

Application of SAN DIEGO GAS & ELECTRIC)
COMPANY for authority to update its gas and electric)
revenue requirement and base rates)
effective January 1, 2019 (U 902-M))

Application No. 17-10-007
Exhibit No.: (SDG&E-43-WP-2R)

SECOND REVISED
WORKPAPERS TO PREPARED
DIRECT TESTIMONY OF
KENNETH J. DEREMER
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

April 6, 2018



TAX REFORM UPDATE

Pursuant to the Assigned Commissioner’s Scoping Memorandum and Ruling issued on January 29, 2018 (Scoping Memo), this exhibit has been revised to reflect the impact of the Tax Cuts and Jobs Act (TCJA) on the SoCalGas/SDG&E TY 2019 General Rate Case. The TCJA was signed into federal law on December 22, 2017 and is discussed in the testimony of the Taxes witness Ragan Reeves (Exhibit SCG-37-2R/SDG&E-35-2R), served concurrently with this exhibit.

PROPOSED POST-TEST YEAR RATEMAKING MECHANISM – SDG&E

A. TOTAL REVENUE REQUIREMENT

This post-test year (“PTY”) ratemaking mechanism proposes to adjust 2019 test-year (“TY”) authorized revenue requirement in the PTY’s 2020, 2021, and 2022 for:

1. Labor and non-labor costs based on IHS/Markit Global Insight’s forecast (Section B.1.),
2. Medical costs based on the Willis Towers Watson forecast (Section B.2), and
3. Capital investments based on an escalated 5-year average of capital additions (Section C).

The base margin amounts adopted in SDG&E’s TY 2019 are from the testimony of SDG&E witness Khai Nguyen (Exhibit SDG&E-42) and utilized throughout these workpapers. Table 1 below summarizes the total revenue requirement associated with SDG&E’s PTY ratemaking mechanism including Miscellaneous Revenues and Franchise Fees & Uncollectible (“FF&U”).

Table 1

Line No.	Description (\$ in millions)	PTY – 2020	PTY – 2021	PTY – 2022
1	Total O&M Margin (excluding Medical and FFU)	846.8	868.8	890.9
2	Medical Expense	30.1	31.9	33.6
3	Capital Related Costs (Depreciation, Taxes, Return)	1,382.0	1,477.3	1,574.8
4	Total (L1 + L2 + L3)	2,258.8	2,378.0	2,499.4
5	FF&U (Electric =3.75%, Gas=2.30%)	73.9	74.7	75.5
6	Total Base Margin (L4 + L5)	2,332.7	2,452.7	2,574.9
7	Miscellaneous Revenues	17.5	17.5	17.5
8	Total Revenue Requirement (L6 + L7)	2,350.2	2,470.2	2,592.4
9	Revenue Requirement Increase \$	151.5	120.0	122.2
10	Revenue Requirement Increase %	6.89%	5.10%	4.95%
<i>*Difference due to rounding.</i>				

B. OPERATION & MAINTENANCE (“O&M”) EXPENSES

The starting base for O&M escalation is the 2019 Test Year revenue requirement excluding miscellaneous revenues, capital related margin, medical expense, and FF&U (“O&M Margin”). O&M expenses are determined in total for the electric distribution, electric generation and gas departments. Medical costs are escalated separately.

1. Escalation of O&M, excluding medical: For simplicity in calculating PTY escalation, a gas and electric O&M utility input price index (“GEOMPI”) is used to adjust O&M expenses to reflect the expected cost inflation of goods and services that SDG&E will incur to serve its customers. The calculation of GEOMPI is described in Mr. Scott Wilder’s testimony (Exhibit SDG&E-39). The PTY O&M revenue requirement prior to FF&U gross up is calculated below in Table 2 (differences due to rounding):

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Table 2

Line No.	O&M Expense Adjustment (\$ in millions)	TY-2019	2020	2021	2022
1	Prior Year O&M Margin		\$824.9	\$846.8	\$868.8
2	O&M Escalation Rate		2.66%	2.59%	2.55%
3	Attrition-year O&M Escalation (L1* L2)		\$21.9	\$22.0	\$22.2
4	O&M Expense (L1+ L3)	\$824.9	\$846.8	\$868.8	\$890.9

- Escalation of Medical Costs: Medical costs adopted in SDG&E’s 2019 test year will be escalated annually using the Willis Towers Watson medical escalation projections as described in the direct testimony of SDG&E witness Ms. Debbie Robinson (Exhibit SDG&E-28). The associated revenue requirement prior to FF&U gross up is calculated in Table 3 below (differences due to rounding):

Table 3

Line No.	Medical Cost Adjustment (\$ in millions)	TY-2019	2020	2021	2022
1	Prior Year Medical Expense		\$28.2	\$30.1	\$31.9
2	Medical Escalation Rate		6.50%	6.00%	5.50%
3	Attrition-year Medical Escalation (L1* L2)		\$1.8	\$1.8	\$1.8
4	Medical Expense (L1+ L3)	\$28.2	\$30.1	\$31.9	\$33.6

C. CAPITAL-RELATED

- This section describes the development of PTY plant additions and other PTY rate base changes to determine the capital-related revenue requirement (authorized returns, depreciation expense, taxes and gross ups) for the electric distribution (“ED”), electric generation (“EG”) and gas distribution (“GD”) departments. The recorded (2015-2016) plant additions are taken from historically recorded rate base. Forecasted (2017-2019) rate base components, plant additions and plant retirements are from the testimony and workpapers of SDG&E witness Mr. R. Craig Gentes (Exhibit SDG&E-33-CWP). SDG&E escalates the average of 2015-2019 capital additions to determine PTY capital additions. Incremental depreciation and amortization reserve and deferred taxes are also calculated to determine the rate base for the attrition-year. The change in year-over-year rate base is used to calculate the capital costs components of the revenue requirement. The capital-related revenue requirement is shown in Table 4 below (differences due to rounding):

Table 4

Line No.	Capital-Related Attrition (\$ in millions)	TY-2019	2020	2021	2022
1	Prior Year Capital-Related Costs		\$1,255.1	\$1,382.0	\$1,477.3
2	Capital-Related Attrition		\$126.9	\$95.4	\$97.5
3	Capital-Related Costs (L1+ L2)	\$1,255.1	\$1,382.0	\$1,477.3	\$1,574.8

The development of the PTY rate base and the derivation of individual revenue requirement components are described in detail below.

2. Weighted Average (WAVG) Rate Base (Tables 5, 7, 9): The starting point in developing WAVG rate base for each attrition-year is the prior year plant-in-service, accumulated depreciation reserve and accumulated amortization reserve. WAVG plant additions are added and capital retirements are subtracted to determine net plant additions. Changes to the net depreciation and net amortization reserve and accumulated deferred tax reserve are calculated as further described below.
 - a) Weighted Net Plant Additions
 - 1) Plant additions (Table 6, 8, 10: Lines 10, 11-13) for the PTY are calculated using a five-year period of recorded (2015-2016) and forecasted (2017-2019) capital additions. Each year is escalated to 2019 dollars and then averaged. The five-year average is then escalated to 2020, 2021, and 2022 dollars using Global Insight indices, as described in the testimony of Scott Wilder (Exhibit SDG&E-39).
 - 2) Plant retirements (Table 6, 8, 10: Lines 10, 14-16) for the PTY are calculated using a five-year period of recorded (2015-2016) and forecasted (2017-2019) capital retirements. Each year is escalated to 2019 dollars and then averaged. The five-year average is then escalated to 2020, 2021 and 2022 dollars using Global Insight indices, as described in the testimony of Scott Wilder (Exhibit SDG&E-39).
 - 3) WAVG Net Plant Additions (Table 6, 8, 10: Lines 1-3, 17): Each PTY's WAVG net plant additions is calculated using the ratio of the prior year WAVG net plant additions balance to the prior year end of year (EOY) net plant additions balance multiplied by the attrition-year's EOY net plant additions.
 - b) Change in Accumulated Depreciation Reserve (Tables 6, 8, 10: Lines 4-6): Each PTY's WAVG net depreciation reserve is calculated using the ratio of the prior year WAVG net depreciation reserve to the prior year EOY net depreciation reserve multiplied by the attrition-year's EOY net depreciation reserve. Net depreciation reserve includes annual retirements, cost of removal and salvage.
 - c) Change in Net Amortization Reserve (Tables 6, 8, 10: Lines 7-9): Each PTY's WAVG net amortization reserve is calculated using the ratio of the prior year WAVG net amortization reserve to the prior year EOY net amortization reserve multiplied by the attrition-year's EOY net amortization reserve.
 - d) Change in Accumulated Deferred Tax Reserve (Tables 5, 7: Line 12, Table 9: Line 13): Each PTY's WAVG accumulated deferred tax is calculated by multiplying the ratio of test year deferred taxes to the test year WAVG plant in service by the PTY's WAVG plant in service.
 - e) Accumulated Deferred Taxes - 2017 Tax Cuts & Jobs Act Adj (Tables 5, 7: Line 9, Table 9: Line 10): SDG&E calculated the rate base adjustments using the average

rate assumption method (ARAM) as explained by witness Ragan Reeves (Exhibit SCG-37-R2/SDG&E-35-R2) and continues the amortization of adjustment into the PTYs.

- f) Working Capital and Other (Tables 5, 7: Lines 3, 4, 7, Table 9: Lines 3, 4, 5, 8): SDG&E is not proposing to change the rate base elements of Fuel in Storage, Materials and Supplies, Working Cash, and Customer Advances for Construction from the test year 2019 amounts.
- g) Repair Deductions Rate Base Adjustment (Tables 5, 7: Line 6, Table 9: Line 7): SDG&E proposes to continue the amortization of this rate base adjustment as ordered in D.16-06-054, page 192, and adjusted for TJCA as discussed in the testimony and workpapers of witness Ragan Reeves (Exhibit SDG&E-35-R2/Exhibit SDG&E-35-WP-R2).
- h) Allocation of Electric General Plant and Common Plant (Tables 5, 7: Lines 15-16): To calculate the allocations of Electric General Plant and Common Plant from ED to EG for each PTY, SDG&E uses the ratio (from Table 5) of prior year allocated Electric General Plant to the plant-in-service multiplied by the attrition-year plant-in-service. Similarly, SDG&E uses the ratio (from Table 5) of prior year allocated Common Plant to the plant-in-service multiplied by the attrition-year plant-in-service. The resulting allocations are transferred to EG in Table 7.

The resulting WAVG Depreciated Rate Base and supporting calculations are shown in the tables below:

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Table 5

San Diego Gas and Electric Company
WEIGHTED AVERAGE DEPRECIATED RATE BASE
ELECTRIC DISTRIBUTION
(Thousands of Dollars)

		2019 RO Model			2020-2022 Attrition Year			
Source: Witness: R. Craig Gentes / Exhibit SDG&E-33								
Line No.	Account Description	Recorded Year 2016	Estimated Year		Test Year 2019	PTY AY 2020	PTY AY 2021	PTY AY 2022
			2017	2018				
Fixed Capital								
1	Plant In Service	6,979,749	7,449,470	8,049,000	8,831,194	9,680,914	10,386,559	11,113,572
2	Total Fixed Capital	6,979,749	7,449,470	8,049,000	8,831,194	9,680,914	10,386,559	11,113,572
Working Capital								
3	Materials & Supplies	42,857	48,414	49,481	50,788	50,788	50,788	50,788
4	Working Cash	92,137	95,362	98,699	122,102	122,102	122,102	122,102
5	Total Working Capital	134,994	143,776	148,181	172,890	172,890	172,890	172,890
6	Repair Deductions Rate Base Adjustment (2016 - 2042)	(42,484)	(40,850)	(39,216)	(37,582)	(35,948)	(34,314)	(32,680)
7	Customer Advances For Construction	(34,041)	(35,366)	(33,343)	(33,343)	(33,343)	(33,343)	(33,343)
8	Total Other	(76,525)	(76,216)	(72,560)	(70,926)	(69,292)	(67,658)	(66,024)
Deductions For Reserves								
9	Accumulated Deferred Taxes - 2017 Tax Cuts & Jobs Act Adj			229,229	224,102	218,975	213,848	208,721
10	Accumulated Depreciation Reserve	2,842,799	3,010,098	3,188,563	3,375,596	3,584,728	3,811,380	4,054,206
11	Accumulated Amortization Reserve	253,881	307,880	371,060	436,817	506,505	582,048	662,983
12	Accumulated Deferred Taxes	543,186	560,964	347,478	333,111	365,162	391,779	419,201
13	Total Deductions For Reserves	3,639,866	3,878,942	4,136,331	4,369,626	4,675,370	4,999,054	5,345,111
14	Weighted Average Depreciated Rate Base	<u>3,398,352</u>	<u>3,638,086</u>	<u>3,988,290</u>	<u>4,563,532</u>	<u>5,109,142</u>	<u>5,492,737</u>	<u>5,875,327</u>
15	Allocated Electric General		(11,885)	(11,884)	(13,200)	(14,470)	(15,525)	(16,611)
16	Allocated Common		(24,125)	(29,866)	(35,262)	(38,655)	(41,472)	(44,375)
17	Total Rate Base		<u>3,602,076</u>	<u>3,946,540</u>	<u>4,515,071</u>	<u>5,056,018</u>	<u>5,435,740</u>	<u>5,814,340</u>

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Table 6

San Diego Gas and Electric Company
WAVG Rate Base Support: Capital Additions, Capital Retirements, Net Depreciation and Amortization Reserve
ELECTRIC DISTRIBUTION
(Thousands of Dollars)

Line No.	Description	2019 RO Model		2020-2022 Attrition Year																																																																																																
		2019 End of Year	2019 WAVG	2020 End of Year	2020 WAVG	2020 WAVG Increase	2021 End of Year	2021 WAVG	2021 WAVG Increase	2022 End of Year	2022 WAVG	2022 WAVG Increase																																																																																								
Plant-in-Service																																																																																																				
1	Beginning of the Year	8,476,923	8,476,923	9,418,370	9,418,370	941,447	10,116,061	10,116,061	697,691	10,834,889	10,834,889	718,828																																																																																								
2	Net Plant Additions	941,447	354,270	697,691	262,544	(91,726)	718,828	270,498	7,954	740,578	278,683	8,185																																																																																								
3	Total	9,418,370	8,831,194	10,116,061	9,680,914	849,720	10,834,889	10,386,559	705,645	11,575,467	11,113,572	727,013																																																																																								
Accumulated Depreciation Reserve																																																																																																				
4	Beginning of the Year	3,273,843	3,273,843	3,473,184	3,473,184	199,341	3,691,705	3,691,705	218,521	3,926,155	3,926,155	234,449																																																																																								
5	Net Depreciation Reserve	199,341	101,753	218,521	111,544	9,791	234,449	119,674	8,130	250,860	128,051	8,377																																																																																								
6	Total	3,473,184	3,375,596	3,691,705	3,584,728	209,132	3,926,155	3,811,380	226,652	4,177,014	4,054,206	242,826																																																																																								
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7	Beginning of the Year	403,522	403,522	470,007	470,007	66,485	542,889	542,889	72,882	621,084	621,084	78,194																																																																																								
8	Net Amortization Reserve	66,485	33,294	72,882	36,498	3,204	78,194	39,158	2,660	83,668	41,899	2,741																																																																																								
9	Total	470,007	436,817	542,889	506,505	69,688	621,084	582,048	75,542	704,751	662,983	80,935																																																																																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Recorded</th> <th colspan="3">Forecast</th> <th colspan="3">PTY</th> </tr> <tr> <th>2015 (2015\$)</th> <th>2016 (2016\$)</th> <th>2017 (2017\$)</th> <th>2018 (2018\$)</th> <th>2019 (2019\$)</th> <th>2020</th> <th>2021</th> <th>2022</th> </tr> </thead> <tbody> <tr> <td>10 Escalation Rates to 2019\$</td> <td>8.955%</td> <td>7.461%</td> <td>5.358%</td> <td>2.870%</td> <td>0.000%</td> <td>2.995%</td> <td>3.030%</td> <td>3.026%</td> </tr> <tr> <td>11 Capital Additions (Table 12)</td> <td>549,011</td> <td>457,496</td> <td>684,040</td> <td>824,880</td> <td>1,051,956</td> <td></td> <td></td> <td></td> </tr> <tr> <td>12 Capital Additions (2019\$)</td> <td>598,176</td> <td>491,628</td> <td>720,694</td> <td>848,556</td> <td>1,051,956</td> <td></td> <td></td> <td></td> </tr> <tr> <td>13 Capital Additions 5-Year Average</td> <td></td> <td></td> <td></td> <td></td> <td>742,202</td> <td>764,435</td> <td>787,594</td> <td>811,424</td> </tr> <tr> <td>14 Capital Retirements (Table 13)</td> <td>72,497</td> <td>56,195</td> <td>52,853</td> <td>60,293</td> <td>66,928</td> <td></td> <td></td> <td></td> </tr> <tr> <td>15 Capital Retirements (2019\$)</td> <td>78,989</td> <td>60,388</td> <td>55,685</td> <td>62,023</td> <td>66,928</td> <td></td> <td></td> <td></td> </tr> <tr> <td>16 Capital Retirements 5-Year Average</td> <td></td> <td></td> <td></td> <td></td> <td>64,803</td> <td>66,744</td> <td>68,766</td> <td>70,847</td> </tr> <tr> <td>17 Net Plant Additions for Ratebase</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>697,691</td> <td>718,828</td> <td>740,578</td> </tr> </tbody> </table>													Recorded		Forecast			PTY			2015 (2015\$)	2016 (2016\$)	2017 (2017\$)	2018 (2018\$)	2019 (2019\$)	2020	2021	2022	10 Escalation Rates to 2019\$	8.955%	7.461%	5.358%	2.870%	0.000%	2.995%	3.030%	3.026%	11 Capital Additions (Table 12)	549,011	457,496	684,040	824,880	1,051,956				12 Capital Additions (2019\$)	598,176	491,628	720,694	848,556	1,051,956				13 Capital Additions 5-Year Average					742,202	764,435	787,594	811,424	14 Capital Retirements (Table 13)	72,497	56,195	52,853	60,293	66,928				15 Capital Retirements (2019\$)	78,989	60,388	55,685	62,023	66,928				16 Capital Retirements 5-Year Average					64,803	66,744	68,766	70,847	17 Net Plant Additions for Ratebase						697,691	718,828	740,578
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Table 7

San Diego Gas and Electric Company
WEIGHTED AVERAGE DEPRECIATED RATE BASE
ELECTRIC GENERATION
(Thousands of Dollars)

Line No.	Account Description	2019 RO Model			2020-2022 Attrition Year			
		Recorded Year 2016	Estimated Year		PTY AY 2020	PTY AY 2021	PTY AY 2022	
			2017	2018				Test Year 2019
Source: Witness: R. Craig Gentes / Exhibit SDG&E-33								
Fixed Capital								
1	Plant In Service	1,014,954	1,045,526	1,080,794	1,375,173	1,396,697	1,422,930	1,449,750
2	Total Fixed Capital	1,014,954	1,045,526	1,080,794	1,375,173	1,396,697	1,422,930	1,449,750
Working Capital								
3	Materials & Supplies	55,503	57,455	59,074	60,553	60,553	60,553	60,553
4	Working Cash	-	-	-	18,722	18,722	18,722	18,722
5	Total Working Capital	55,503	57,455	59,074	79,275	79,275	79,275	79,275
6	Repair Deductions Rate Base Adjustment (2016 - 2042)					-	-	-
7	Customer Advances For Construction	-	-	-	-	-	-	-
8	Total Other	-	-	-	-	-	-	-
Deductions For Reserves								
9	Accumulated Deferred Taxes - 2017 Tax Cuts & Jobs Act Adj			29,846	29,178	28,510	27,843	27,175
10	Accumulated Depreciation Reserve	368,254	407,969	448,955	492,889	551,130	610,375	670,734
11	Accumulated Amortization Reserve	3	8	10	12	14	16	19
12	Accumulated Deferred Taxes	66,645	70,775	46,488	49,920	50,701	51,654	52,627
13	Total Deductions For Reserves	434,902	478,752	525,299	571,999	630,356	689,888	750,556
14	Weighted Average Depreciated Rate Base	635,554	624,229	614,570	882,449	845,615	812,317	778,469
15	Allocated Electric General		11,885	11,884	13,200	14,470	15,525	16,611
16	Allocated Common		24,125	29,866	35,262	38,655	41,472	44,375
17	Total Weighted Average Rate Base		660,239	656,320	930,911	898,740	869,314	839,455

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Table 8

San Diego Gas and Electric Company
WAVG Rate Base Support: Capital Additions, Capital Retirements, Net Depreciation and Amortization Reserve
ELECTRIC GENERATION
(Thousands of Dollars)

		2019 RO Model			2020-2022 Attrition Year							
Line No.	Description	2019		2020			2021			2022		
		End of Year	WAVG	End of Year	WAVG	WAVG Increase	End of Year	WAVG	WAVG Increase	End of Year	WAVG	WAVG Increase
Plant-in-Service												
1	Beginning of the Year	1,366,829	1,366,829	1,384,298	1,384,298	17,469	1,410,255	1,410,255	25,957	1,436,790	1,436,790	26,535
2	Net Plant Additions	17,469	8,344	25,957	12,399	4,055	26,535	12,675	276	27,131	12,959	285
3	Total	1,384,298	1,375,173	1,410,255	1,396,697	21,523	1,436,790	1,422,930	26,233	1,463,921	1,449,750	26,820
Accumulated Depreciation Reserve												
4	Beginning of the Year	464,051	464,051	521,841	521,841	57,790	580,536	580,536	58,695	640,333	640,333	59,797
5	Net Depreciation Reserve	57,790	28,837	58,695	29,289	451	59,797	29,839	550	60,924	30,401	562
6	Total	521,841	492,889	580,536	551,130	58,241	640,333	610,375	59,245	701,257	670,734	60,359
Accumulated Amortization Reserve												
7	Beginning of the Year	11	11	13	13	2	15	15	2	18	18	2
8	Net Amortization Reserve	2	1	2	1	0	2	1	0	2	1	0
9	Total	13	12	15	14	2	18	16	2	20	19	2
		Recorded		Forecast			PTY					
		2015 (2015\$)	2016 (2016\$)	2017 (2017\$)	2018 (2018\$)	2019 (2019\$)	2020	2021	2022			
10	Escalation Rates to 2019\$	11.536%	8.141%	5.077%	2.293%	0.000%	2.296%	2.226%	2.245%			
11	Capital Additions (Table 12)	6,775	22,879	50,926	20,645	22,831						
12	Capital Additions (2019\$)	7,557	24,742	53,512	21,119	22,831						
13	Capital Additions 5-Year Average					25,952	26,548	27,139	27,748			
14	Capital Retirements (Table 13)	58	-	839	909	1,011						
15	Capital Retirements (2019\$)	65	-	882	930	1,011						
16	Capital Retirements 5-Year Average					577	591	604	617			
17	Net Plant Additions for Ratebase						25,957	26,535	27,131			

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Table 9

San Diego Gas and Electric Company
WEIGHTED AVERAGE DEPRECIATED RATE BASE
GAS DISTRIBUTION
(Thousands of Dollars)

Line No.	Account Description	2019 RO Model				2020-2022 Attrition Year		
		Recorded Year 2016	Estimated Year		Test Year 2019	PTY AY 2020	PTY AY 2021	PTY AY 2022
			2017	2018				
Source: Witness: R. Craig Gentes / Exhibit SDG&E-33								
Fixed Capital								
1	Plant In Service	1,810,744	1,981,628	2,153,206	2,361,232	2,571,827	2,741,133	2,914,545
2	Total Fixed Capital	1,810,744	1,981,628	2,153,206	2,361,232	2,571,827	2,741,133	2,914,545
Working Capital								
3	Fuel in Storage	285	285	285	285	285	285	285
4	Materials & Supplies	3,311	3,330	3,444	3,550	3,550	3,550	3,550
5	Working Cash	8,575	8,875	9,186	29,902	29,902	29,902	29,902
6	Total Working Capital	12,171	12,490	12,914	33,737	33,737	33,737	33,737
7	Repair Deductions Rate Base Adjustment (2016 - 2042)	-	-	-	-	-	-	-
8	Customer Advances For Construction	(2,340)	(2,225)	(2,079)	(2,079)	(2,079)	(2,079)	(2,079)
9	Total Other	(2,340)	(2,225)	(2,079)	(2,079)	(2,079)	(2,079)	(2,079)
Deductions For Reserves								
10	Accumulated Deferred Taxes - 2017 Tax Cuts & Jobs Act Adj			49,618	48,110	46,602	45,095	43,587
11	Accumulated Depreciation Reserve	994,289	1,033,107	1,073,049	1,112,955	1,156,431	1,203,213	1,253,008
12	Accumulated Amortization Reserve	64,967	78,969	94,057	111,696	131,629	153,098	175,533
13	Accumulated Deferred Taxes	104,148	114,593	76,530	76,522	83,346	88,833	94,453
14	Total Deductions For Reserves	1,163,403	1,226,669	1,293,254	1,349,282	1,418,008	1,490,240	1,566,582
15	Weighted Average Depreciated Rate Base	<u>657,171</u>	<u>765,224</u>	<u>870,788</u>	<u>1,043,608</u>	<u>1,185,477</u>	<u>1,282,551</u>	<u>1,379,621</u>
16	Total Weighted Average Rate Base		<u>765,224</u>	<u>870,788</u>	<u>1,043,608</u>	<u>1,185,477</u>	<u>1,282,551</u>	<u>1,379,621</u>

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Table 10

San Diego Gas and Electric Company
WAVG Rate Base Support: Capital Additions, Capital Retirements, Net Depreciation and Amortization Reserve
GAS DISTRIBUTION
(Thousands of Dollars)

		2019 RO Model			2020-2022 Attrition Year							
Line No.	Description	2019		2020			2021			2022		
		End of Year	WAVG	End of Year	WAVG	WAVG Increase	End of Year	WAVG	WAVG Increase	End of Year	WAVG	WAVG Increase
Plant-in-Service												
1	Beginning of the Year	2,259,736	2,259,736	2,501,430	2,501,430	241,694	2,669,068	2,669,068	167,638	2,840,677	2,840,677	171,609
2	Net Plant Additions	241,694	101,495	167,638	70,396.79	(31,099)	171,609	72,064	1,667	175,903	73,868	1,803
3	Total	2,501,430	2,361,232	2,669,068	2,571,827	210,595	2,840,677	2,741,133	169,305	3,016,580	2,914,545	173,412
Accumulated Depreciation Reserve												
4	Beginning of the Year	1,090,487	1,090,487	1,131,959	1,131,959	41,472	1,177,130	1,177,130	45,171	1,225,275	1,225,275	48,145
5	Net Depreciation Reserve	41,472	22,468	45,171	24,472	2,004	48,145	26,083	1,611	51,191	27,733	1,650
6	Total	1,131,959	1,112,955	1,177,130	1,156,431	43,476	1,225,275	1,203,213	46,782	1,276,466	1,253,008	49,795
Accumulated Amortization Reserve												
7	Beginning of the Year	102,238	102,238	121,327	121,327	19,089	142,118	142,118	20,792	164,279	164,279	22,160
8	Net Amortization Reserve	19,089	9,458	20,792	10,302	844	22,160	10,980	678	22,715	11,255	275
9	Total	121,327	111,696	142,118	131,629	19,933	164,279	153,098	21,470	186,993	175,533	22,435
		Recorded		Forecast			PTY					
		2015 (2015\$)	2016 (2016\$)	2017 (2017\$)	2018 (2018\$)	2019 (2019\$)	2020	2021	2022			
10	Escalation Rates to 2019\$	9.320%	10.147%	6.297%	2.972%	0.000%	2.766%	2.369%	2.502%			
11	Capital Additions (Table 12)	108,664	113,787	201,308	172,588	237,474						
12	Capital Additions (2019\$)	118,791	125,334	213,984	177,718	237,474						
13	Capital Additions 5-Year Average			174,660			179,492	183,743	188,341			
14	Capital Retirements (Table 13)	18,489	4,706	9,121	10,586	11,682						
15	Capital Retirements (2019\$)	20,212	5,183	9,696	10,900	11,682						
16	Capital Retirements 5-Year Average			11,535			11,854	12,134	12,438			
17	Net Plant Additions for Ratebase			174,660			167,638	171,609	175,903			

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Table 11

**SAN DIEGO GAS & ELECTRIC
RECORDED & FORECASTED CAPITAL ADDITIONS BY FUNCTION
(Thousands of Dollars)**

Asset ID	Description/Function	RECORDED		FORECASTS		
		2015	2016	2017	2018	2019
10	Steam Production Land	-	-	-	-	-
20	Steam Production Easements	-	-	-	-	-
30	Steam Production Other	4,751	12,602	3,416	4,957	5,447
		4,751	12,602	3,416	4,957	5,447
40	Other Production Land	-	-	-	-	-
50	Other Production Easements	-	(54)	-	-	-
60	Other Production Other	268	5,860	31,136	11,081	12,740
		268	5,807	31,136	11,081	12,740
70	Electric Transmission Assigned to Generation	6	725	-	-	-
80	Electric Distribution Assigned to Generation	-	-	-	-	-
90	Nuclear Generation	-	-	-	-	-
100	Electric Distribution Software & Franchises	13,877	10,457	4,115	6,344	26,537
100	Electric Distribution Software & Franchises - Fully Recovered	-	-	-	-	-
110	Electric Distribution Land	-	-	-	10,968	107
120	Electric Distribution Easements	1,617	1,575	926	1,697	2,043
130	Electric Distribution Other	362,537	337,601	444,348	576,303	800,279
		378,031	349,633	449,389	595,311	828,967
140	Electric Generation Assigned to Electric Distribution	2,216	(348)	-	-	-
150	Electric Transmission Land Assigned to Electric Distribution	893	0	-	-	-
151	Electric Transmission Easement Assigned to Electric Distribution	-	-	-	-	-
152	Electric Transmission Other Assigned to Electric Distribution	4,588	5,565	5,944	646	337
		7,697	5,218	5,944	646	337
160	Electric General Land & Non Depreciables	-	-	-	-	-
170	Electric General Other	21,437	27,749	8,761	44,841	8,700
		21,437	27,749	8,761	44,841	8,700
180	Gas Storage Land	-	-	-	-	-
190	Gas Storage Other	-	190	-	-	-
		-	190	-	-	-
200	Gas Transmission Land	-	-	-	-	-
210	Gas Transmission Easements	-	0	715	195	139
220	Gas Transmission Other	31,130	29,209	18,909	14,512	17,971
		31,130	29,209	19,624	14,706	18,110
230	Gas Distribution Software & Franchises	-	-	-	-	-
230	Gas Distribution Software & Franchises - Fully Recovered	-	-	-	-	-
240	Gas Distribution & General Land	-	-	-	-	-
250	Gas Distribution & General Easements	24	10	41	42	43
260	Gas Distribution & General Other	49,435	65,750	116,914	119,325	171,022
		49,459	65,760	116,955	119,367	171,065
270	Common Software 5 Year	64,812	69,885	109,595	84,094	56,345
270	Common Software 5 Year-Fully Recovered	-	-	-	-	-
280	Common Software 15 Year	-	-	-	-	-
280	Common Software 15 Year-Fully Recovered	-	-	-	-	-
290	Common Land & Non-Depreciable Easements	-	(224)	205	306	323
300	Common IT Hardware	1,014	7,156	46,672	17,140	17,584
310	Common Other	105,845	20,453	144,577	125,664	192,645
		171,671	97,270	301,050	227,205	266,896
	Total	664,450	594,163	936,274	1,018,114	1,312,261
Allocation of Common IT:						
	Electric Generation	1,751	3,746	16,375	4,607	4,643
	Electric Distribution	141,846	74,896	219,946	184,082	213,953
	Gas	28,075	18,628	64,729	38,515	48,299
		171,671	97,270	301,050	227,205	266,896
Description/Function Asset ID		2015	2016	2017	2018	2019
Electric Distribution	100+110+120+130+140+150+151+152+160+170+Common IT	549,011	457,496	684,040	824,880	1,051,956
Electric Generation	10+20+30+40+50+60+70+80+Common IT	6,775	22,879	50,926	20,645	22,831
Gas Distribution	180+190+200+210+220+230+240+250+260+Common IT	108,664	113,787	201,308	172,588	237,474
		664,450	594,163	936,274	1,018,114	1,312,261

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Table 12

**SAN DIEGO GAS & ELECTRIC
CAPITAL RETIREMENTS BY FUNCTION
(Thousands of Dollars)**

Asset ID	Description/Function	RECORDED		FORECASTS		
		2015	2016	2017	2018	2019
10	Steam Production Land	-	-	-	-	-
20	Steam Production Easements	-	-	-	-	-
30	Steam Production Other	-	-	464	467	471
		0	0	464	467	471
40	Other Production Land	-	-	-	-	-
50	Other Production Easements	-	-	-	-	-
60	Other Production Other	29	0	72	76	120
		29	0	72	76	120
70	Electric Transmission Assigned to Generation	-	-	-	-	-
80	Electric Distribution Assigned to Generation	-	-	-	-	-
90	Nuclear Generation	-	-	-	-	-
100	Electric Distribution Software & Franchises	-	-	-	-	-
100	Electric Distribution Software & Franchises - Fully Recovered	-	-	-	-	-
110	Electric Distribution Land	-	-	-	-	-
120	Electric Distribution Easements	5	65	467	470	476
130	Electric Distribution Other	34,118	35,534	32,337	34,600	37,575
		34,123	35,599	32,805	35,070	38,052
140	Electric Generation Assigned to Electric Distribution	-	54	-	-	-
150	Electric Transmission Land Assigned to Electric Distribution	-	-	-	-	-
151	Electric Transmission Easement Assigned to Electric Distribution	-	-	-	-	-
152	Electric Transmission Other Assigned to Electric Distribution	227	453	-	-	-
		227	506	-	-	-
160	Electric General Land & Non Depreciables	-	-	-	-	-
170	Electric General Other	1,067	853	962	984	1,108
		1,067	853	962	984	1,108
180	Gas Storage Land	-	-	-	-	-
190	Gas Storage Other	-	44	-	-	-
		-	44	-	-	-
200	Gas Transmission Land	-	-	-	-	-
210	Gas Transmission Easements	0	0	3	4	4
220	Gas Transmission Other	1,314	86	449	472	490
		1,314	86	452	476	494
230	Gas Distribution Software & Franchises	-	-	-	-	-
230	Gas Distribution Software & Franchises - Fully Recovered	-	-	-	-	-
240	Gas Distribution & General Land	-	-	-	-	-
250	Gas Distribution & General Easements	0	4	35	35	35
260	Gas Distribution & General Other	7,718	2,961	5,340	5,819	6,306
		7,719	2,965	5,376	5,854	6,341
270	Common Software 5 Year	2,075	-	-	-	-
270	Common Software 5 Year-Fully Recovered	-	-	-	-	-
280	Common Software 15 Year	-	-	-	-	-
280	Common Software 15 Year-Fully Recovered	-	-	-	-	-
290	Common Land & Non-Depreciable Easements	-	-	-	-	-
300	Common IT Hardware	34,690	8,975	1,828	3,472	3,973
310	Common Other	9,801	11,873	20,854	25,388	29,062
		46,567	20,848	22,683	28,859	33,035
Total		91,044	60,901	62,813	71,787	79,621
Allocation of Common IT:						
Electric Generation		30	-	303	365	419
Electric Distribution		37,080	19,237	19,086	24,239	27,769
Gas		9,456	1,611	3,294	4,256	4,847
		46,567	20,848	22,683	28,859	33,035
Description/Function	Asset ID					
Electric Distribution	100+110+120+130+140+150+151+152+160+170+Common IT	72,497	56,195	52,853	60,293	66,928
Electric Generation	10+20+30+40+50+60+70+80+Common IT	58	-	839	909	1,011
Gas Distribution	180+190+200+210+220+230+240+250+260+Common IT	18,489	4,706	9,121	10,586	11,682
Total Retirements by Major Function		91,044	60,901	62,813	71,787	79,621

3. Capital-Related Revenue Requirement: The capital-related revenue requirement components for each attrition-year are calculated using the methodology described below:
- a) Depreciation Expense (Tables 14, 17, 20: Lines 1-7): Depreciation expense is calculated by multiplying the current PTY plant-in-service weighted average increase by the TY's system average depreciation rate (ED 4.63%, EG 4.77%, GD 3.60%).
 - b) Ad Valorem Tax (Tables 14, 17, 20: Lines 8-14): Ad Valorem Tax is calculated by multiplying the current attrition-year additions by the TY's system ad valorem tax rate (ED 0.80%, EG 1.08%, GD 0.65%).
 - c) State Tax Depreciation (Tables 14, 17, 20: Lines 15-23): State Tax Depreciation income tax expense is calculated by multiplying the current attrition-year additions by the TY's system average state tax depreciation rate (ED 3.02%, EG 4.61%, GD 2.99%) and by the state income tax rate (8.84%).
 - d) Payroll Tax (Tables 14, 17, 20: Lines 24-28): Payroll Tax is calculated by multiplying the prior year payroll taxes by the current attrition-year labor escalation rate forecasted by Global Insight (2.98% 2020, 2.95% 2021, 2.89% 2022).
 - e) Federal Tax Depreciation (Tables 15, 18, 21: Lines 1-9): Federal Tax Depreciation income tax expense is calculated by multiplying current attrition-year additions by the TY's system average federal tax depreciation rate (ED 3.45%, EG 4.61%, GD 2.70%) and by the federal income tax rate (21%).
 - f) California Corporation Franchise Tax (Prior Year) (Tables 15, 18, 21: Lines 10-28)): Prior Year's state income tax is a deduction for federal income tax purposes.
 - g) Long-Term Debt Cost (Tables 16, 19, 22: Lines 4-10): Long-Term Debt Cost is calculated by multiplying the attrition-year change in WAVG rate base by the authorized weighted cost of Long Term Debt.
 - h) Preferred Stock Cost (Tables 16, 19, 22: Lines 11-17): Preferred Stock Cost is calculated by multiplying the attrition-year change in WAVG rate base by the authorized weighted return on Preferred Stock.
 - i) Common Equity Cost (Tables 16, 19, 22: Lines 18-24): Common Equity Cost is calculated by multiplying the attrition-year change in WAVG rate base by the authorized weighted return on Common Equity.
 - j) Gross Ups: All revenue requirement components which are not directly deductible for income taxes are grossed up for income taxes by factors shown in Table 13. These components are Book Depreciation, State Tax Depreciation, Federal Tax Depreciation, Preferred Stock Cost, Common Equity Cost, and California

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Corporation Franchise Tax (Prior Year). All revenue requirement components are
grossed up for FF&U as described in Section D.

4. Tax Law Changes: The revenue requirement estimates were calculated using current federal and state tax laws enacted through the filing date of this testimony. SDG&E's revenue requirement will reflect all tax law changes and tax rate changes, including but not limited to changes in income taxes, payroll taxes, and ad valorem taxes.
- D. Franchise Fees and Uncollectible Gross Up (Table 13): All revenue requirement components are grossed up for FF&U using the franchise fee factors of 3.45% (electric) and 2.08% (gas), and the uncollectible factor of 0.174% (electric and gas). The calculations of the gross up factors (Table 13) are from the 2019 GRC Results of Operations (RO) Model.

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Table 13

SAN DIEGO GAS & ELECTRIC COMPANY
TEST YEAR 2019
NET-TO-GROSS MULTIPLIER

Line No.	Description	Uncollectible and Franchise Fee Factor		State & Federal Tax Factor	N-T-G Multiplier	
		Electric	Gas	Electric and Gas	Electric	Gas
1	Revenues	1.000000	1.000000	1.000000	1.000000	1.000000
2	Uncollectible Tax Rate	0.001740	0.001740	0.000000	0.001740	0.001740
3	Uncollectible Amount Applied	1.000000	1.000000	1.000000	1.000000	1.000000
4	Less: Uncollectible (Line 2 * Line 3)	0.001740	0.001740	0.000000	0.001740	0.001740
5	Subtotal (Line 3 - Line 4)	0.998260	0.998260	1.000000	0.998260	0.998260
6	Franchise Fees Tax Rate	0.034468	0.020799	0.000000	0.034468	0.020799
7	Franchise Fees Amount Applied (Line 5)	0.998260	0.998260	1.000000	0.998260	0.998260
8	Less: Franchise Fees (Line 6 * Line 7)	0.034408	0.020763	0.000000	0.034408	0.020763
9	Subtotal (Line 7 - Line 8)	0.963852	0.977497	1.000000	0.963852	0.977497
10	S.I.T. Rate			0.088400	0.088400	0.088400
11	S.I.T. Amount Applied (Line 9)			1.000000	0.963852	0.977497
12	Less: S.I.T. (Line 10 * Line 11)			0.088400	0.085205	0.086411
13	Subtotal (Line 11 - Line 12)			0.911600	0.878648	0.891086
14	F.I.T. Rate			0.210000	0.210000	0.210000
15	F.I.T. Amount Applied (Line 13)			0.911600	0.878648	0.891086
16	Less: F.I.T. (Line 14 * Line 15)			0.191436	0.184516	0.187128
17	Net Operating Revenues (Line 15 - Line 16)			0.720164	0.694132	0.703958
18	Uncollectible and Franchise Fee Factor (1 / Line 9)	1.037504	1.023021			
19	State & Federal Tax Factor (1 / Line 17)			1.388573		
20	N-T-G Multiplier (1 / Line 17)				1.4406492	1.420539

Source: GRC 2019 Results of Operations (RO) model / Witness Khai Nguyen: Exhibit SDG&E-42

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Table 14

SAN DIEGO GAS & ELECTRIC
2019 CPUC General Rate Case (Application)
Electric Distribution
Calculation of Revenue Requirement Increase
Depreciation Expense, State Tax Depreciation, Ad Valorem Taxes, & Payroll Taxes
(Thousands of Dollars)

Line No.	Description	TY 2019	PTY 2020	PTY 2021	PTY 2022
<u>Depreciation Expense</u>					
1	Test Year (TY) Accrual	409,031			
2	/ TY Weighted Average (WAVG) Plant-in-Service	<u>8,831,194</u>			
3	= System Average Depreciation Rate	4.63%	4.63%	4.63%	4.63%
4	x Plant in Service Weighted Average Increase		<u>849,720</u>	<u>705,645</u>	<u>727,013</u>
5	= Increase in Depreciation Expense		39,356.16	32,683	33,673
6	x Net-to-Gross Multiplier	1.440649	1.440649	1.440649	1.440649
7	= Increase in Revenue Requirement		<u>56,698</u>	<u>47,085</u>	<u>48,511</u>
<u>Ad Valorem Taxes</u>					
8	TY Ad Valorem Taxes	75,006			
9	/ TY Plant In Service	<u>9,418,370</u>			
10	= System Average Ad Valorem Tax Rate	0.80%	0.80%	0.80%	0.80%
11	x Current Attrition Year Additions		<u>697,691</u>	<u>718,828</u>	<u>740,578</u>
12	= Increase to Ad Valorem Taxes		5,556	5,725	5,898
13	x FF&U Factor	1.037504	1.037504	1.037504	1.037504
14	= Increase in Revenue Requirement		<u>5,765</u>	<u>5,939</u>	<u>6,119</u>
<u>State Regulatory Tax Depreciation</u>					
15	TY State Tax Depreciation	284,686			
16	/ TY Plant In Service	<u>9,418,370</u>			
17	= System Average State Tax Depreciation Rate	3.02%	3.02%	3.02%	3.02%
18	x Current Attrition Year Additions		<u>697,691</u>	<u>718,828</u>	<u>740,578</u>
19	= Increase in State Tax Depreciation Expense		21,089	21,728	22,385
20	x -State Income Tax Rate	(0.0884)	(0.0884)	(0.0884)	(0.0884)
21	= State Income Taxes		(1,864)	(1,921)	(1,979)
22	x Net-to-Gross Multiplier	1.440649	1.440649	1.440649	1.440649
23	= Decrease in Revenue Requirement		<u>(2,686)</u>	<u>(2,767)</u>	<u>(2,851)</u>
<u>Payroll Taxes</u>					
24	Prior Year Payroll Taxes		11,518	11,862	12,211
25	x Current Year Labor Escalation Rate		<u>2.98%</u>	<u>2.95%</u>	<u>2.89%</u>
26	= Increase in Full Year Additions		343	349	353
27	x FF&U Factor		<u>1.037504</u>	<u>1.037504</u>	<u>1.037504</u>
28	= Increase in Revenue Requirement		<u>356</u>	<u>363</u>	<u>366</u>

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Table 15

SAN DIEGO GAS & ELECTRIC
2019 CPUC General Rate Case (Application)
Electric Distribution
Calculation of Revenue Requirement Increase
Federal Tax Depreciation Expense & Prior Year CCFT
(Thousands of Dollars)

Line No.	Description	TY 2019	PTY 2020	PTY 2021	PTY 2022
<u>Federal Regulatory Tax Depreciation</u>					
1	TY Federal Tax Depreciation	324,593			
2	/ TY Plant-In-Service	<u>9,418,370</u>			
3	= System Average Federal Tax Depreciation Rate	3.45%	3.45%	3.45%	3.45%
4	x Current Attrition Year Additions		<u>697,691</u>	<u>718,828</u>	<u>740,578</u>
5	= Increase in Federal Tax Depreciation Expense		24,045	24,774	25,523
6	x -Federal Income Tax Rate	(0.2100)	<u>(0.2100)</u>	<u>(0.2100)</u>	<u>(0.2100)</u>
7	= Federal Income Taxes		(5,049)	(5,202)	(5,360)
8	x Net-to-Gross Multiplier	1.440649	<u>1.440649</u>	<u>1.440649</u>	<u>1.440649</u>
9	= Decrease in Revenue Requirement		<u>(7,275)</u>	<u>(7,495)</u>	<u>(7,722)</u>
 <u>California Corporation Franchise Tax (Prior Year)</u>					
10	+ RevReq from Book Depreciation			56,698	47,085
11	+ RevReq from State Tax Depreciation			(2,686)	(2,767)
12	+ RevReq from Federal Tax Depreciation (ACRS/MACRS)			(7,275)	(7,495)
13	+ Rate Base: Preferred Stock			1,325	930
14	+ Rate Base: Common Stock Equity			41,304	28,994
15	+ CCFT			<u>(1,014)</u>	<u>(1,799)</u>
16	= Revenue Requirement Increase			88,353	64,947
17	x Prior Year State Income Tax Cumulative Component			<u>0.088400</u>	<u>0.088400</u>
18	= Prior Year State Income Tax Increase			7,810	5,741
19	+ Prior Year State Income Tax (State Tax Depreciation Expense)			(1,864)	(1,921)
20	+ Prior Year State Income Tax (State Rate Change)			-	-
21	= Prior Year Total State Income Tax Increase			<u>5,946</u>	<u>3,821</u>
22	Prior Year Current California Corp Franchise Tax		16,391	22,337	26,158
23	- Prior Year CCFT Deductible for Federal Income Taxes		<u>13,040</u>	<u>16,391</u>	<u>22,337</u>
24	= Increase CCFT Deduction on Federal Income Taxes		3,351	5,946	3,821
25	<u>x -Federal Income Tax Rate</u>		<u>(0.2100)</u>	<u>(0.2100)</u>	<u>(0.2100)</u>
26	= Federal Income Taxes		(704)	(1,249)	(802)
27	x Net-To-Gross Multiplier		<u>1.440649</u>	<u>1.440649</u>	<u>1.440649</u>
28	= Decrease in Revenue Requirement		<u>(1,014)</u>	<u>(1,799)</u>	<u>(1,156)</u>

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Table 16

SAN DIEGO GAS & ELECTRIC
2019 CPUC General Rate Case (Application)
Electric Distribution
Calculation of Revenue Requirement Increase
Return on Rate Base
(Thousands of Dollars)

Line No.	Description	TY 2019	PTY 2020	PTY 2021	PTY 2022
<u>Change in Weighted Average Rate Base</u>					
1	TY W AVG Rate Base	4,515,071	4,515,071		
2	CY W AVG Rate Base		5,056,018	5,435,740	5,814,340
3	Change in W AVG Rate Base		540,947	379,723	378,600
<u>Long Term Debt</u>					
4	Prior Year Return on Debt	4.59%	4.59%	4.59%	4.59%
5	x Prior Year Debt Capitalization	45.25%	45.25%	45.25%	45.25%
6	= Prior Year Weighted Cost of Debt	2.08%	2.08%	2.08%	2.08%
7	x Change in W AVG Rate Base		540,947	379,723	378,600
8	= Change in Weighted Cost of Debt		11,252	7,898	7,875
9	x FF&U Factor	1.037504	1.037504	1.037504	1.037504
10	= Increase in Revenue Requirement		11,674	8,194	8,170
<u>Preferred Stock</u>					
11	Prior Year Return on Preferred Stock	6.22%	6.22%	6.22%	6.22%
12	x Prior Year Preferred Stock Capitalization	2.75%	2.75%	2.75%	2.75%
13	= Prior Year Weighted Cost of Preferred Stock	0.17%	0.17%	0.17%	0.17%
14	x Change in W AVG Rate Base		540,947	379,723	378,600
15	= Change in Weighted Cost of Preferred Stock		920	646	644
16	x Net-To-Gross Multiplier	1.440649	1.440649	1.440649	1.440649
17	= Increase in Revenue Requirement		1,325	930	927
<u>Common Equity</u>					
18	Prior Year Return on Common Equity	10.20%	10.20%	10.20%	10.20%
19	x Prior Year Common Equity Capitalization	52.00%	52.00%	52.00%	52.00%
20	= Prior Year Weighted Cost of Common Equity	5.30%	5.30%	5.30%	5.30%
21	x Change in W AVG Rate Base		540,947	379,723	378,600
22	= Change in Weighted Cost of Common Equity		28,670	20,125	20,066
23	x Net-To-Gross Multiplier	1.440649	1.440649	1.440649	1.440649
24	= Increase in Revenue Requirement		41,304	28,994	28,908
25	Total Increase in ED Revenue Requirement		106,147	79,444	81,273

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Table 17

SAN DIEGO GAS & ELECTRIC
2019 CPUC General Rate Case (Application)
Electric Generation
Calculation of Revenue Requirement Increase
Depreciation Expense, State Tax Depreciation, Ad Valorem Taxes, & Payroll Taxes
(Thousands of Dollars)

Line No.	Description	TY 2019	PTY 2020	PTY 2021	PTY 2022
<u>Depreciation Expense</u>					
1	Test Year (TY) Accrual	65,663			
2	/ TY Weighted Average (WAVG) Plant-in-Service	<u>1,375,173</u>			
3	= System Average Depreciation Rate	4.77%	4.77%	4.77%	4.77%
4	x Plant in Service Weighted Average Increase		<u>21,523</u>	<u>26,233</u>	<u>26,820</u>
5	= Increase in Depreciation Expense		1,028	1,253	1,281
6	x Net-to-Gross Multiplier	1.440649	1.440649	1.440649	1.440649
7	= Increase in Revenue Requirement		<u>1,481</u>	<u>1,805</u>	<u>1,845</u>
<u>Ad Valorem Taxes</u>					
8	TY Ad Valorem Taxes	14,948			
9	/ TY Plant In Service	<u>1,384,298</u>			
10	= System Average Ad Valorem Tax Rate	1.08%	1.08%	1.08%	1.08%
11	x Current Attrition Year Additions		<u>25,957</u>	<u>26,535</u>	<u>27,131</u>
12	= Increase to Ad Valorem Taxes		280	287	293
13	x FF&U Factor	1.037504	1.037504	1.037504	1.037504
14	= Increase in Revenue Requirement		<u>291</u>	<u>297</u>	<u>304</u>
<u>State Regulatory Tax Depreciation</u>					
15	TY State Tax Depreciation	63,860			
16	/ TY Plant In Service	<u>1,384,298</u>			
17	= System Average State Tax Depreciation Rate	4.61%	4.61%	4.61%	4.61%
18	x Current Attrition Year Additions		<u>25,957</u>	<u>26,535</u>	<u>27,131</u>
19	= Increase in State Tax Depreciation Expense		1,197	1,224	1,252
20	x -State Income Tax Rate	(0.0884)	(0.0884)	(0.0884)	(0.0884)
21	= State Income Taxes		(106)	(108)	(111)
22	x Net-to-Gross Multiplier	1.440649	1.440649	1.440649	1.440649
23	= Decrease in Revenue Requirement		<u>(153)</u>	<u>(156)</u>	<u>(159)</u>
<u>Payroll Taxes</u>					
24	Prior Year Payroll Taxes		978	1,007	1,037
25	x Current Year Labor Escalation Rate		<u>2.98%</u>	<u>2.95%</u>	<u>2.89%</u>
26	= Increase in Full Year Additions		29	30	30
27	x FF&U Factor		1.037504	1.037504	1.037504
28	= Increase in Revenue Requirement		<u>30</u>	<u>31</u>	<u>31</u>

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Table 18

SAN DIEGO GAS & ELECTRIC
2019 CPUC General Rate Case (Application)
Electric Generation
Calculation of Revenue Requirement Increase
Federal Tax Depreciation Expense & Prior Year CCFT
(Thousands of Dollars)

Line No.	Description	TY 2019	PTY 2020	PTY 2021	PTY 2022
<u>Federal Regulatory Tax Depreciation</u>					
1	TY Federal Tax Depreciation	63,755			
2	/ TY Plant-In-Service	<u>1,384,298</u>			
3	= System Average Federal Tax Depreciation Rate	4.61%	4.61%	4.61%	4.61%
4	x Current Attrition Year Additions		<u>25,957</u>	<u>26,535</u>	<u>27,131</u>
5	= Increase in Federal Tax Depreciation Expense		1,195	1,222	1,250
6	x -Federal Income Tax Rate	(0.2100)	<u>(0.2100)</u>	<u>(0.2100)</u>	<u>(0.2100)</u>
7	= Federal Income Taxes		(251)	(257)	(262)
8	x Net-to-Gross Multiplier	1.440649	<u>1.440649</u>	<u>1.440649</u>	<u>1.440649</u>
9	= Decrease in Revenue Requirement		<u>(362)</u>	<u>(370)</u>	<u>(378)</u>
<u>California Corporation Franchise Tax (Prior Year)</u>					
10	+ RevReq from Book Depreciation			1,481	1,805
11	+ RevReq from State Tax Depreciation			(153)	(156)
12	+ RevReq from Federal Tax Depreciation (ACRS/MACRS)			(362)	(370)
13	+ Rate Base: Preferred Stock			(79)	(72)
14	+ Rate Base: Common Stock Equity			(2,456)	(2,247)
15	+ CCFT			<u>(633)</u>	<u>91</u>
16	= Revenue Requirement Increase			(2,202)	(949)
17	x Prior Year State Income Tax Cumulative Component			<u>0.088400</u>	<u>0.088400</u>
18	= Prior Year State Income Tax Increase			(195)	(84)
19	+ Prior Year State Income Tax (State Tax Depreciation Expense)			(106)	(108)
20	+ Prior Year State Income Tax (State Rate Change)			-	-
21	= Prior Year Total State Income Tax Increase			<u>(300)</u>	<u>(192)</u>
22	Prior Year Current California Corp Franchise Tax		6,200	5,899	5,707
23	- Prior Year CCFT Deductible for Federal Income Taxes		<u>4,107</u>	<u>6,200</u>	<u>5,899</u>
24	= Increase CCFT Deduction on Federal Income Taxes		2,092	(300)	(192)
25	<u>x -Federal Income Tax Rate</u>		<u>(0.2100)</u>	<u>(0.2100)</u>	<u>(0.2100)</u>
26	= Federal Income Taxes		(439)	63	40
27	x Net-To-Gross Multiplier		<u>1.440649</u>	<u>1.440649</u>	<u>1.440649</u>
28	= Increase in Revenue Requirement		<u>(633)</u>	<u>91</u>	<u>58</u>

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Table 19

SAN DIEGO GAS & ELECTRIC
2019 CPUC General Rate Case (Application)
Electric Generation
Calculation of Revenue Requirement Increase
Return on Rate Base
(Thousands of Dollars)

Line No.	Description	TY 2019	PTY 2020	PTY 2021	PTY 2022
<u>Change in Weighted Average Rate Base</u>					
1	TY W AVG Rate Base	930,911	930,911		
2	CY W AVG Rate Base		898,740	869,314	839,455
3	Change in W AVG Rate Base		(32,171)	(29,426)	(29,859)
<u>Long Term Debt</u>					
4	Prior Year Return on Debt	4.59%	4.59%	4.59%	4.59%
5	x Prior Year Debt Capitalization	45.25%	45.25%	45.25%	45.25%
6	= Prior Year Weighted Cost of Debt	2.08%	2.08%	2.08%	2.08%
7	x Change in W AVG Rate Base		(32,171)	(29,426)	(29,859)
8	= Change in Weighted Cost of Debt		(669)	(612)	(621)
9	x FF&U Factor	1.037504	1.037504	1.037504	1.037504
10	= Increase (Decrease) in Revenue Requirement		(694)	(635)	(644)
<u>Preferred Stock</u>					
11	Prior Year Return on Preferred Stock	6.22%	6.22%	6.22%	6.22%
12	x Prior Year Preferred Stock Capitalization	2.75%	2.75%	2.75%	2.75%
13	= Prior Year Weighted Cost of Preferred Stock	0.17%	0.17%	0.17%	0.17%
14	x Change in W AVG Rate Base		(32,171)	(29,426)	(29,859)
15	= Change in Weighted Cost of Preferred Stock		(55)	(50)	(51)
16	x Net-To-Gross Multiplier	1.440649	1.440649	1.440649	1.440649
17	= Increase (Decrease) in Revenue Requirement		(79)	(72)	(73)
<u>Common Equity</u>					
18	Prior Year Return on Common Equity	10.20%	10.20%	10.20%	10.20%
19	x Prior Year Common Equity Capitalization	52.00%	52.00%	52.00%	52.00%
20	= Prior Year Weighted Cost of Common Equity	5.30%	5.30%	5.30%	5.30%
21	x Change in W AVG Rate Base		(32,171)	(29,426)	(29,859)
22	= Change in Weighted Cost of Common Equity		(1,705)	(1,560)	(1,583)
23	x Net-To-Gross Multiplier	1.440649	1.440649	1.440649	1.440649
24	= Increase (Decrease) in Revenue Requirement		(2,456)	(2,247)	(2,280)
25	Total Increase in EG Revenue Requirement		(2,575)	(1,256)	(1,297)

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SAN DIEGO GAS & ELECTRIC
2019 CPUC General Rate Case (Application)
Gas Distribution
Calculation of Revenue Requirement Increase
Depreciation Expense, State Tax Depreciation, Ad Valorem Taxes, & Payroll Taxes
(Thousands of Dollars)

Line No.	Description	TY 2019	PTY 2020	PTY 2021	PTY 2022
<u>Depreciation Expense</u>					
1	Test Year (TY) Accrual	84,968			
2	/ TY Weighted Average (WAVG) Plant-in-Service	<u>2,361,232</u>			
3	= System Average Depreciation Rate	3.60%	3.60%	3.60%	3.60%
4	x Plant in Service Weighted Average Increase		<u>210,595</u>	<u>169,305</u>	<u>173,412</u>
5	= Increase in Depreciation Expense		7,578	6,092	6,240
6	x Net-to-Gross Multiplier	1.420539	1.420539	1.420539	1.420539
7	= Increase in Revenue Requirement		<u>10,765</u>	<u>8,654</u>	<u>8,864</u>
<u>Ad Valorem Taxes</u>					
8	TY Ad Valorem Taxes	16,209			
9	/ TY Plant In Service	<u>2,501,430</u>			
10	= System Average Ad Valorem Tax Rate	0.65%	0.65%	0.65%	0.65%
11	x Current Attrition Year Additions		<u>167,638</u>	<u>171,609</u>	<u>175,903</u>
12	= Increase to Ad Valorem Taxes		1,086	1,112	1,140
13	x FF&U Factor	1.023021	1.023021	1.023021	1.023021
14	= Increase in Revenue Requirement		<u>1,111</u>	<u>1,138</u>	<u>1,166</u>
<u>State Regulatory Tax Depreciation</u>					
15	TY State Tax Depreciation	74,707			
16	/ TY Plant In Service	<u>2,501,430</u>			
17	= System Average State Tax Depreciation Rate	2.99%	2.99%	2.99%	2.99%
18	x Current Attrition Year Additions		<u>167,638</u>	<u>171,609</u>	<u>175,903</u>
19	= Increase in State Tax Depreciation Expense		5,007	5,125	5,253
20	x -State Income Tax Rate	(0.0884)	(0.0884)	(0.0884)	(0.0884)
21	= State Income Taxes		(443)	(453)	(464)
22	x Net-to-Gross Multiplier	1.420539	1.420539	1.420539	1.420539
23	= Decrease in Revenue Requirement		<u>(629)</u>	<u>(644)</u>	<u>(660)</u>
<u>Payroll Taxes</u>					
24	Prior Year Payroll Taxes		5,942	6,119	6,300
25	x Current Year Labor Escalation Rate		<u>2.98%</u>	<u>2.95%</u>	<u>2.89%</u>
26	= Increase in Full Year Additions		177	180	182
27	x FF&U Factor		1.023021	1.023021	1.023021
28	= Increase in Revenue Requirement		<u>181</u>	<u>184</u>	<u>186</u>

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Table 21

SAN DIEGO GAS & ELECTRIC
2019 CPUC General Rate Case (Application)
Gas Distribution
Calculation of Revenue Requirement Increase
Federal Tax Depreciation Expense & Prior Year CCFT
(Thousands of Dollars)

Line No.	Description	TY 2019	PTY 2020	PTY 2021	PTY 2022
<u>Federal Regulatory Tax Depreciation</u>					
1	TY Federal Tax Depreciation	67,661			
2	/ TY Plant-In-Service	<u>2,501,430</u>			
3	= System Average Federal Tax Depreciation Rate	2.70%	2.70%	2.70%	2.70%
4	x Current Attrition Year Additions		<u>167,638</u>	<u>171,609</u>	<u>175,903</u>
5	= Increase in Federal Tax Depreciation Expense		4,534	4,642	4,758
6	x -Federal Income Tax Rate	(0.2100)	<u>(0.2100)</u>	<u>(0.2100)</u>	<u>(0.2100)</u>
7	= Federal Income Taxes		(952)	(975)	(999)
8	x Net-to-Gross Multiplier	1.420539	<u>1.420539</u>	<u>1.420539</u>	<u>1.420539</u>
9	= Decrease in Revenue Requirement		<u>(1,353)</u>	<u>(1,385)</u>	<u>(1,419)</u>
 <u>California Corporation Franchise Tax (Prior Year)</u>					
10	+ RevReq from Book Depreciation			10,765	8,654
11	+ RevReq from State Tax Depreciation			(629)	(644)
12	+ RevReq from Federal Tax Depreciation (ACRS/MACRS)			(1,353)	(1,385)
13	+ Rate Base: Preferred Stock			343	234
14	+ Rate Base: Common Stock Equity			10,681	7,309
15	+ CCFT			<u>(788)</u>	<u>(370)</u>
16	= Revenue Requirement Increase			19,019	13,800
17	x Prior Year State Income Tax Cumulative Component			<u>0.088400</u>	<u>0.088400</u>
18	= Prior Year State Income Tax Increase			1,681	1,220
19	+ Prior Year State Income Tax (State Tax Depreciation Expense)			(443)	(453)
20	+ Prior Year State Income Tax (State Rate Change)			<u>-</u>	<u>-</u>
21	= Prior Year Total State Income Tax Increase			1,239	767
22	Prior Year Current California Corp Franchise Tax		4,753	5,992	6,759
23	- Prior Year CCFT Deductible for Federal Income Taxes		<u>2,110</u>	<u>4,753</u>	<u>5,992</u>
24	= Increase CCFT Deduction on Federal Income Taxes		2,643	1,239	767
25	<u>x -Federal Income Tax Rate</u>		<u>(0.2100)</u>	<u>(0.2100)</u>	<u>(0.2100)</u>
26	= Federal Income Taxes		(555)	(260)	(161)
27	x Net-To-Gross Multiplier		<u>1.420539</u>	<u>1.420539</u>	<u>1.420539</u>
28	= Decrease in Revenue Requirement		<u>(788)</u>	<u>(370)</u>	<u>(229)</u>

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Table 22

SAN DIEGO GAS & ELECTRIC
2019 CPUC General Rate Case (Application)
Gas Distribution
Calculation of Revenue Requirement Increase
Return on Rate Base
(Thousands of Dollars)

Line No.	Description	TY 2019	PTY 2020	PTY 2021	PTY 2022
<u>Change in Weighted Average Rate Base</u>					
1	TY W AVG Rate Base	1,043,608	1,043,608		
2	CY W AVG Rate Base		1,185,477	1,282,551	1,379,621
3	Change in W AVG Rate Base		141,869	97,074	97,070
<u>Long Term Debt</u>					
4	Prior Year Return on Debt	4.59%	4.59%	4.59%	4.59%
5	x Prior Year Debt Capitalization	45.25%	45.25%	45.25%	45.25%
6	= Prior Year Weighted Cost of Debt	2.08%	2.08%	2.08%	2.08%
7	x Change in W AVG Rate Base		141,869	97,074	97,070
8	= Change in Weighted Cost of Debt		2,951	2,019	2,019
9	x FF&U Factor	1.023021	1.023021	1.023021	1.023021
10	= Increase in Revenue Requirement		3,019	2,066	2,066
<u>Preferred Stock</u>					
11	Prior Year Return on Preferred Stock	6.22%	6.22%	6.22%	6.22%
12	x Prior Year Preferred Stock Capitalization	2.75%	2.75%	2.75%	2.75%
13	= Prior Year Weighted Cost of Preferred Stock	0.17%	0.17%	0.17%	0.17%
14	x Change in W AVG Rate Base		141,869	97,074	97,070
15	= Change in Weighted Cost of Preferred Stock		241	165	165
16	x Net-To-Gross Multiplier	1.420539	1.420539	1.420539	1.420539
17	= Increase in Revenue Requirement		343	234	234
<u>Common Equity</u>					
18	Prior Year Return on Common Equity	10.20%	10.20%	10.20%	10.20%
19	x Prior Year Common Equity Capitalization	52.00%	52.00%	52.00%	52.00%
20	= Prior Year Weighted Cost of Common Equity	5.30%	5.30%	5.30%	5.30%
21	x Change in W AVG Rate Base		141,869	97,074	97,070
22	= Change in Weighted Cost of Common Equity		7,519	5,145	5,145
23	x Net-To-Gross Multiplier	1.420539	1.420539	1.420539	1.420539
24	= Increase in Revenue Requirement		10,681	7,309	7,308
25	Total Increase in GD Revenue Requirement		23,330	17,187	17,517