra Energy and, based on that review, is not aware of any significant benefits required to be valued that were not.

Changes in benefits valued

There have been no changes in benefits valued.

¹ Where used in this report, "RP-2016" refers to the Society of Actuaries' RP-2014 mortality table, with mortality improvements stripped back to 2006 then projected using the MP-2016 generational mortality improvement scale.

² Where used in this report, "RP-2017" refers to the Society of Actuaries' RP-2014 mortality table, with mortality improvements stripped back to 2006 then projected using the MP-2017 generational mortality improvement scale.

Plan-to-plan transfers

During 2017 the benefit obligation transferred due to business-as-usual transfers was less than 1% of the plan's benefit obligations. Consistent with Sempra's past practices, no outstanding amortization bases were transferred. In connection with these transfers, as well as transfers into this plan, Sempra is transferring assets between the plans. The amount of assets transferred is based on the funded status of the transferring plan as of December 31, 2017.

Special events

In 2018, a health reimbursement account in the amount of \$100,000 was offered to employees who accepted the 2018 VREP window.

Subsequent events

To our knowledge, no other material events occurred after the valuation.

Additional information

To our knowledge, there were no material issues (e.g. settlements, curtailments, plan mergers, acquisitions, divestitures UCEBs) to be reflected in this valuation other than those described in the Special events section above.

Actuarial certification

This valuation has been conducted in accordance with generally accepted actuarial principles and practices. However, please note the information discussed below regarding this valuation.

Reliances

In preparing the results presented in this report, we have relied upon information regarding plan provisions, participants, assets, and sponsor accounting policies and methods provided by the Company and other persons or organizations designated by the Company. See the Sources of Data and Other Information section of Appendix A for further details. We have relied on all the data and information provided as complete and accurate. We have reviewed this information for overall reasonableness and consistency, but have neither audited nor independently verified this information. Based on discussions with and concurrence by the plan sponsor, assumptions or estimates may have been made if data were not available. We are not aware of any errors or omissions in the data that would have a significant effect on the results of our calculations. We have relied on all the information provided as complete and accurate. The results presented in this report are directly dependent upon the accuracy and completeness of the underlying data and information. Any material inaccuracy in the data, assets, plan provisions or other information provided to us may have produced results that are not suitable for the purposes of this report and such inaccuracies, as corrected by the Company, may produce materially different results that could require that a revised report be issued.

Measurement of benefit obligations, plan assets and balance sheet adjustments

Census date/measurement date

The measurement date is January 1, 2018. The benefit obligations were measured as of January 1, 2018 and are based on participant data as of the census date, January 1, 2018.

Plan assets and balance sheet adjustments

Information about the fair value of plan assets was furnished to us by the Company. The Company also provided information about the general ledger account balances for the other postretirement benefit plan cost at December 31, 2017, which reflect the expected funded status of the plans before adjustment to reflect the funded status based on the year-end measurements. Willis Towers Watson used information supplied by the Company regarding postretirement benefit asset, postretirement benefit liability and amounts recognized in accumulated other comprehensive income as of December 31, 2017. This data was reviewed for reasonableness and consistency, but no audit was performed.

Accumulated other comprehensive (income)/loss amounts shown in the report are shown prior to adjustment for tax effects. Any tax effects in AOCI should be determined in consultation with the Company's tax advisors and auditors.

Plan contributions are assumed to be pre-tax because the plan sponsor's funding policy is to only contribute up to the maximum tax deductible limit. Plan benefits have been adjusted for excise tax as described in the additional assumptions section of this report. The expected return on assets, as shown in this report, has been adjusted to reflect tax effect on taxable trusts.

Assumptions and methods under U.S. GAAP

As required by U.S. GAAP, the actuarial assumptions and methods employed in the development of the other postretirement benefit cost and other financial reporting have been selected by the Company. Willis Towers Watson has concurred with these assumptions and methods. U.S. GAAP requires that each significant assumption "individually represent the best estimate of a particular future event."

The results shown in this report have been developed based on actuarial assumptions that, to the extent evaluated by Willis Towers Watson, we consider to be reasonable. Other actuarial assumptions could also be considered to be reasonable. Thus, reasonable results differing from those presented in this report could have been developed by selecting different reasonable assumptions.

A summary of the assumptions and methods used is provided in Appendix A. Note that any subsequent changes in methods or assumptions for the January 1, 2018 measurement date will change the results shown in this report.

Nature of actuarial calculations

The results shown in this report are estimates based on data that may be imperfect and on assumptions about future events that cannot be predicted with any certainty. The effects of certain plan provisions may be approximated, or determined to be insignificant and therefore not valued. Reasonable efforts were made in preparing this valuation to confirm that items that are significant in the context of the actuarial liabilities or costs are treated appropriately, and are not excluded or included inappropriately. Any rounding (or lack thereof) used for displaying numbers in this report is not intended to imply a degree of precision, which is not a characteristic of actuarial calculations.

If overall future plan experience produces higher benefit payments or lower investment returns than assumed, the relative level of plan costs reported in this valuation will likely increase in future valuations (and vice versa). Future actuarial measurements may differ significantly from the current measurements presented in this report due to many factors, including: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for the measurements (such as the end of an amortization period), and changes in plan

provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements. Retiree group benefits models necessarily rely on the use of approximations and estimates, and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements.

See Basis for Valuation in Section 1 above for a discussion of any material events that have occurred after the valuation date that are not reflected in this valuation.

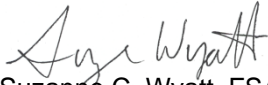
Limitations on use

This report is provided subject to the terms set out herein and in our engagement letter dated December 14, 2015 and any accompanying or referenced terms and conditions.

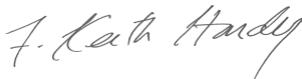
The information contained in this report was prepared for the internal use of the Company and its auditors in connection with our actuarial valuation of the other postretirement benefit plans as described in Purposes of Valuation above. It is not intended for and may not be used for other purposes, and we accept no responsibility or liability in this regard. The Company may distribute this actuarial valuation report to the appropriate authorities who have the legal right to require the Company to provide them this report, in which case the Company will use best efforts to notify Willis Towers Watson in advance of this distribution. Further distribution to, or use by, other parties of all or part of this report is expressly prohibited without Willis Towers Watson's prior written consent. Willis Towers Watson accepts no responsibility for any consequences arising from any other party relying on this report or any advice relating to its contents.

Professional qualifications

The undersigned are members of the Society of Actuaries and meet the "Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States" relating to other postretirement benefit plans. Our objectivity is not impaired by any relationship between the plan sponsor and our employer, Willis Towers Watson US LLC ("Willis Towers Watson").



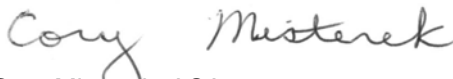
Suzanne C. Wyatt, FSA, EA, FCA



Keith Handley, FSA, EA



Kristen Tanaka, FSA
Pricing Specialist



Cory Misterek, ASA
Pricing Specialist

The Pricing Specialist is responsible for developing and/or determining the reasonableness of retiree welfare plan trend and participation assumptions as well as assumed per capita claims costs (including the aging/morbidity assumption if applicable). The Valuation Actuary is responsible for other aspects of the valuation (e.g., developing and/or reviewing the reasonableness of other valuation assumptions and methods, ensuring that the valuation model reasonably reflects the substantive plan and actual plan operation, preparing demographic data, performing the valuation, implementing the correct accounting or funding calculations, etc.).

<http://natct.internal.towerswatson.com/clients/602948/2018SempraAnnualWork/PBOP/Sempra 2018 PBOP Valuation Report SDGE - FINAL.docx>

Section 2: Accounting exhibits

2.1 Balance sheet asset/(liability)

All monetary amounts shown in US Dollars

Measurement Date	01/01/2018	01/01/2017
A Development of Balance Sheet Asset/(Liability)¹		
1 Accumulated postretirement benefit obligation (APBO)	(182,067,722)	(191,340,813)
2 Fair value of assets (FVA) ²	194,105,124	168,700,969
3 Net balance sheet asset/(liability)	12,037,402	(22,639,844)
B Current and Noncurrent Allocation³		
1 Noncurrent asset	12,037,402	0
2 Current liability	0	0
3 Noncurrent liability	0	(22,639,844)
4 Net balance sheet asset/(liability)	12,037,402	(22,639,844)
C Accumulated Other Comprehensive (Income)/Loss		
1 Net prior service cost/(credit)	7,303,083	11,068,114
2 Net loss/(gain)	(56,656,965)	(25,821,336)
3 Accumulated other comprehensive (income)/loss ⁴	(49,353,882)	(14,753,222)
D Assumptions and Dates		
1 Discount rate	3.65%	4.15%
2 Rate of compensation increase	N/A	N/A
3 Current health care cost trend rate (pre-65)	7.00%	8.00%
Current health care trend rate (post-65)	5.00%	5.50%
4 Ultimate health care cost trend rate (pre-65)	5.00%	5.00%
Ultimate health care cost trend rate (post-65)	4.50%	4.50%
5 Year of ultimate trend rate	2022	2022
6 Census date	January 1, 2018	January 1, 2017

¹ Whether the amounts in this table that differ from those disclosed at year-end must be disclosed in subsequent interim financial statements should be determined.

² Excludes receivable contributions.

³ The current liability (for each underfunded plan) was measured as the benefits expected to be paid over the next 12 months in excess of the fair value of the plan's assets at the measurement date.

⁴ Amount shown is pre-tax and should be adjusted by plan sponsor for tax effects.

2.2 Changes in disclosed liabilities and assets

All monetary amounts shown in US Dollars

Fiscal Year Beginning	01/01/2018	01/01/2017
A Change in Accumulated Postretirement Benefit Obligation (APBO)		
1 APBO at beginning of prior fiscal year	191,340,813	162,708,358
2 Employer service cost	4,981,459	4,664,496
3 Interest cost	7,936,835	7,361,895
4 Actuarial loss/(gain)	(12,320,358)	10,564,650
5 Plan participants' contributions	7,333,761	6,950,189
6 Gross benefits paid from assets	(14,890,975)	(14,011,441)
7 Gross benefits paid by the Company	(1,510,378)	(417,433)
8 Plan-to-plan transfers between SDG&E and SoCalGas	(18,133)	(24,313)
9 Plan-to-plan transfers between SDG&E and Sempra	(785,302)	(95,740)
10 Plan change	0	0
11 Acquisitions/(divestitures)	0	0
12 Curtailments	0	0
13 Special/contractual termination benefits	0	13,640,125
14 APBO at beginning of current fiscal year	182,067,722	191,340,813
B Change in Plan Assets		
1 Fair value of assets at beginning of prior fiscal year	168,700,969	160,966,879
2 Actual return on assets	30,373,999	12,988,934
3 Employer contributions	4,990,364	2,356,519
4 Plan participants' contributions	0	0
5 Benefits paid ¹	(9,067,592)	(7,478,685)
6 Plan-to-plan transfers between SDG&E and SoCalGas	23,720	(2,071)
7 Plan-to-plan transfers between SDG&E and Sempra	(916,336)	(130,607)
8 Acquisitions/(divestitures)	0	0
9 Settlements	0	0
10 Fair value of assets at beginning of current fiscal year	194,105,124	168,700,969

¹ Net of retiree contributions

2.3 Summary of net balances

A reconciliation of net prior service cost/(credit)

All monetary amounts shown in US Dollars

	Remaining Amount at 01/01/2017	Plan Amendment	Amount Amortized during 2017	Effect of Curtailments	Effect of Transfers	Remaining Amount at 01/01/2018	Remaining Amortization Period	Amount to be Amortized in 2018
Base 1	\$ 8,706,848	\$ 0	\$ 3,213,555	\$ 0	0	\$ 5,493,293	1.7	\$ 3,213,555
Base 2	99,355	0	20,374	0	0	78,981	3.9	20,374
Base 3	339,170	0	226,783	0	0	112,387	1.0	112,387
Base 4	493,135	0	89,941	0	0	403,194	4.5	89,941
Base 5	9,249	0	1,968	0	0	7,281	3.7	1,968
Base 6	427,766	0	58,073	0	0	369,693	6.4	58,073
Base 7	3,844	0	645	0	0	3,199	5.0	645
Base 8	802,793	0	139,132	0	0	663,661	4.8	139,132
Base 9	(6,917)	0	(3,762)	0	0	(3,155)	1.0	(3,155)
Base 10	192,871	0	18,322	0	0	174,549	9.5	18,322
Total	\$ 11,068,114	\$ 0	\$ 3,765,031	\$ 0	\$ 0	\$ 7,303,083		\$ 3,651,242

B Reconciliation of Net Loss/(Gain)¹

All monetary amounts shown in US Dollars

	Remaining Amount at 01/01/2017	Experience Loss/(Gain) during 2017	Amount Amortized during 2017	Effect of Curtailments/Settlements	Effect of Transfers	Remaining Amount at 01/01/2018	Amount to be Amortized in 2018
	\$ (25,821,336)	\$ (31,262,879)	\$ (427,250)	\$ 0	\$ 0	\$ (56,656,965)	\$ (2,414,394)

¹ See Appendix A for description of amortization method.

2.4 Summary and comparison of benefit cost and cash flows

All monetary amounts shown in US Dollars

Fiscal Year Ending	12/31/2018	12/31/2017
A Total Benefit Cost		
1 Employer service cost	4,470,391	4,981,459
2 Interest cost	6,686,102	7,936,835
3 Expected return on assets ¹	(13,176,308)	(11,342,297)
4 Subtotal	(2,019,815)	1,575,997
5 Net prior service cost/(credit) amortization	3,651,242	3,765,031
6 Net loss/(gain) amortization	(2,414,394)	(427,250)
7 Subtotal	1,236,848	3,337,781
8 Net periodic postretirement benefit cost/(income)	(782,967)	4,913,778
9 Immediate recognition of benefit cost/(income) due to special events	2,541,947	0
10 Total benefit cost	1,758,980	4,913,778
B Assumptions²		
1 Discount rate	3.65%	4.15%
2 Rate of return on assets ³	4.00%/7.00%	4.00%/7.00%
3 Current health care cost trend rate (pre-65)	7.00%	8.00%
Current health care cost trend rate (post-65)	5.00%	5.50%
4 Ultimate health care cost trend rate (pre-65)	5.00%	5.00%
Ultimate health care cost trend rate (post-65)	4.50%	4.50%
5 Year of ultimate trend rate	2022	2022
6 Census date	January 1, 2018	January 1, 2017
C Assets at Beginning of Year		
1 Fair market value	194,105,124	168,700,969
2 Market-related value	194,105,124	168,700,969
D Cash Flow⁴	2018	2017
1 Employer contributions ¹	1,640,805	4,990,364
2 Benefits paid by the Employer	231,479	1,510,378
3 Benefits paid from plan assets, net of participant contributions	12,818,753	9,067,592
4 Expected benefit payments and expenses net of participant contributions	9,277,493	10,250,651

¹ Cost calculations assumes trust contributions are made at year-end.

² These assumptions were used to calculate Net Periodic Postretirement Benefit Cost/(Income) as of the beginning of the year. Rates are expressed on an annual basis where applicable. For assumptions used for interim measurement periods, if any, refer to Appendix A.

³ Assumed pre-tax rate of 7.00% for the 401(h) trust and Union (post 7/1/2008) VEBA and post-tax rate of 4.00% for the Non-Union and Union (pre 7/1/2008) VEBAs.

⁴ Net of Medicare Part D subsidy.

2.5 Detailed results for postretirement welfare cost and funded position

All monetary amounts shown in US Dollars

Detailed Results	01/01/2018	01/01/2017
A Service Cost		
1 Medical and dental	4,180,266	4,737,192
2 Life insurance	290,125	244,267
3 Total	4,470,391	4,981,459
B Accumulated Postretirement Benefit Obligation (APBO)		
1 Medical and dental		
a Participants currently receiving benefits	78,042,731	81,526,963
b Fully eligible active participants	34,887,523	34,797,882
c Other participants	52,913,705	60,962,419
d Total	165,843,959	177,287,264
2 Life insurance		
a Participants currently receiving benefits	8,401,550	7,345,855
b Fully eligible active participants	4,123,349	3,419,555
c Other participants	3,698,864	3,288,139
d Total	16,223,763	14,053,549
3 All benefits		
a Participants currently receiving benefits	86,444,281	88,872,818
b Fully eligible active participants	39,010,872	38,217,437
c Other participants	56,612,569	64,250,558
d Total	182,067,722	191,340,813
C Assets		
1 Fair value	194,105,124	168,700,969
2 Investment losses (gains) not yet in market-related value	0	0
3 Market-related value	194,105,124	168,700,969
D Funded Position		
1 Overfunded (underfunded) APBO	12,037,402	(22,639,844)
2 APBO funded percentage	106.6%	88.2%
E Amounts in Accumulated Other Comprehensive Income		
1 Prior service cost (credit)	7,303,083	11,068,114
2 Net actuarial loss (gain)	(56,656,965)	(25,821,336)
3 Total	(49,353,882)	(14,753,222)
F Effect of Change in Health Care Cost Trend Rate		
1 One-percentage-point increase:		
a Sum of service cost and interest cost	357,560	601,329
b APBO	2,935,742	5,247,781
2 One-percentage-point decrease:		
a Sum of service cost and interest cost	(294,255)	(499,884)
b APBO	(2,499,065)	(4,569,233)

2.6 ASC 965 (plan reporting) information

All monetary amounts shown in US Dollars

Plan Year Ending **12/31/2017**

A Present Value of Benefit Obligation and Funded Status

1 Present value of benefit obligations	
a Participants currently receiving benefits	86,444,281
b Other fully eligible participants	39,010,872
c Other participants	56,612,569
d Total	182,067,722
2 Fair value of assets	194,105,124

B Changes in Benefit Obligations

1 At prior plan year end	191,340,813
2 Additional benefits accumulated including effects of noninvestment experience	576,958
3 Decrease in the discount period	7,754,404
4 Benefits paid, net of employee contributions	(9,067,592)
5 Assumption changes	(7,733,426)
6 Plan amendments	0
7 Plan-to-plan transfers between SDG&E and SoCalGas	(18,133)
8 Plan-to-plan transfers between SDG&E and Sempra	(785,302)
9 Benefit cost/(income) due to special events	0
10 At current plan year end	182,067,722

See postretirement cost sharing provisions in Appendix B for retirees' relative share of the plan's estimated cost of providing postretirement benefits.

Actuarial Assumptions and Methods

The key actuarial assumptions used for plan reporting calculations as of December 31, 2017 are the same as those used to measure benefit obligations for Sempra Energy's December 31, 2017 financial reporting, refer to Appendix A. The same plan provisions shown in Appendix B were used to determine the present value of accumulated benefits.

2.7 Maximum deductible employer contributions

All monetary amounts shown in US Dollars

Non-Union 401(h) ¹		01/01/2018
A Section 401(h) Deduction Limit – Aggregate Normal Cost – Preliminary		
1	Present Value of Projected Benefits (PVB) excluding key employees	106,025,700
2	Market value of assets	129,715,602
3	Present value of future normal costs: [(1)-(2)]	0
4	Present value future service	23,591
5	Normal cost accrual rate: [(3)-(4)]	0
6	Number of employees, excluding key employees	2,877
7	Aggregate normal cost BOY: [(5)x(6)]	0
8	Aggregate normal cost with interest to the end of the fiscal year: [(7) x 1.065]	0
9	10% of PVB as of the end of the fiscal year	10,544,893
10	Greater of 10% of PVB or normal cost, but not greater than the end of year unfunded PVB	0
B Section 401(h) Subordination Test – Preliminary²		
1	Cumulative subordination limit	90,126,908
2	Cumulative 401(h) contributions through prior year	73,608,847
3	Maximum employer contribution to satisfy subordination test	16,518,061
C 401(h) Funding Discount Rate		6.50%
D Maximum Employer Contribution – Preliminary		
1	Amount – lesser of IRC Section 401(h) Deduction Limit and Subordination Test	0

¹ 401(h) is trust designated to pre-fund non-union retiree health benefits, union health benefits from 2018 onward for pre 7/1/2008 retirees and Non-Union VREP HRA benefits. The Union VEBA (post 7/1/2008) is designated to pre-fund union health benefits from 2018 onward for retirees on and after 7/1/2008 and HRA and Union VREP HRA benefits. The Non-Union VEBA is designated to pre-fund non-union life insurance benefits, until the trust is exhausted. The Union VEBA (pre 7/1/2008) is designated to pre-fund union health benefits through the end of 2017 and union life insurance benefits, until the trust is exhausted.

² Consists of cumulative subordination limit as of the end of the 2017 plan year, plus one third of the lesser of 2018 pension plan target normal cost, including load for administrative expenses, and actual pension contributions for the 2018 plan year. To be provided with final version of report. Final amounts will reflect plan-to-plan transfers adjusted based on 2018 pension results.

Exhibit No. SDG-1

All monetary amounts shown in US Dollars

VEBAs ¹	Non-Union	Union prior to 7/1/2008
A Present Value of Projected Benefits (PVB) Excluding Key Employees	12,957,258	4,250,324
B Actuarial Value of Plan Assets	2,872,745	951,828
C Present Value of Future Normal Costs: [(A)-(B)]	10,084,513	3,298,496
D Present Value of Future Service	28,125	12,845
E Normal Cost Accrual Rate: [(C)÷(D)]	359	257
F Number of Employees, Excluding Key Employees	2,877	1,254
G Aggregate Normal Cost BOY: [(E)×(F)]	1,032,843	322,278
H VEBA Funding Discount Rate	4.00%	4.00%
I Maximum Deductible VEBA Contribution EOY: [(G)×(1+H)]	1,074,157	335,169

VEBAs ¹	Union post 7/1/2008
A Present Value of Projected Benefits (PVB) Excluding Key Employees - Preliminary	36,765,780
B Market Value of Plan Assets	60,562,931
C Unfunded PVB – Maximum Tax Deductible Contribution: [(A)-(B)]	0
D VEBA Funding Discount Rate	6.50%

¹ 401(h) is trust designated to pre-fund non-union retiree health benefits, union health benefits from 2018 onward for pre 7/1/2008 retirees and non-union VREP HRA benefits. The Union VEBA (post 7/1/2008) is designated to pre-fund union health benefits from 2018 onward for retirees on and after 7/1/2008 and HRA and union VREP HRA benefits. The Non-Union VEBA is designated to pre-fund non-union life insurance benefits, until the trust is exhausted. The Union VEBA (pre 7/1/2008) is designated to pre-fund union health benefits through the end of 2017 and union life insurance benefits, until the trust is exhausted.

Section 3: Data exhibits

3.1 Plan participant data

Census Date		01/01/2018		
		Represented	Non-Represented	Total
A Participating Employees				
1	Number			
a	Fully eligible	168	693	861
b	Other	1,086	2,197	3,283
c	Total participating employees	1,254	2,890	4,144
2	Average age	46.0	46.7	46.5
3	Average credited service	17.3	13.4	14.6
4	Average future working life			
a	to full retirement age	15.9	15.2	15.4
b	to full eligibility age	14.9	11.9	13.0
B Retirees and Surviving Spouses				
1	Retirees and surviving spouses			
a	Number under 65	102	396	498
b	Number 65 and older	456	1,140	1,596
c	Total	558	1,536	2,094
d	Average age	73.2	70.8	71.5
e	Number with married/family health care coverage	220	570	790
f	Number with single health care coverage	224	560	784
g	Number with life insurance	277	1,185	1,462

Employee data was supplied by the employer as of the census date. Data on persons receiving benefits was supplied by the plan administrator.

Census Date		01/01/2017		
		Represented	Non-Represented	Total
A Participating Employees				
1	Number			
a	Fully eligible	163	646	809
b	Other	1,103	2,301	3,404
c	Total participating employees	1,266	2,947	4,213
3	Average age	46.2	46.2	46.2
4	Average credited service	17.8	13.0	14.4
5	Average future working life			
a	to full retirement age	15.8	15.6	15.7
b	to full eligibility age	14.7	11.9	12.9
B Retirees and Surviving Spouses				
1	Retirees and surviving spouses			
a	Number under 65	87	435	522
b	Number 65 and older	439	1,086	1,525
c	Total	526	1,521	2,047
d	Average age	73.7	70.5	71.3
e	Number with married/family health care coverage	218	579	797
f	Number with single health care coverage	219	560	779
g	Number with life insurance	240	1,142	1,382

Employee data was supplied by the employer as of the census date. Data on persons receiving benefits was supplied by the plan administrator.

3.2 Age and service distribution of participating employees

Attained Age	Attained Years of Credited Service and Number							Total	
	0-4	5-9	10-14	15-19	20-24	25-29	30-34		Over 34
Under 25	56	1	0	0	0	0	0	0	57
25-29	164	47	5	0	0	0	0	0	216
30-34	186	153	145	4	0	0	0	0	488
35-39	135	131	254	85	4	0	0	0	609
40-44	87	98	190	173	18	0	0	0	566
45-49	63	89	137	152	43	24	0	0	508
50-54	49	55	123	136	55	60	38	2	518
55-59	31	71	96	132	62	65	65	121	643
60-64	15	36	52	55	30	31	35	157	411
65-69	5	8	15	14	8	8	6	43	107
70 & over	0	2	1	3	4	1	0	10	21
Total	791	691	1,018	754	224	189	144	333	4,144
Average Age:	46.5	Number of Participants:							861
Average Service:	14.6	Fully eligible							3,283
		Other							

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Appendix A: Statement of actuarial assumptions, methods and data sources

Actuarial Assumptions and Methods – Other Postretirement Benefit Cost for Fiscal 2018 Plan Reporting Based on Calendar Year

Economic Assumptions

Discount rate for post-retirement benefit cost	3.65% as of 1/1/2018
Discount rate for 2018 VREP special termination cost	4.30% as of 7/31/2018
Discount rate for 401(h) and Union VEBA (post 7/1/2008) funding	6.50%
Discount rate for Non-Union VEBA and Union VEBA (pre 7/1/2008) funding	4.00%
Expected long-term rate of return on plan assets (before-tax)	7.00%
Expected long-term rate of return on plan assets (after-tax)	4.00%

The expected long-term rate of return on plan assets assumption is used for ASC 715 accounting and is net of expenses paid from the trust. Insurance carriers' administrative expenses are accounted for by including them in the fully insured premiums, premium equivalents and per capita claims costs. The funding discount rate has not been adjusted to reflect administrative expenses paid from the trust.

Healthcare reimbursement account interest crediting rate 2.80%

Salary increase rate

Age	Rate
Below 25	10.00%
25-29	8.50%
30-34	6.50%
35-39	5.50%
40-44	5.00%
45-49	4.50%
Above 49	3.50%

Participation Assumptions

Inclusion date	The valuation date coincident with or next following the date on which the employee is hired (excludes employees not yet eligible for active healthcare coverage).
New or rehired employees	It was assumed there will be no new or rehired employees.

	Current Retirees	Future Retirees	
Participation:	Based on valuation census data	Percentages of eligible individuals electing coverage:	
		Pre-65	Post-65
<ul style="list-style-type: none"> ■ Medical/dental ■ Life insurance ■ Former employees other than retirees 		80%	70%
		100%	100%
	Not eligible for postretirement welfare benefits		

	Current Retirees	Future Retirees
Percentage of covered retirees electing spousal coverage (medical/dental)	Based on valuation census data	80% of males, 50% of females
Spouse ages	Based on valuation census data	Wife three years younger than husband
Non-spouse dependent coverage	None assumed	0% of participants are assumed to elect coverage for non-spouse dependents in retirement.
Medical plan elections	Assumption for current actives and pre-65 retirees regarding their medical plan election upon attainment of age 65 and forward.	

	Current Pre-65 Medical Plan	Assumed Post-65 Medical Plan
	Anthem Select HMO	A blended assumption of 15% UHC Medicare Advantage HMO, 65% UHC Medicare Advantage PPO #2 and 20% UHC Medicare Advantage PPO #1
	Anthem Select Plus HMO	
	Anthem PPO Out of CA (OOA)	
	Anthem Health Care Plus+	
	Kaiser HMO	

Demographic Assumptions

Mortality

Pre-retirement	<p>Base Mortality Table (Male Table used for males; Female Table used for females)</p> <ol style="list-style-type: none"> 1. Base table: RP-2014 Employee table adjusted backward to 2006 with MP-2014 and projected forward to 2017 using MP-2017 2. Base mortality table year: 2017 3. Table type: No Collar 4. Healthy or Disabled: Healthy 5. Table weighting: Benefit <p>Mortality Improvement Scale (Male Table used for males; Female Table used for females)</p>
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1. Base scale: MP-2017
2. Projection Type: "Generational"
3. Adjustment: Unadjusted

Post-retirement

Base Mortality Table (Male Table used for males; Female Table used for females)

1. Base table: RP-2014 Healthy Annuitant table adjusted backward to 2006 with MP-2014 and projected forward to 2011 using MP-2015, blended with Sempra pension retiree experience for 2009 – 2013
2. Base mortality table year: 2011
3. Table type: No Collar
4. Healthy or Disabled: Healthy
5. Table weighting: Benefit
6. Other: Blending of Sempra experience in item 1 resulted in a 4.64% increase in mortality rates based on an 80% credibility factor

Mortality Improvement Scale (Male Table used for males; Female Table used for females)

1. Base scale: MP-2017
2. Projection Type: "Generational"
3. Adjustment: Unadjusted

Disability rates

10% of the 1987 Commissioner's Group Disability Table with 12 month elimination period. Participants on disability are assumed to retire at age 65. Sample rates per 1,000:

Age	Males	Females
25	0.0593	0.0978
40	0.1594	0.3347
55	1.0100	0.9510

Termination (not due to disability or retirement) rates

Based on years of service. Rate leaving during the year per 1,000:

Years of Service	Rate
0-2	70
3-4	95
5	65
6-8	35
9-17	20
18-19	10
20 and over	0

Retirement

The following rates apply for:

- Participants with grandfathered SoCal benefits – with 20 years of service as of January 1, 2007 – who are expected to have 90 points prior to age 62. Rates shown are for decrement prior to age 62, on or after age 62 are the same as rate table (3) below. Rate retiring during the year per 1,000:

Points ¹	Rate
Below 90	50
90-91	200
Above 91	170

- Other participants with grandfathered SoCal or SDG&E benefits with 20 years of service as of January 1, 2007. Rate retiring during the year per 1,000:

Age	Rate
55-59	50
60-61	150
62	300
63	250
64-65	300
66-67	350
68-69	400
Above 69	1,000

- All other participants. Rate retiring during the year per 1,000:

Age	Rate
55-59	30
60-61	100
62-64	200
65	300
66-69	250
Above 69	1,000

Benefit commencement dates:

Preretirement death benefit	None
Deferred vested benefit	None
Retirement benefit	Upon termination of employment

Trend Rates

Basis for trend assumptions Best estimate assumptions developed based on a review of recent and expected future claims experience.

¹ Points are equal to age plus service

Health care cost trend rate:

Medical Benefits

	Under Age 65	Age 65 and Over
2018	7.00%	5.00%
2019	6.50%	4.75%
2020	6.00%	4.75%
2021	5.50%	4.75%
2022 onwards	5.00%	4.50%

Employer cap (fixed employer contribution) 0%

Dental benefit trend rate:

Employer cap (fixed employer contribution) 0%

All other dental benefits 4.00% for Indemnity Dental (Delta) and 4.00% for MetLife Dental

Participant Contribution Trend Rates**Medical costs**

Same as applicable medical plan trend rates for participants not subject to the employer cap. For others, retiree contributions will increase the same as applicable health care plan trend rates while premium costs are under the defined dollar employer cap, and will increase dollar for dollar with the premium after the defined dollar cap is reached.

Dental costs

All participants are subject to the employer cap.

Per Capita Claims Costs**Basis for per capita claim cost assumptions**

The claim costs are developed based on participant demographics and the 2018 calendar year premiums or premium equivalents for the respective medical plans.

See Appendix C for more details.

Additional Assumptions**Administrative expenses**

Included in fully insured premiums, premium equivalents for self-insured and per capita claims costs.

Excise tax

For participants eligible for a defined dollar benefit: Once the premium exceeds the defined dollar benefit amount, the retirees will pay the difference between the premium amount and the defined dollar benefit. Under this arrangement, Sempra's obligation doesn't change with the excise tax since by 2022 the premium both before and after inclusion of the excise tax will exceed Sempra's defined dollar benefit and the retiree will pay the entire cost of the tax.

There are very few participants who are not subject to the defined dollar benefit. Therefore, no excise tax has been valued for them.

Healthcare Reimbursement Account (HRA)/VREP usage	Retirees are assumed to apply for and be reimbursed for a flat dollar assumed drawdown of \$1,000 for regular HRAs and \$5,000 for VREP HRAs using their HRA until the account is exhausted. Unused balances are forfeited upon death of the covered retiree and spouse.
Funding policy	Sempra's funding policy is to contribute an amount equal to the postretirement welfare cost, not to exceed the maximum tax-deductible limit. Sempra maximizes its contribution to the §401(h) account and contributes the remainder to the VEBA. The sponsor may deviate from this policy, as permitted by its terms, based on cash, tax or other considerations.
Cash flow:	
Timing of benefit payments	Benefit payments are assumed to be made uniformly throughout the year and on average at mid-year.
Amount and timing of contributions	Contributions in accordance with Sempra's funding policy are assumed to be made throughout the year and, on average, at mid-year.

Methods – Postretirement Welfare Cost and Funded Position

Census date	January 1, 2018
Measurement date	January 1, 2018
Service cost and accumulated postretirement benefit obligation	<p>Costs are determined using the Projected Unit Credit Cost Method. The annual service cost is equal to the present value of the portion of the projected benefit attributable to service during the upcoming year, and the Accumulated Postretirement Benefit Obligation (APBO) is equal to the present value of the portion of the projected benefit attributable to service before the measurement date. Service from hire date through the expected full eligibility date is counted in allocating costs. Costs are allocated prorata over the service period described above.</p> <p>APBO is measured by determining a portfolio of bonds, using the December 31, 2017 Willis Towers Watson BOND:Link model, that will provide the cash flows necessary to satisfy the projected benefit payments underlying the APBO determined using the methodology described above, and determining the market value of that portfolio. A single discount rate that will equate the present value of those benefit payments to the market value of the bond portfolio is determined. Service cost is determined by discounting the projected benefit payments underlying service cost, determined using the methodology described above, by the same discount rate determined above for the APBO. Interest cost is measured by applying the discount rate to the APBO and service cost.</p>
Market-related value of assets	Equals fair value of assets.

Amortization of unamortized amounts:

Prior service cost (credit)	Increase in APBO resulting from a plan amendment is amortized on a straight-line basis over the average expected remaining service of active participants expected to benefit under the plan. Amortization of net prior service cost/(credit) resulting from a plan change is included as a component of Net Periodic Postretirement Benefit Cost/(Income) in the year first recognized and every year thereafter until such time as it is fully amortized. The annual amortization payment is determined in the first year as the increase in APBO due to the plan change divided by the average remaining service period to full eligibility for participating employees expected to receive benefits under the Plan. Reductions in APBO first reduce any unrecognized prior service cost; any remaining amount is amortized on a straight-line basis as described above.
Net loss (gain)	Amortization of the net gain or loss resulting from experience different from that assumed and from changes in assumptions (excluding asset gains and losses not yet reflected in market-related value) is included as a component of Net Periodic Postretirement Benefit Cost/(Income) for a year. Net loss (gain) in excess of 10% of the greater of APBO and market-related value of assets is amortized on a straight-line basis over the expected average remaining service of active participants.
Present value of projected benefits for maximum tax deductible purposes	Aggregate cost method.
Benefits not valued	All benefits described in the Plan Provisions section of this report were valued. Willis Towers Watson has reviewed the plan provisions with Sempra Energy and, based on that review, is not aware of any significant benefits required to be valued that were not.

Sources of Data and Other Information

Sempra Energy or its third party vendors furnished participant data, premium and retiree contribution amounts as of January 1, 2018. Sempra Energy also provided the postretirement benefit asset, postretirement benefit liability, and amounts recognized in accumulated other comprehensive income as of the end of the 2017 fiscal year, and amounts recognized in other comprehensive income in 2017. Data were reviewed for reasonableness and consistency, but no audit was performed. Based on discussions with the plan sponsor, assumptions or estimates were made when data were not available, and the data was adjusted to reflect any significant events that occurred between the date the data was collected and the measurement date.

Accumulated other comprehensive (income)/loss amounts shown in the report are shown prior to adjustment for deferred taxes. Any deferred tax effects in AOCI should be determined in consultation with Sempra Energy's tax advisors and auditors. Willis Towers Watson used information supplied by Sempra Energy regarding the postretirement benefit asset, postretirement benefit liability, and amounts recognized in accumulated other comprehensive income as of the end of the 2018 fiscal year and amounts recognized in other comprehensive income in the 2018 fiscal year.

We are not aware of any errors or omissions in the data that would have a significant effect on the results of our calculations.

Assumptions Rationale - Significant Economic Assumptions

Discount rate	As required by U.S. GAAP the discount rate was chosen by the plan sponsor based on market information on the measurement date.
Expected return on plan assets	We understand that the expected return on assets assumption reflects the plan sponsor's estimate of future experience for trust asset returns, reflecting the plan's current asset allocation and any expected changes during the current plan year, current market conditions and the plan sponsor's expectations for future market conditions. The analysis was informed by analysis of historical data and real returns on the various classes of assets held by the trust.
Healthcare Reimbursement Account Plan (HRA) interest rate	Interest credits on certain HRA accounts are based on the 30-year Treasury rate for the November preceding the plan year. Thus, current market rates at the valuation date are reflected and represent an estimate of future experience.
Salary increase rate	Assumed increases were chosen by the plan sponsor based on an experience study that was conducted in 2015 with annual consideration of whether any conditions have changed that would be expected to produce different results in the future. They represent an estimate of future experience.
Administrative expenses	Administrative expenses are included in the fully insured premiums, premium equivalents and per capita claims costs.
Claims cost trend rates	Assumed increases were chosen by the plan sponsor and, as required by U.S. GAAP, reflect anticipated future premium costs. Near-term expectations are influenced by current market forces and Sempra specific utilization. All future trend rates are influenced by general and medical sector inflation. Ultimate trend is limited by anticipated GDP growth. Small increases in trend rates are anticipated due to implementation of certain ACA provisions. After examining historical variability in trend rates, we believe that the

selected assumptions do not significantly conflict with what would be reasonable based on a combination of market conditions at the measurement date and future expectations consistent with other economic assumptions used, other than the discount rate.

Per capita claims costs

Per capita claims costs were chosen by the plan sponsor to be the best estimate of the plan's per capita claims costs including expenses in the plan year beginning on the measurement date (with any expected changes in future years reflected in the trend rate assumption).

Over age 65 retiree premium rates are not blended and represent the actual cost of insurance for these retirees and their spouses.

Kaiser and Anthem Health Care Plus+ premium equivalent rates are a blend of costs for actives and retirees under age 65. Each year, an actuarial study based on active and retiree claims data supplied by the carriers is completed to determine the cost of retiree health care insurance as a percentage of the blended premium and premium equivalent rates. The annual results are blended over a three-year period with a weighting of 1/6, 2/6, and 3/6 for 2016, 2017 and 2018, respectively in the current study. This reduces major fluctuations and gives greater weight to current experience, but tends to avoid spikes while improving credibility. An estimate of the subsidization of retirees by actives for dental plans is also determined annually and included in the per capita dental costs for all retirees.

For the remaining pre-age 65 medical plans, separate active and retiree only premium equivalents were developed.

Per capita claims costs are based on a composite enrollment-weighted average of adjusted premiums and retiree only premium equivalents. Separate active and inactive composite averages were developed. Final average per capitas were distributed by age in accordance with the Willis Towers Watson AGEDIST model. This model uses medical prescription drug claims experience on millions of lives from 2012 and 2013 to estimate the variation in plan cost by age.

Regular HRA & VREP HRA Drawdown

The drawdown assumptions were chosen by the plan sponsor based on an experience study conducted in 2017.

Assumed post-65 medical plan

Assumed post-65 medical plan election was chosen by the plan sponsor and takes into consideration historical data.

Assumptions Rationale - Significant Demographic Assumptions

Assumptions were selected by the plan sponsor and, as required by U.S.GAAP, represents a best estimate of future experience.

Mortality

For pre-retirement mortality, the plan sponsor selected the Society of Actuaries' most recent mortality table/improvement scale, that is, the RP-2017 "Employee" table, no collar adjustment, with MP-2017 generational mortality improvement scale, due to a lack of credible plan-specific data for pre-retirement deaths.

For post-retirement, the plan sponsor selected a Sempra-specific table, which reflects 2009-2013 mortality experience for retirees of Sempra's qualified pension plans. Sempra's experience was used to adjust the RP-2014 "Healthy Annuitant" table adjusted backward to

	<p>2006 with MP-2014 and projected forward to 2011 using MP-2015. Sempra's experience was blended with the standard tables based on the level of credibility Sempra's experience allowed (an 80% credible adjustment). Sempra also selected the MP-2017 generational projection scale to project mortality improvements from 2011 forward.</p> <p>"RP-2017" refers to the Society of Actuaries' RP-2014 mortality table, with mortality improvements stripped back to 2006 then projected forward using MP-2017 generational mortality improvement scale.</p>
Termination	<p>Termination rates were based on an experience study conducted in 2015, with annual consideration of whether any conditions have changed that would be expected to produce different results in the future.</p> <p>Assumed termination rates differ by service because of observed differences in termination rates by service.</p>
Disability	<p>Given the lack of credible experience for disabled participants in this plan, and the materiality of this assumption, there is not a different assumption that is believed to provide a better estimate.</p>
Retirement	<p>Retirement rates were based on an experience study conducted in 2015, with annual consideration of whether any conditions have changed that would be expected to produce different results in the future.</p> <p>Assumed retirement rates differ by age because of expected differences in retirement rates by age.</p>
Participation:	
Participants	<p>Assumed participation rates reflect historical experience based on an experience study conducted in 2017 as well as anticipated future reductions in rates of participation due to availability of public exchanges.</p>
Covered spouses	<p>Assumed coverage rates for spouses reflect historical experience based on an experience study conducted in 2017 as well as anticipated future reductions in rates of spousal coverage due to availability of public exchanges.</p>
Benefit commencement date	<p>Employees are assumed to commence immediately at assumed retirement ages and surviving spouses are assumed to commence at earliest possible age as there is insufficient data to indicate a better assumption.</p>
Marital assumptions:	
Spousal coverage	<p>Spousal coverage is based on an experience study conducted in 2017, with annual consideration of whether any conditions have changed that would be expected to produce different results in the future.</p>
Spouse age	<p>Spouse age is based on a standard assumption.</p>

Source of Prescribed Methods

Accounting methods	The methods used for accounting purposes as described in Appendix A, including the method of determining the market-related value of plan assets, are "prescribed methods set by another party", as defined in the actuarial standards of practice (ASOPs). As required by U.S. GAAP, these methods were selected by the plan sponsor.
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Changes in Assumptions, Methods and Estimation Techniques

Change in assumptions since prior valuation	<p>Pre-retirement mortality was changed from the RP-2016 Employee table with MP-2016 generational projection scale to the RP-2017 Employee table with MP-2017 generational projection scale.</p> <p>Post-retirement mortality was changed from the Sempra specific table, base year of 2011, with MP-2016 generational projection from 2011 to the Sempra specific table, base year of 2011, with MP-2017 generational projection from 2011.</p> <p>The discount rate was updated from 4.15% to 3.65%.</p> <p>Healthcare claims assumptions were updated to reflect 2018 renewal rates, migration, and retiree cost shift factors.</p> <p>HRA/VREP usage was updated to assume drawdown of \$1,000 for regular HRAs and \$5,000 for VREP HRAs based on an experience study conducted in 2017.</p> <p>Interest credit on HRAs was updated from 2.86% to 2.80%.</p>
Change in methods since prior valuation	None.
Change in estimation techniques since prior valuation	None.

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Appendix B: Summary of principal other postretirement benefit plan provisions

Substantive Plan Provisions

The most recent change reflected in the following substantive plan provisions was effective January 1, 2017

Covered employees	All regular full time employees
Participation date	Date of becoming a covered employee

Definitions

Eligibility service	Years and months of service as a covered participant
Benefit service	Years and months of service as a covered employee
Spouse	A spouse who was married to the participant both on the participant's retirement date and on the measurement date
Surviving spouse	A spouse who was married to the participant both on the participant's retirement date and on the date of his or her death

Substantive Plan Provisions for Participants Who Retired Prior to January 1, 2006

Medical Benefits

Eligibility	Retirement on or after age 55 with at least 5 years of service.
Plan	Before age 65, retirees can elect coverage from among three Anthem medical plans (one HMO, one OOA, and Anthem Health Care Plus+) and one Kaiser HMO. Upon attainment of age 65, retirees can choose among two United HealthCare Medicare Advantage PPO plans (PPO #1 and PPO #2), a United HealthCare Medicare Advantage HMO plan, or a Kaiser Senior Advantage plan.
Under age 65 benefits	Comprehensive major medical; deductible, coinsurance, and out-of-pocket limit varies by plan.
Age 65 and older benefits	Same plan as under age 65 with Medicare carve-out.
Survivor eligibility	For survivors of retirees or active employees age 55 with at least 5 years of service, coverage continues after the retiree or active employee's death. The Company contributes a monthly fixed \$300 contribution before age 65 and \$145 contribution upon attainment of age 65.

Postretirement Contributions

Pre-1987 retirees	Retirees are not required to make monthly contributions except for PPO #2 where they pay the difference in premiums between PPO #2 and PPO #1. Dependents are required to make monthly contributions of \$35 for any of the Anthem medical plans and PPO #1, \$5 for United Healthcare Advantage, and pay the difference in premiums between PPO #2 and PPO #1 for PPO #2.
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Post-1986 retirees

For employees who retire on or after January 1, 1987, SDG&E has capped the company contribution at \$90/month for pre-65 and \$50/month for post-65 medical coverage (\$30 for the Medicare Advantage plans). However, since SDG&E's postretirement medical pricing for pre-65 retirees is based on a blend of lower active and higher retiree claim experience, it was assumed that SDG&E had a substantive commitment to provide increasing pre-65 retiree contributions. Thus, the valuation assumes an additional pre-65 cost for postretirement welfare purposes in order to reflect the increase in SDG&E's subsidy.

Life Insurance Benefits

Eligibility	Retirement on or after age 55 with at least 5 years of service.
Postretirement contributions	Retirees pay the full cost unless retired prior to January 1, 1987.
Benefits	Employees who retired prior to January 1, 1987 received a postretirement life benefit of \$2,500. Retirees were eligible to purchase supplemental postretirement life coverage at a subsidized rate of \$0.50 per thousand dollars of coverage.

Future Plan Changes

No future plan changes were recognized in determining postretirement welfare cost or in determining employer funding policy contributions or maximum tax-deductible contributions.

Changes in Benefits Valued Since Prior Year

None.

Temporary Deviations

We are not aware of any temporary deviations.

Substantive Plan Provisions for Nonrepresented Participants Who Retire On or After January 1, 2006¹

Medical Benefits

Eligibility	Retirement on or after age 55 with at least 10 continuous years of service or age 62 with at least 5 years of service.
Plan	<p>Before age 65, retirees can elect coverage from among three Anthem medical plans (one HMO, one OOA, and Anthem Health Care Plus+) and one Kaiser HMO.</p> <p>Upon attainment of age 65, retirees can choose among two United HealthCare Medicare Advantage PPO plans (PPO #1 and PPO #2), a United HealthCare Medicare Advantage HMO plan, or a Kaiser Senior Advantage plan.</p>
Survivor eligibility	For survivors of retirees or active employees age 55 with at least 10 years of continuous service or age 62 with at least 5 years of service, coverage continues after the retiree or active employee's death. The Company contributes an amount as described in the next paragraph.
Under age 65 benefits	Comprehensive major medical; deductible, coinsurance, and out-of-pocket limit varies by plan.
Age 65 and older benefits	Same plan as under age 65 with Medicare carve-out.
Postretirement contributions	Pre-65 retiree contribution is equal to the active premium (blended rate) minus the monthly fixed \$300 employer contribution. Pre-65 employer contribution is equal to the monthly fixed contribution plus the excess of the unblended early retiree cost over the active premium. Post-65 employer contribution is equal to the monthly fixed \$145 employer contribution without inflation.

Healthcare Reimbursement Account (HRA) under 2013 Voluntary Retirement Enhancement Program (2013 VREP)

Eligibility for VREP	Regular full time employees, including those on a leave of absence; and age 62 with at least 5 years of continuous service as of August 31, 2013; subject to eligible job title and functional area, who accepted and retired under the offer.
Survivor eligibility	Upon the participant's death, surviving spouses and eligible dependents can use the remaining HRA balance to pay for their eligible health expenses.
Benefits	Upon retirement, the Company will credit the HRA with \$50,000 which can be used to pay retiree and eligible dependent health expenses. No additional accruals or interest credits will be applied towards the HRA.

Healthcare Reimbursement Account (HRA) under 2014 Voluntary Retirement Enhancement Program (2014 VREP)

Eligibility for VREP	Employees who retired under the 2014 Voluntary Retirement Enhancement Program.
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¹ Participants who do not satisfy the eligibility conditions above, but are at least age 55 with 5 or more years of service (and retired prior to December 31, 2010) will be eligible for the benefits described in the section "Substantive Plan Provisions for Participants who Retired Prior to January 1, 2006".

Survivor eligibility	Upon the participant's death, surviving spouses and eligible dependents can use the remaining HRA balance to pay for their eligible health expenses.
Benefits	Upon retirement, the Company will credit the HRA with \$50,000 which can be used to pay retiree and eligible dependent health expenses. No additional accruals or interest credits will be applied towards the HRA.

Healthcare Reimbursement Account (HRA) under 2016 Voluntary Retirement Enhancement Program (2016 VREP)

Eligibility for VREP	Select non-union employees who were retirement eligible and accepted the offer to retire under the 2016 VREP by October 31, 2016.
Survivor eligibility	Upon the participant's death, surviving spouses and eligible dependents can use the remaining HRA balance to pay for their eligible health expenses.
Benefits	Upon retirement, the Company will credit the HRA with \$100,000 which can be used to pay retiree and eligible dependent health expenses. No additional accruals or interest credits will be applied towards the HRA.

Healthcare Reimbursement Account (HRA) under 2018 Voluntary Retirement Enhancement Program (2018 VREP)

Eligibility for VREP	Select non-union employees who were retirement eligible and accepted the offer to retire under the 2018 VREP by July 31, 2018.
Survivor eligibility	Upon the participant's death, surviving spouses and eligible dependents can use the remaining HRA balance to pay for their eligible health expenses.
Benefits	Upon retirement, the Company will credit the HRA with \$100,000 which can be used to pay retiree and eligible dependent health expenses. No additional accruals or interest credits will be applied towards the HRA.

Dental Benefits

Eligibility	Retirement on or after age 55 with at least 10 continuous years of service or age 62 with at least 5 years of service.
Survivor eligibility	For survivors of eligible retirees or active participants, eligibility continues beyond death of retiree or active participant eligible to retire.
Benefits	Retirees can elect coverage under the MetLife Dental plan or the Delta Dental plan. The company will contribute a flat dollar amount of up to \$24.50/month for a retiree and up to \$45/month for a retiree with one or more dependents.

Life Insurance Benefits

Eligibility	Retirement on or after age 55 with at least 10 continuous years of service or age 62 with at least 5 years of service.
Postretirement contributions	None, benefit is solely paid by the Company.
Benefits	\$10,000 flat amount or \$25,000 flat amount for SoCal Gas grandfathered nonrepresented participants.

Future Plan Changes

No future plan changes were recognized in determining postretirement welfare cost or in determining employer funding policy contributions or maximum tax-deductible contributions.

Changes in Benefits Valued Since Prior Year

A health reimbursement account in the amount of \$100,000 was offered to employees who accepted the 2018 VREP window.

Temporary Deviations

We are not aware of any temporary deviations.

Substantive Plan Provisions for Represented Participants Who Retired Between January 1, 2006 and June 30, 2008¹

Medical Benefits

Eligibility	Retirement after age 60 with at least 10 years of service.
Plan	<p>Before age 65, retirees can elect coverage from among three Anthem medical plans (one HMO, one OOA, and Anthem Health Care Plus+) and one Kaiser HMO.</p> <p>Upon attainment of age 65, retirees can choose among two United HealthCare Medicare Advantage PPO plans (PPO #1 and PPO #2), a United HealthCare Medicare Advantage HMO plan, or a Kaiser Senior Advantage plan.</p>
Survivor eligibility	For survivors of retirees or active employees age 60 with at least 10 years of service, coverage continues after the retiree or active employee's death. The Company contributes an amount as described in the next paragraph.
Postretirement contributions	Pre-65 retiree contribution is equal to the active premium (blended rate) minus the monthly fixed \$300 employer contribution. Pre-65 employer contribution is equal to the monthly fixed contribution plus the excess of the unblended early retiree cost over the active premium. Post-65 employer contribution is equal to the monthly fixed \$145 employer contribution without inflation.
Under age 65 benefits	Comprehensive major medical; deductible, coinsurance, and out-of-pocket limit varies by plan.
Age 65 and older benefits	Same plan as under age 65 with Medicare carve-out.

Dental Benefits

None.

Life Insurance Benefits

None.

Future Plan Changes

No future plan changes were recognized in determining postretirement welfare cost or in determining employer funding policy contributions or maximum tax-deductible contributions.

Changes in Benefits Valued Since Prior Year

None.

Temporary Deviations

We are not aware of any temporary deviations.

¹ Participants who do not satisfy the eligibility conditions above, but are at least age 55 with 5 or more years of service at retirement will be eligible for the benefits described in the section "Substantive Plan Provisions for Participants who Retired Prior to January 1, 2006".

Substantive Plan Provisions for Represented Participants Who Retire On or After July 1, 2008

Medical Benefits

Eligibility

- Tier 1 (high): Retirement after age 60 with at least 10 years of continuous service.
- Tier 1 (low): Retirement after age 62 with at least 5 years of continuous service.
- Tier 2: Retirement after age 55 with at least 10 years of continuous service.
- Tier 3: Retirement after age 55 with at least 5 years of continuous service.

Plan

Before age 65, retirees can elect coverage from among three Anthem medical plans (one HMO, one OOA, and Anthem Health Care Plus) and one Kaiser HMO.

Upon attainment of age 65, retirees can choose among two United HealthCare Medicare Advantage PPO plans (PPO #1 and PPO #2), a United HealthCare Medicare Advantage HMO plan, or a Kaiser Senior Advantage plan.

Survivor eligibility

For survivors of retirees or active employees, coverage continues after the retiree or active employee's death. For Tier 1 (high), the Company contributes an amount as described in the next paragraph. For Tier 1 (low), Tier 2 and Tier 3, the Company contributes a monthly fixed \$300 contribution before age 65 and \$145 contribution upon attainment of age 65.

Under age 65 benefits

Comprehensive major medical; deductible, coinsurance, and out-of-pocket limit varies by plan.

Age 65 and older benefits

Same plan as under age 65 with Medicare carve-out.

Postretirement contributions

- Tier 1 (high): Pre-65 retiree contribution is equal to the active premium (blended rate) minus the monthly fixed \$300 employer contribution. Pre-65 employer contribution is equal to the monthly fixed contribution plus the excess of the unblended early retiree cost over the active premium. Post-65 employer contribution is equal to the monthly fixed \$145 employer contribution without inflation.
- Tier 1 (low): Pre-65 retiree contribution is equal to the active premium (blended rate) minus the monthly fixed \$300 employer contribution. Pre-65 employer contribution is equal to the monthly fixed contribution plus the excess of the unblended early retiree cost over the active premium. Post-65 employer contribution is equal to the monthly fixed \$50 employer contribution without inflation (\$30 for the Medicare Advantage plans).

- Tier 2: Pre-65 retiree contribution is equal to the active premium (blended rate) minus the monthly fixed \$150 employer contribution. Pre-65 employer contribution is equal to the monthly fixed contribution plus the excess of the unblended early retiree cost over the active premium. Post-65 employer contribution is equal to the monthly fixed \$50 employer contribution without inflation (\$30 for the Medicare Advantage plans).
- Tier 3: Pre-65 retiree contribution is equal to the active premium (blended rate) minus the monthly fixed \$90 employer contribution. Pre-65 employer contribution is equal to the monthly fixed contribution plus the excess of the unblended early retiree cost over the active premium. Post-65 employer contribution is equal to the monthly fixed \$50 employer contribution without inflation (\$30 for the Medicare Advantage plans).

Healthcare Reimbursement Account Plan (HRA)

Eligibility	Represented active full-time employees retiring on or after December 1, 2009.
Survivor eligibility	Upon the participant's death, surviving spouses and eligible dependents can use the remaining HRA balance to pay for their qualified medical expenses.
Benefits	Upon retirement, the Company will contribute to the retiree's HRA an amount determined by adding a percent of unused extended sick hours and all unused vacation hours, and multiplying those hours by the employee's straight-time hourly wage rate on his last day of work.

Age at Retirement	Percent of Unused Sick Time
55-59	10%
60-63	15%
64	25%
Above 65	15%

Postretirement contributions None.

Healthcare Reimbursement Account (HRA) under 2014 Voluntary Retirement Enhancement Program (2014 VREP)

Eligibility for VREP	Employees who retired under the 2014 Voluntary Retirement Enhancement Program.
Survivor eligibility	Upon the participant's death, surviving spouses and eligible dependents can use the remaining HRA balance to pay for their eligible health expenses.
Benefits	Upon retirement, the Company will credit the HRA with \$50,000 which can be used to pay retiree and eligible dependent health expenses. No additional accruals or interest credits will be applied towards the HRA.

Dental Benefits

Eligibility	Same as for medical benefits.
Survivor eligibility	For survivors of eligible retirees or active participants, eligibility continues beyond death of retiree or active participant eligible to retire.
Benefits	Tier 1 (high) & Tier 1 (low): Retirees can elect coverage under the MetLife Dental plan or the Delta Dental plan. The company will contribute a flat dollar amount of up to \$24.50/month for a retiree and up to \$45/month for a retiree with one or more dependents. Tiers 2 & 3: None.

Life Insurance Benefits

Eligibility	Same as for medical benefits.
Postretirement contributions	None, benefit is solely paid by the Company.
Benefits	Tier 1 (high) & Tier 1 (low): \$10,000 flat amount. Tiers 2 & 3: None.

Future Plan Changes

No future plan changes were recognized in determining postretirement welfare cost or in determining employer funding policy contributions or maximum tax-deductible contributions.

Changes in Benefits Valued Since Prior Year

None.

Temporary Deviations

We are not aware of any temporary deviations.

Appendix C: Claims costs tables

Average Per Life Gross Medical Claims Costs (before Retiree Contribution, Including Mental Health Claims Costs and Administrative Fees)

All monetary amounts shown in US Dollars

	Age	Annual Amount	
		Represented	Non-Represented
Active Participants	50 - 54	7,058	7,334
	55 - 59	8,475	8,806
	60 - 64	10,488	10,897
	65 - 69	3,673	3,673
	70 - 74	4,067	4,067
	75 - 79	4,376	4,376
	80 - 84	4,508	4,508
	85 - 89	4,500	4,500
	90 - 94	4,216	4,216
	>= 95	3,945	3,945
Retirees and Surviving Spouses	50 - 54	6,990	7,300
	55 - 59	8,393	8,765
	60 - 64	10,386	10,846
	65 - 69	3,512	3,512
	70 - 74	3,888	3,888
	75 - 79	4,184	4,184
	80 - 84	4,311	4,311
	85 - 89	4,303	4,303
	90 - 94	4,031	4,031
	>= 95	3,772	3,772

Average Per Life Dental Gross Claims Costs

All monetary amounts shown in US Dollars

Plan	Age	Annual Amount	
		Retiree	Spouse
Delta	All ages	512	426
MetLife	All ages	151	136

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Appendix D: Regulatory versus GAAP accounting

Other Postretirement Benefit Cost for Fiscal Year 2018	Regulatory Accounting	GAAP Accounting
A Service cost	4,470,391	4,470,391
B Interest cost	6,686,102	6,686,102
C Expected return on assets	(13,176,308)	(13,176,308)
D Amortization of:		
1 Prior service cost	3,651,242	3,204,064
2 Losses (gains)	(2,414,394)	(2,424,451)
3 Amortizations subtotal	1,236,848	779,613
E Net periodic postretirement welfare cost	(782,967)	(1,240,202)
F Immediate recognition of benefit cost (income) due to special events	2,541,947	2,541,947
G Total postretirement welfare cost	1,758,980	1,301,745
Funded Position as of Valuation Date		
Overfunded (Underfunded) APBO	12,037,402	12,037,402
Amounts Not Yet Amortized in Net Periodic Cost as of Valuation Date		
Unamortized net actuarial loss (gain)	(56,656,965)	(56,812,111)
Unamortized prior service cost (credit)	7,303,083	6,537,529
Total	(49,353,882)	(50,274,582)

Appendix D: Summary of net balances U.S. GAAP accounting

A Summary of Net Prior Service Cost/(Credit)

All monetary amounts shown in US Dollars

	Remaining Amount at 01/01/2017	Plan Amendment	Amount Amortized during 2017	Effect of Curtailments	Effect of Transfers	Remaining Amount at 01/01/2018	Remaining Amortization Period	Amount to be Amortized in 2018
Base 1	\$ 7,494,116	\$ 0	\$ 2,766,377	\$ 0	0	\$ 4,727,739	1.7	\$ 2,766,377
Base 2	99,355	0	20,374	0	0	78,981	3.9	20,374
Base 3	339,170	0	226,783	0	0	112,387	1.0	112,387
Base 4	493,135	0	89,941	0	0	403,194	4.5	89,941
Base 5	9,249	0	1,968	0	0	7,281	3.7	1,968
Base 6	427,766	0	58,073	0	0	369,693	6.4	58,073
Base 7	3,844	0	645	0	0	3,199	5.0	645
Base 8	802,793	0	139,132	0	0	663,661	4.8	139,132
Base 9	(6,917)	0	(3,762)	0	0	(3,155)	1.0	(3,155)
Base 10	192,871	0	18,322	0	0	174,549	9.5	18,322
Total	\$ 9,855,382	\$ 0	\$ 3,317,853	\$ 0	\$ 0	\$ 6,537,529		\$ 3,204,064

B Summary of Net Loss/(Gain)¹

All monetary amounts shown in US Dollars

	Remaining Amount at 01/01/2017	Experience Loss/(Gain) during 2017	Amount Amortized during 2017	Effect of Curtailments/Settlements	Effect of Transfers	Remaining Amount at 01/01/2018	Amount to be Amortized in 2018
	\$ (25,987,071)	\$ (31,262,879)	\$ (437,839)	\$ 0	\$ 0	\$ (56,812,111)	\$ (2,424,451)

¹ See Appendix A for description of amortization method.

San Diego Gas & Electric Company

Exhibit No. SDG-1-1

**“Section 1: Summary of Key
Results – Benefit Cost, Assets, &
Obligations” – (Excerpt from
Exhibit No. SDG-1)**

Section 1: Summary of key results

Benefit cost, assets & obligations

All monetary amounts shown in US Dollars

Fiscal Year Beginning		01/01/2018	01/01/2017
Benefit Cost/ (Income)	Net Periodic Postretirement Benefit Cost/(Income)	(782,967)	4,913,778
	Immediate Recognition of Benefit Cost/(Income) due to Special Events ¹	2,541,947	0
	Total Benefit Cost/(Income)	1,758,980	4,913,778
Measurement Date		01/01/2018	01/01/2017
Plan Assets	Fair Value of Assets (FVA)	194,105,124	168,700,969
	Market-Related Value of Assets (MRVA)	194,105,124	168,700,969
Benefit Obligations	Accumulated Postretirement Benefit Obligation (APBO)	(182,067,722)	(191,340,813)
Funded Status	Funded Status	12,037,402	(22,639,844)
Accumulated Other Comprehensive (Income)/Loss	Net Prior Service Cost/(Credit)	7,303,083	11,068,114
	Net Loss/(Gain)	(56,656,965)	(25,821,336)
	Total Accumulated Other Comprehensive (Income)/Loss	(49,353,882)	(14,753,222)
Assumptions	Discount Rate	3.65%	4.15%
	Expected Long-term Rate of Return on Plan Assets ²	4.00%/7.00%	4.00%/7.00%
		<u>Pre-65</u> <u>Post-65</u>	<u>Pre-65</u> <u>Post-65</u>
	Current Health Care Cost Trend Rate	7.00% 5.00%	8.00% 5.50%
	Ultimate Health Care Cost Trend Rate	5.00% 4.50%	5.00% 4.50%
	Year of Ultimate Trend Rate	2022 2022	2022 2022
	Participant Data	Census Date	January 1, 2018
Plan Reporting (ASC 965) for Plan Year Ending		12/31/2017	12/31/2016
	Present value of accumulated benefits	182,067,722	191,340,813
	Market value of assets	194,105,124	168,700,969
	Plan reporting discount rate	3.65%	4.15%
	Census Date	January 1, 2018	January 1, 2017

¹ A health reimbursement account in the amount of \$100,000 was offered to employees who accepted the 2018 Voluntary Retirement Enhancement Program window.

² Assumed pre-tax rate of 7.00% for the 401(h) trust and Union (post 7/1/2008) VEBA and post-tax rate of 4.00% for the Non-Union and Union (pre 7/1/2008) VEBAs.

Employer Contributions		Plan Year 2018	Plan Year 2017
Cash Flow¹	Funding policy trust contributions ²	1,758,980	3,403,400
	Maximum tax-deductible contributions		
	Pay-as-you-go (PAYG) ³	231,479	1,510,378
	Non-Union VEBA	1,074,157	1,025,157
	Union VEBA (pre 7/1/2008)	335,169	347,714
	Union VEBA (post 7/1/2008)	0	0
	401(h)	0	4,700,221
	Total	1,640,805	7,583,470
Expected benefit payments and expenses net of participant contributions		9,277,493	10,250,651

¹ 401(h) is trust designated to pre-fund non-union retiree health benefits, union health benefits from 2018 onward for pre 7/1/2008 retirees and Non-Union VREP HRA benefits. The Union VEBA (post 7/1/2008) is designated to pre-fund union health benefits from 2018 onward for retirees on and after 7/1/2008 and HRA and Union VREP HRA benefits. The Non-Union VEBA is designated to pre-fund non-union life insurance benefits, until the trust is exhausted. The Union VEBA (pre 7/1/2008) is designated to pre-fund union health benefits through the end of 2017 and union life insurance benefits, until the trust is exhausted.

² Actual 2018 contributions were \$1,640,805, comprised of \$231,479 PAYGO and \$1,409,326 to trusts.

³ 2017 and 2018 are actual benefit payments made from Company assets as provided by Semptra.

San Diego Gas & Electric Company

Exhibit No. SDG-2

Derivation of 2018 Costs Used to Support the Annual FERC PBOP Costs for the TO5 Cycle 2 Informational Filing

San Diego Gas & Electric Company
Derivation of 2018 Costs Used to Support the
Annual FERC PBOP's Filing for the TO5 Cycle 2 Informational Filing

Line No.	A	Reference	B	Line No.
1	Amounts Embedded in Account 926 - Employee Pension & Benefits			1
2	PBOP Cost Per Exhibit No. SDG-1, Section 1, Page 4		\$ 1,640,805	2
3				3
4	Total Company Contribution to PBOP	Line 2	1,640,805	4
5				5
6	Adjustments:			6
7	Capitalized Costs (reflects SDG&E's electric and gas capital costs)	Line 4 * 42.66 %	(699,967)	7
8	Billings to SCG for Shared Services - (Capital & O&M)	Line 4 * 5.86 %	(96,151)	8
9	Billings to Others for Shared Services - Unregulated Affiliates	Line 4 * 0.26 %	(4,266)	9
10	Billings from SCG for Shared Services - (O&M) (1)		251,159	10
11	Net Adjustments	Line 7 to Line 10	(549,225)	11
12				12
13	Net PBOP Cost after Capital & Billings - Electric & Gas	Line 4 + Line 11	1,091,580	13
14				14
15	SDG&E Account 926 for PBOP Expense - Electric Portion (2)	Line 13 * 73.51 %	\$ 802,420	15
16				16
17	Transmission Wage and Salary Factor (3)		19.46%	17
18				18
19	Allocated to SDG&E's Electric Transmission Cost of Service	Line 15 * Line 17	\$ 156,151	19
20				20

(1) The O&M billings from Southern California Gas Company (SCG) is based on SCG's PBOP cost. The allocated expense is derived based on SCG's O&M ratio factor over its total billing to SDG&E.

(2) The total PBOP cost shown in Column B, Line 15 will be the amount reflected in the TO5 Cycle 2 Informational Filing for A&G expenses line for FERC account 926 in the 2018 Base Period and the 12-Month True-Up Period (Jan - Dec 2018). See details in Workpaper for Exhibit SDG-2.

(3) The transmission wage & salary allocation factor for the 2018 Base Period and 12-Month True-Up Period from Jan - Dec 2018 was at 19.46%.

San Diego Gas & Electric Company

Exhibit No. SDG-2-1

Work papers for Exhibit SDG-2

San Diego Gas & Electric Company
 2018 Monthly Electric PBOP Cost
 Used to Derive Account 926 for PBOP Expense - Electric Portion
 For the TO5 Cycle 2 - 2018 Base Period and
 True-Up Period (Jan to Dec 2018)

Line No	Period	Recorded 2018 Base Period / True- Up Period (1)	Line No
1	January	\$ 17,021	1
2	February	49,031	2
3	March	(13,615)	3
4	April	15,860	4
5	May	17,074	5
6	June	17,074	6
7	July	17,074	7
8	August	3,560	8
9	September	15,307	9
10	October	15,469	10
11	November	15,386	11
12	December	633,179	12
13			13
14	Total	\$ 802,420	14

- (1) The monthly recorded 2018 PBOP costs vary by month based upon PBOP activities such as:
- (1) monthly premium payments for key retirees that cannot be paid by the trust which generally does not change much.
 - (2) monthly amounts deposited into the Health Reimbursement Account (HRA) for retired employees which can vary monthly based on the number of retirees per month and the amounts contributed per retiree.
 - (3) contributions to the employee benefit trusts that were deferred until December.