Company: San Diego Gas & Electric Company (U 902 M)
Proceeding: 2019 General Rate Case
Application: A.17-10-___
Exhibit: SDG&E-33

SDG&E

DIRECT TESTIMONY OF R. CRAIG GENTES

(RATE BASE)

October 6, 2017

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Doc # 317247

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SUMMARY

- My testimony presents San Diego Gas & Electric Company's (SDG&E's) weighted average rate base for recorded year 2016, estimated years 2017 and 2018, and Test Year (TY) 2019.
- In addition, my testimony describes the development of SDG&E's rate base and its components including the various methodologies used to derive the TY 2019 rate base of $5.3 billion for Electric and $1.0 billion for Gas.

SDG&E DIRECT TESTIMONY OF R. CRAIG GENTES
(RATE BASE)

I. PURPOSE

My testimony presents San Diego Gas & Electric Company's (SDG&E) weighted average rate base for Electric and Gas operations for recorded year 2016, estimated years 2017 and 2018, and Test Year (TY) 2019. In addition, my testimony describes the development of rate base and its components including the various methodologies used to derive the TY 2019 rate base of $5.3 billion for Electric and $1.0 billion for Gas.[1]

II. SUMMARY OF REQUEST

Table SDGE-RCG-1 below presents SDG&E's total weighted average rate base request for combined Electric and Gas operations for TY 2019.

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[1] A late reduction in SDG&E's proposed TY 2019 revenue requirement is reflected in the Summary of Earnings testimony of Khai Nguyen (Exhibit SDG&E-42). Due to the timing of the TY 2019 revenue requirement change, SDG&E has updated only certain witness testimonies to reflect this reduction prior to filing its application. SDG&E's rate base testimony proposal has not yet been updated to reflect this reduction. The rate base revenue requirement reduction will be provided and updated in the testimony and workpapers at SDG&E's earliest opportunity.

Table SDGE-RCG-1

San Diego Gas and Electric Company
WEIGHTED AVERAGE DEPRECIATED RATE BASE
Summary Total CPUC
(Thousands of Dollars)

Line No.	Account Description	Recorded Year 2016	Estimated Year 2017	Estimated Year 2018	Test Year 2019
	Fixed Capital				
1	Plant In Service	$ 9,805,446	$ 10,476,540	$ 11,282,711	$ 12,567,169
2	Total Fixed Capital	$ 9,805,446	$ 10,476,540	$ 11,282,711	$ 12,567,169
	Working Capital				
3	Fuel in Storage	$ 285	$ 285	$ 285	$ 285
4	Materials & Supplies	101,671	109,199	111,999	114,891
5	Working Cash*	100,712	104,237	107,885	178,021
6	Total Working Capital	$ 202,668	$ 213,720	$ 220,169	$ 293,197
	Other Deductions				
7	Repair Deductions Rate Base Adjustment (2016 - 2042) [1]	$ (54,952)	$ (52,838)	$ (50,725)	$ (48,611)
8	Customer Advances For Construction	(36,380)	(37,591)	(35,422)	(35,422)
9	Total Other	$ (91,332)	$ (90,429)	$ (86,147)	$ (84,033)
	Deductions For Reserves				
10	Accumulated Depreciation Reserve	$ 4,205,342	$ 4,451,179	$ 4,710,579	$ 4,981,461
11	Accumulated Amortization Reserve	318,851	386,857	465,127	548,525
12	Accumulated Deferred Taxes	713,979	752,477	838,443	928,271
13	Total Deductions For Reserves	$ 5,238,172	$ 5,590,513	$ 6,014,149	$ 6,458,256
14	Weighted Average Depreciated Rate Base	$ 4,678,610	$ 5,009,319	$ 5,402,584	$ 6,318,076

[1] D.16-06-054, p. 192.
*2016 to 2018 Working Cash based on TY 2016 GRC Decision.

III. METHODOLOGY

Rate base is defined as the net investment of property, plant, equipment, and other assets that SDG&E has acquired or constructed to provide utility services to its customers. The weighted average rate base is calculated using a 13-month average (the sum of the monthly balances from December of the prior year through December of the current year, less one-half of each December balance, divided by 12). The weighted average balance method has been an accepted industry practice for all California utilities and is a California Public Utilities Commission (Commission or CPUC) approved methodology adopted in prior rate-setting proceedings.

The four major components of rate base include Fixed Capital, Working Capital, Other Deductions, and Deductions for Reserves. This section provides a detailed description of the methodology used to forecast plant-in-service, which is included in Fixed Capital and is the largest component of the weighted average rate base. As with other rate base components, plant-in-service is computed based on original cost and is shown on a weighted average basis. To determine the plant balances for the estimated years 2017 and 2018, and TY 2019, capital expenditure information was provided through the annual planning process as described below.

A. Capital Planning Process

This section describes the capital planning process for general rate case (GRC)-funded capital that is non-balanced. The capital planning process is SDG&E's current process for prioritizing funding based on risk-informed priorities and input from operations. The capital planning process leads to organizational budgets. For non-balanced base capital, the SDG&E Executive Finance Committee (EFC) establishes a total annual capital expenditure target consistent with our authorized revenue requirement funding over the GRC cycle period. From this total allocation, funding is prioritized based on risk-informed priorities and continuous input from operations.

- **Step 1** – Initial capital allocations begin with input from Functional Capital Committees (FCCs), which are organized by the nature and type of capital investment or function: Electric Distribution, Electric Generation, Electric Transmission,[2] Gas Operations, Customer Services, Information Technology (IT), and Facilities/Other. These teams of managers and subject matter experts perform a high-level assessment of the capital requirements for serving customers to ensure that infrastructure is maintained and developed to provide safe, reliable service with the highest risk mitigation at the lowest attainable costs. Each FCC elicits broad input for developing each function's capital plan and formulates a prioritized grouping of annual spending requirements.
- **Step 2** - The capital requirements identified by the FCCs are provided to the Capital Planning Committee (CPC), a cross-functional team of directors representing each operational area with capital requests. The CPC reviews the FCC submissions, cross-

[2] Electric Transmission falls within the jurisdiction of the Federal Energy Regulatory Commission (FERC), and is therefore not included in this GRC.

prioritizes projects among the FCCs, and establishes a final ranking of proposed capital work. Projects determined to have the highest ratings on key priority metrics will receive the highest priority for funding. These key priority metrics include: safety, cost effectiveness, reliability, security, environmental, and customer experience.

- **Step 3** - The CPC presents its recommendations for capital spending consistent within each functional area and consistent with the overall funding target to the EFC, which reviews the recommendations and either approves the proposed capital funding allocations or requests changes.

Once the capital allocations are approved, each individual operating organization is chartered to manage their respective capital needs within the capital allotted by the plan. The real-time prioritization of work within the context of the budget allocations is completed by the front-line and projects managers on an ongoing and continuous basis. Regulatory compliance deadlines, customer scheduling requirements, and overall infrastructure conditions are all factors taken into consideration as work elements are executed. Progress on existing capital projects is monitored and reviewed on a monthly basis by the CPC and EFC, and any new projects stemming from incremental Commission directives or changing business needs are evaluated and assessed throughout the year to determine whether current capital allocation should be reprioritized. Prior to starting a project or making any commitments, the project manager must secure specific project approval signatures in accordance with SDG&E's Internal Order process,[3] and the Sempra Energy Utilities' approval and commitment policy.

Similar to SDG&E's risk evaluation processes,[4] the capital planning process continues to evolve as SDG&E endeavors to achieve its and the Commission's shared goal of determining the risk reduction per dollar invested. SDG&E, together with Southern California Gas Company (SoCalGas), demonstrate the first steps towards this evolution by showcasing a pilot they are currently conducting to calculate a risk spend efficiency for their proposed risk mitigations.[5] The

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[3] A Work Order Authorization form is used to document the approval authority of capital project expenditures. The appropriate level of approval authority required is based on pre-determined dollar thresholds which vary with the level of capital expenditures.

[4] SDG&E's risk evaluation processes are described in Investigation (I.) 16-10-015/I.16-10-016, Risk Assessment and Mitigation Phase Report of San Diego Gas & Electric Company and Southern California Gas Company, November 30, 2016 (RAMP Report).

[5] *See* RAMP Report at RAMP-A: Overview and Approach.

current status of the risk reduction per dollar invested metric is discussed in the testimony of Diana Day (Exhibit SCG-02/SDG&E-02, Chapter 1).

B. Plant-In-Service

Based on the projected capital expenditures and estimated completion dates provided by organizational budget planners, electric distribution, nuclear and non-nuclear generation, and gas plant balances are developed using estimated in-service dates for non-routine projects, historical experience from 2012 to 2016 for plant additions on routine projects, and projected plant retirements based on historical experience from 2012 to 2016 as the plant-in-service component of rate base.

As shown in the Fixed Capital section of Table SDGE-RCG-1 above, SDG&E's TY 2019 plant-in-service is projected to increase, reflecting higher capital expenditures in 2019 as compared to previous years. The major drivers for the increase in capital expenditure levels are described in detail in the testimonies of SDG&E's respective capital witnesses: Electric Distribution Capital – Alan Colton (Exhibit SDG&E-14); Gas Distribution – Gina Orozco-Mejia (Exhibit SDG&E-04); Gas Engineering – Deanna Haines (Exhibit SDG&E-09); Gas Transmission – Michael Bermel and Beth Musich (Exhibit SDG&E-07); Pipeline Integrity for Transmission and Distribution – Maria Martinez (Exhibit SDG&E-11); Information Technology – Chris Olmsted (Exhibit SDG&E-24); Cybersecurity – Gavin Worden (Exhibit SDG&E-25); Real Estate, Land Services, & Facilities – R. Dale Tattersall (Exhibit SDG&E-22); Electric Generation – Daniel Baerman (Exhibit SDG&E-16).

A component of plant-in-service is allowance for funds used during construction (AFUDC). Accruing for AFUDC is a generally accepted regulatory accounting procedure to capitalize the cost of debt and equity funds used to finance capital additions. SDG&E utilizes the AFUDC formula mandated by FERC's Uniform System of Accounts (USofA),[6] which the CPUC has authorized the utilities to follow. Consistent with prior SDG&E rate case proceedings before this Commission, including Decision (D).16-06-054, SDG&E typically uses its authorized Rate of Return (ROR)[7] as a reasonable proxy for estimating AFUDC applied to construction work in progress (CWIP) in the Results of Operations (RO) model. Due to timing for this filing,

[6] 18 Code of Federal Regulations (CFR) Part 101, Electric Plant Instruction 3(A)17 and 18 CFR Part 201, Gas Plant Instruction 3(A)17.

[7] SDG&E's current authorized ROR is 7.79% per D.12-12-034 (TY 2013 Cost of Capital for Major Utilities) at 52, Ordering Paragraph 2.

SDG&E is using a forecasted ROR, which will be trued up at a future date to the ROR submitted in Advice Letter 3120-E/2611-G on September 29, 2017.[8] Historically, SDG&E uses its authorized ROR for forecasting purposes, which reasonably approximates its actual AFUDC rates. Other than the authorized ROR, there is no separate forecast of debt and equity in developing AFUDC rates for the GRC period. On an actual basis, SDG&E applies an AFUDC rate that is computed in conformance with the formula prescribed by FERC's USofA. SDG&E's recorded AFUDC rate is derived by taking its capital structure at the time of the calculations and weighting its actual capital structure by the authorized return on equity (ROE), actual costs of debt, and authorized preferred stock costs as adopted by D.12-12-034.

SDG&E's authorized capital structure is comprised of common equity, long-term debt, and preferred stock. There is no "authorized" short-term debt component in the authorized capital structure because SDG&E finances its capital investments with long-term debt and equity. This is consistent with prudent financial management where long-lived assets such as plant and equipment are financed with long-term borrowing and equity. Short-term debt, however, is used for temporary fluctuations and needs in the cash flow cycle and is not used for long-term ongoing financing of SDG&E long-lived investments. There may be times when SDG&E temporarily carries balances of short-term debt due to balancing account under-collections and/or fluctuations in timing of cash inflows and cash outflows which warrant using short-term debt. Outstanding short-term debt is factored into the AFUDC calculations to the extent the short-term debt exceeds the approved allowable FERC regulatory thresholds. As a result, any temporary use of short-term debt is already taken into consideration in the AFUDC calculations and reflected in the rates. The Cost of Capital proceeding is the regulatory forum that establishes SDG&E's capital structure and its authorized costs of financing. SDG&E manages its capital structure over the long-term towards these Commission-authorized targets.An offsetting component to capital expenditures prior to being recorded to plant-in-service is contributions in aid of construction (CIAC). CIAC are non-refundable contributions

[8] In D.17-07-005 (modifying D.12-12-034 and D.13-03-015), the Commission reduced SDG&E's Return on Equity to 10.20% (from 10.30%), and directed SDG&E to submit their revised embedded cost of long-term debt and the costs of any preferred stock issued since January 3, 2013 in an advice letter by September 29, 2017. SDG&E filed Advice Letter 3120-E/2611-G on September 29, 2017, which proposed a new forecasted ROR based on the new Return on Equity effective January 1, 2018. SDG&E will update this forecasted ROR at the earliest opportunity after the Commission approves a final rate.

collected from utility customers in the form of money – or its equivalent – toward the construction of plant, such as customer-requested relocations. CIAC amounts collected or received are a direct reduction of fully-loaded (*i.e.*, including overhead costs) capital expenditures (if any) prior to being added to rate base.

IV. ELECTRIC RATE BASE SUMMARY

Table SDGE-RCG-2 below presents SDG&E's total Electric weighted average rate base.

Table SDGE-RCG-2

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

Line No.	Account Description	Recorded Year 2016	Estimated Year 2017	Estimated Year 2018	Test Year 2019
	Fixed Capital				
1	Plant In Service	$ 7,994,702	$ 8,494,927	$ 9,129,565	$ 10,205,985
2	Total Fixed Capital	$ 7,994,702	$ 8,494,927	$ 9,129,565	$ 10,205,985
	Working Capital				
3	Materials & Supplies	$ 98,360	$ 105,869	$ 108,555	$ 111,341
4	Working Cash*	92,137	95,362	98,699	147,248
5	Total Working Capital	$ 190,497	$ 201,231	$ 207,255	$ 258,589
	Other Deductions				
6	Repair Deductions Rate Base Adjustment (2016 - 2042)	[1] $ (54,952)	$ (52,838)	$ (50,725)	$ (48,611)
7	Customer Advances For Construction	(34,041)	(35,366)	(33,343)	(33,343)
8	Total Other	$ (88,992)	$ (88,204)	$ (84,068)	$ (81,954)
	Deductions For Reserves				
9	Accumulated Depreciation Reserve	$ 3,211,053	$ 3,418,076	$ 3,637,543	$ 3,868,520
10	Accumulated Amortization Reserve	253,884	307,888	371,070	436,829
11	Accumulated Deferred Taxes	609,831	635,864	698,246	771,075
12	Total Deductions For Reserves	$ 4,074,768	$ 4,361,828	$ 4,706,858	$ 5,076,425
13	Weighted Average Depreciated Rate Base	$ 4,021,439	$ 4,246,126	$ 4,545,893	$ 5,306,195

[1] D.16-06-054, p. 192.

*2016 to 2018 Working Cash based on TY 2016 GRC Decision.

The development of each component of Electric rate base is discussed below.

A. Fixed Capital – Electric Plant-In-Service

Table SDGE-RCG-3

Fixed Capital - Electric
(Thousands of Nominal Dollars)

Line No.	Account Description	Recorded Year 2016	Estimated Year 2017	Estimated Year 2018	Test Year 2019
	Fixed Capital				
1	Plant In Service	$ 7,994,702	$ 8,494,927	$ 9,129,565	$ 10,205,985
2	Total Fixed Capital	$ 7,994,702	$ 8,494,927	$ 9,129,565	$ 10,205,985

Plant-in-service represents gross fixed assets used in utility operations with an expected economic and physical life greater than one year from the date placed in service. Electric plant-in-service is comprised of Distribution Plant, Reclassified Transmission Plant to Distribution, Allocated Common Plant to Distribution, Allocated Electric General Plant to Distribution, and Non-Nuclear Generation.

Electric plant-in-service was developed in accordance with the definitions prescribed in SDG&E's FERC Transmission Owner Tariff filing,[9] in which FERC defined and approved the methodology by which SDG&E would unbundle its electric department. In order to fully assign SDG&E's plant to the appropriate departmental functions, reclassification of specific plant was made across traditional FERC functional categories. For example, SDG&E redefined certain "transmission" plant as distribution and some "distribution" plant as transmission in accordance with the FERC Transmission Access filing, and consistent with Commission filings since SDG&E's 1999 Cost of Service Application (A.) 98-01-014.[10] In this GRC TY 2019 filing, SDG&E proposes using the labor ratio allocation method to allocate Common Plant between Electric Transmission, Electric Distribution, and Gas, as well as allocate Electric General Plant assets between Electric Transmission and Electric Distribution, as sponsored in the testimony of the Shared Services & Shared Assets Billing, Segmentation, & Capital Reassignments witness James Vanderhye (Exhibit SCG-34/SDG&E-32).

As shown in Table SDGE-RCG-3 above, the recorded year 2016 weighted average plant-in-service for Electric Distribution and Generation is $8.0 billion. This amount includes $6.1

[9] FERC Docket No. ER97-2364, SDG&E FERC Transmission Owner Tariff (March 31, 1997).
[10] Please see my work papers for supporting details.

billion in Electric Plant (including redefined amounts as described above), $278.0 million in Electric General Plant allocated to Electric Distribution, $618.4 million in Common Plant allocated to Electric Distribution, and $1.0 billion in Generation, as shown in my work papers. The recorded year 2016 weighted average plant-in-service for Nuclear is zero.

The TY 2019 weighted average plant balance for Electric includes Electric Distribution, Electric General, and Common allocated to Electric and Generation and is based upon recorded plant data for 2016 and forecasted additions and retirements for 2017, 2018, and 2019. The weighted average plant balance for TY 2019 for Electric Distribution and Generation is $10.2 billion. This includes $7.5 billion in Distribution Plant (including redefined amounts), $333.5 million in Electric General Plant applicable to Electric Distribution, $958.6 million in Common Plant applicable to Electric Distribution, and $1.4 billion in Generation, as shown in my work papers.

Forecasted Electric Generation, Distribution and General direct capital expenditures, including an allocation of Common Plant, totaled $2.5 billion for years 2017 to 2019. As mentioned in Section III.B above, specific witnesses provide testimony regarding capital expenditures related to their organizations, as well as supporting documentation in their respective work papers.

For blanket or routine projects, annual capital additions were forecast based on capital expenditures and historical average work order lives provided by organizational budget planners. For individual non-routine projects, capital additions were determined by the organization budget planners based on projected in-service dates. Capital expenditures are escalated and fully loaded with overheads by project by capital witness in the RO Model. The escalation factors applied are sponsored in the Cost Escalation testimony of Scott Wilder (Exhibit SDG&E-39). The capital overhead pool amounts for local engineering, department overheads, and contract administration are sponsored in the Electric Distribution – Capital testimony of Alan Colton (Exhibit SDG&E-14). For all remaining overheads assigned to capital such as pension and benefits, workers compensation, administrative and general, etc., the costs are sponsored by various witnesses and forecasted in cost centers as directed in SDG&E's 2008 GRC Decision.[11] The cost center expenses have been mapped to FERC accounts as explained in the Summary of Earnings testimony of Khai Nguyen (Exhibit SDG&E-42), while the factors that are used to produce

[11] D.08-07-046 at 106, Ordering Paragraph 22.

operations and maintenance (O&M) to capital reassignment rates are sponsored in the Shared Services & Shared Assets Billing, Segmentation, & Capital Reassignments testimony of James Vanderhye (Exhibit SCG-34/SDG&E-32).

Finally, retirements for 2017 through 2019 for all plant accounts were forecasted based on a five-year retirement history from 2012 through 2016. The use of five years of historical data is consistent with and in line with the currently adopted methodology used by capital and O&M witnesses in their forecasts as well as with prior SDG&E rate case proceedings before this Commission.

B. Working Capital - Electric

Table SDGE-RCG-4

Working Capital - Electric
(Thousands of Nominal Dollars)

Line No.	Account Description	Recorded Year 2016	Estimated Year 2017	Estimated Year 2018	Test Year 2019
	Working Capital				
1	Materials & Supplies	$ 98,360	$ 105,869	$ 108,555	$ 111,341
2	Working Cash*	92,137	95,362	98,699	147,248
3	Total Working Capital	$ 190,497	$ 201,231	$ 207,255	$ 258,589

*2016 to 2018 Working Cash based on TY 2016 GRC Decision.

1. Materials and Supplies

Materials and Supplies (M&S) represents the cost of inventory materials purchased for construction, operation, maintenance, and contract work. M&S include items which are directly assignable to Electric Generation, Nuclear, and Distribution, as well as an allocated portion of General and Common consistent with the labor ratio allocation methodology referred to in Section IV.A above. Although SDG&E does not anticipate significant changes from its current inventory levels for operational needs, the future costs of M&S are assumed to increase at the projected rate of capital inflation. As such, the estimated years 2017 ($105.9 million) and 2018 ($108.6 million), and TY 2019 ($111.3 million) are calculated using the December 2016 ending balance of $104.6 million and applying the cost escalation index for capital inflation, which is sponsored in the testimony of Scott Wilder (Exhibit SDG&E-39). Please see supporting my work papers for the detailed computation.

2. Working Cash

Working Cash represents the cash requirement resulting from a lead-lag study and operational cash requirements contributed by investors. Working cash is included in rate base to compensate our investors for the funds advanced to operate the business. These funds are used to pay operating expenses in advance of receiving customer revenues and for day-to-day operational working fund requirements. For TY 2019, SDG&E proposes electric working cash forecast of $147.2 million. The working cash study is sponsored in the testimony of Steve Dais (Exhibit SDG&E-36).

C. Other Deductions

Table SDGE-RCG-5

Other Deductions - Electric
(Thousands of Nominal Dollars)

Line No.	Account Description	Recorded Year 2016	Estimated Year 2017	Estimated Year 2018	Test Year 2019
	Other Deductions				
1	Repair Deductions Rate Base Adjustment (2016 - 2042) [1]	$ (54,952)	$ (52,838)	$ (50,725)	$ (48,611)
2	Customer Advances For Construction	(34,041)	(35,366)	(33,343)	(33,343)
3	Total Other	$ (88,992)	$ (88,204)	$ (84,068)	$ (81,954)

[1] D.16-06-054, p. 192.

1. Repairs Deduction Rate Base Adjustment (2016 – 2042)

The repairs deduction rate base adjustment represents the reduction to rate base as ordered in D.16-06-054.[12]

2. Customer Advances for Construction

Customer advances for construction (CAC) represents refundable cash advances for construction paid by third parties and/or customers who have requested the installation of electric distribution facilities for new business. These cash advances are subject to refund when new customers and appliances are added to these lines as mandated by the Commission and described in SDG&E Tariff Rules 15 and 16. SDG&E anticipates a decrease of $0.7 million in the average balance of electric CAC for new construction deposits and refunds in TY 2019 as compared to recorded year 2016.

[12] D.16-06-054 at 192. The rate base component reduction is identified in D.16-06-054, Appendix B at 3.

The forecast data begins with recorded December 2016 month-end balances, and then incorporates estimated activity for routine projects. Routine projects are projected based on non-farm employment forecasts for San Diego County and estimated activity for planned major projects based on construction forecasts for individual projects. The CAC balances include the receipts of cash advances, which are recorded as increases, and refunds and/or forfeitures of cash advances, which are recorded as decreases. Please see supporting my work papers for the detailed computation.

D. Deductions for Reserves - Electric

Table SDGE-RCG-6

Deductions For Reserves - Electric
(Thousands of Nominal Dollars)

Line No.	Account Description	Recorded Year 2016	Estimated Year 2017	Estimated Year 2018	Test Year 2019
	Deductions For Reserves				
1	Accumulated Depreciation Reserve	$ 3,211,053	$ 3,418,076	$ 3,637,543	$ 3,868,520
2	Accumulated Amortization Reserve	253,884	307,888	371,070	436,829
3	Accumulated Deferred Taxes	609,831	635,864	698,246	771,075
4	Total Deductions For Reserves	$ 4,074,768	$ 4,361,828	$ 4,706,858	$ 5,076,425

1. Accumulated Depreciation Reserve

The accumulated depreciation reserve represents a weighted average accumulated book reserve which includes a summation of depreciation accrual charges, plant retirements, net salvage, and other adjustments or transfers as prescribed by FERC's USofA. The amount is based on the recorded depreciation reserve as of December 31, 2016, and forecasted net activity (depreciation, retirements, and net salvage) of $678.6 million for years 2017 through 2019. Depreciation is sponsored in the testimony of Matthew Vanderbilt (Exhibit SDG&E-34).

2. Accumulated Amortization Reserve

Accumulated amortization reserve represents the weighted average accumulation of the provision and salvage costs less retirement and removal costs for land rights, software, and limited-term investments. The amount is based on the recorded amortization reserve as of December 31, 2016, and forecasted net activity (amortization, retirements, and net salvage) of $192.3 million for years 2017 through 2019. Amortization is sponsored in the Depreciation testimony of Matthew Vanderbilt (Exhibit SDG&E-34).

3. Accumulated Deferred Taxes

Accumulated deferred taxes arises from accelerated tax over book depreciation and the tax normalization requirements enacted pursuant to the Economic Tax Recovery Act of 1981 (ERTA). The tax normalization requirements provide that the federal tax basis of 1981 and future years' plant additions be depreciated for ratemaking tax purposes using book lives on a straight-line remaining life basis. The tax effect of the difference between this normalized depreciation method and the accelerated depreciation methods allowed for federal income tax return purposes is treated as a reduction to rate base, thereby reflecting this tax treatment as a benefit for the ratepayer.

SDG&E has computed deferred tax balances in accordance with the normalization requirements of Internal Revenue Code § 168(i)(9) and Treasury Regulation § 1.167(1)-(h)(6)(ii). The forecasted deferred tax balance that reduces rate base is the weighted average of the beginning of the period balance and the end of the period balance (derived using a pro rata portion of the projected change during the period). The derivation of the deferred tax balance is sponsored in the testimony of the Taxes witness Ragan Reeves (Exhibit SDG&E-35).

V. GAS RATE BASE SUMMARY

Table SDGE-RCG-7 below presents SDG&E's total Gas weighted average rate base.

[Remainder of page intentionally left blank]

Table SDGE-RCG-7

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

Line No.	Account Description	Recorded Year 2016	Estimated Year 2017	Estimated Year 2018	Test Year 2019
	Fixed Capital				
1	Plant In Service	$ 1,810,744	$ 1,981,613	$ 2,153,146	$ 2,361,184
2	Total Fixed Capital	$ 1,810,744	$ 1,981,613	$ 2,153,146	$ 2,361,184
	Working Capital				
3	Fuel in Storage	$ 285	$ 285	$ 285	$ 285
4	Materials & Supplies	3,311	3,330	3,444	3,550
5	Working Cash*	8,575	8,875	9,186	30,773
6	Total Working Capital	$ 12,171	$ 12,490	$ 12,914	$ 34,608
	Other Deductions				
7	Repair Deductions Rate Base Adjustment (2016 - 2042) [1]	$ -	$ -	$ -	$ -
8	Customer Advances For Construction	$ (2,340)	$ (2,225)	$ (2,079)	$ (2,079)
9	Total Other	$ (2,340)	$ (2,225)	$ (2,079)	$ (2,079)
	Deductions For Reserves				
10	Accumulated Depreciation Reserve	$ 994,289	$ 1,033,103	$ 1,073,036	$ 1,112,940
11	Accumulated Amortization Reserve	64,967	78,969	94,057	111,696
12	Accumulated Deferred Taxes	104,148	116,613	140,197	157,196
13	Total Deductions For Reserves	$ 1,163,403	$ 1,228,685	$ 1,307,291	$ 1,381,832
14	Weighted Average Depreciated Rate Base	$ 657,171	$ 763,193	$ 856,691	$ 1,011,881

[1] D.16-06-054, p. 192.
*2016 to 2018 Working Cash based on TY 2016 GRC Decision.

The development of each component of Gas rate base is discussed below.

A. Fixed Capital - Gas Plant-In-Service

Table SDGE-RCG-8

Fixed Capital - Gas
(Thousands of Nominal Dollars)

Line No.	Account Description	Recorded Year 2016	Estimated Year 2017	Estimated Year 2018	Test Year 2019
	Fixed Capital				
1	Plant In Service	$ 1,810,744	$ 1,981,613	$ 2,153,146	$ 2,361,184
2	Total Fixed Capital	$ 1,810,744	$ 1,981,613	$ 2,153,146	$ 2,361,184

As shown in Table SDGE-RCG-8 above, the recorded year 2016 weighted average gas plant-in-service is approximately $1.8 billion. This includes $1.6 billion in Gas Plant and $243.8 million in Common Plant allocated to Gas Plant, as shown in my work papers.

The TY 2019 weighted average plant balance for Gas, including the Common Plant associated with Gas, is based upon recorded plant data for 2016 and forecasted additions and retirements for 2017, 2018 and 2019. The weighted average plant balance for TY 2019, including Common Plant applicable to Gas is $2.4 billion. The weighted average plant balance for TY 2019 is composed of $2.0 billion in Gas Plant and $395.3 million in Common Plant applicable to Gas, as shown in my work papers.

Forecasted Gas and Common direct capital expenditures totaled $604.3 million for years 2017 to 2019. As mentioned in Section III.B above, specific witnesses will provide testimonies regarding capital expenditures related to their organizations, as well as supporting documentation in their respective work papers.

For blanket or routine projects, annual capital additions were forecasted based on capital expenditures and historical average work order lives provided by organizational budget planners. For individual non-routine projects, plant additions were determined by the organization budget planners based on projected in-service dates. Capital expenditures are escalated and fully loaded with overheads by project by capital witnesses in the RO Model. The escalation factors applied are sponsored in the Escalation testimony of Scott Wilder (Exhibit SDG&E-39). The capital overhead pool amounts, such as engineering and department overheads, are sponsored in the Electric Distribution – Capital and Gas Distribution testimonies of Alan Colton (Exhibit SDG&E-14) and Gina Orozco-Mejia (Exhibit SDG&E-04), respectively. For all remaining overheads assigned to capital such as pension and benefits, workers compensation, administrative and general, etc., the costs are sponsored by various witnesses and forecasted in cost centers as directed in SDG&E's 2008 GRC Decision.[13] The cost center expenses have been mapped to FERC accounts as explained in the Summary of Earnings testimony of Khai Nguyen (Exhibit SDG&E-42), while the factors that are used to produce O&M to capital reassignments are sponsored in the Shared Services & Shared Assets Billing, Segmentation, & Capital Reassignments testimony of James Vanderhye (Exhibit SCG-34/SDG&E-32).

[13] D.08-07-046 at 106, Ordering Paragraph 22.

Finally, retirements for 2017 through 2019 for all plant accounts were forecasted based on a five-year retirement history from 2012 through 2016. The use of five years of historical data is consistent with and in line with currently adopted methodology used by capital and O&M witnesses in their forecasts as well as with prior SDG&E rate case proceedings before this Commission.

B. Working Capital - Gas

Table SDGE-RCG-9

Working Capital - Gas
(Thousands of Nominal Dollars)

Line No.	Account Description	Recorded Year 2016	Estimated Year 2017	Estimated Year 2018	Test Year 2019
	Working Capital				
1	Fuel in Storage	$ 285	$ 285	$ 285	$ 285
2	Materials & Supplies	3,311	3,330	3,444	3,550
3	Working Cash*	8,575	8,875	9,186	30,773
4	Total Working Capital	$ 12,171	$ 12,490	$ 12,914	$ 34,608

*2016 to 2018 Working Cash based on TY 2016 GRC Decision.

1. Fuel in Storage

Gas fuel in storage consists of gas line pack. Annually, the line pack values are computed based on line pack volumes in therms, valued at the current weighted average cost of gas (WACOG). The monthly recorded December 2015 through December 2016 line pack values were used to develop the weighted average amount included in Gas rate base, with no forecasted changes in value for 2017 to 2019, as shown in my work papers.

2. Materials and Supplies

M&S included in rate base are those items which are directly assignable to gas plus an allocated portion of Common M&S, consistent with the labor ratio allocation methodology referred to in Section V.A. above. While SDG&E does not anticipate significant changes from its current inventory levels for operational needs, the future costs of M&S are assumed to increase at the projected rate of capital inflation. As such, the estimated years 2017 ($3.3 million) and 2018 ($3.4 million), and TY 2019 ($3.6 million) are calculated using the December 2016 ending balance of $3.3 million and then applying an annual factor for capital inflation

which is sponsored in the testimony of Escalation witness Scott Wilder (Exhibit SDG&E-39). Please see supporting my work papers for the detailed computation.

3. Working Cash

Working Cash represents the cash requirement resulting from a lead-lag study and operational cash requirements contributed by investors. Working cash is included in rate base to compensate our investors for the funds advanced to operate the business. These funds are used to pay operating expenses in advance of receiving customer revenues and for day-to-day operational working fund requirements. For TY 2019, SDG&E proposes a gas working cash forecast of $30.8 million. The working cash study is sponsored in the testimony of Steve Dais (Exhibit SDG&E-36).

C. Other Deductions

Table SDGE-RCG-10

Other Deductions - Gas
(Thousands of Nominal Dollars)

Line No.	Account Description	Recorded Year 2016	Estimated Year 2017	Estimated Year 2018	Test Year 2019
	Other Deductions				
1	Repair Deductions Rate Base Adjustment (2016 - 2042) [1]	$ -	$ -	$ -	$ -
2	Customer Advances For Construction	$ (2,340)	$ (2,225)	$ (2,079)	$ (2,079)
3	Total Other	$ (2,340)	$ (2,225)	$ (2,079)	$ (2,079)

[1] D.16-06-054, p. 192.

1. Repairs Deduction Rate Base Adjustment (2016-2042)

The repairs deduction rate base adjustment represents the reduction to rate base as ordered in D.16-06-054.[14]

2. Customer Advances for Construction

CAC represents refundable cash advances for construction paid by third parties and/or customers who have requested the installation of new business mains and services. These cash advances are subject to refund when new customers and appliances are added to these lines as mandated by the Commission and described in SDG&E Tariff Rules 15 and 16. SDG&E

[14] D.16-06-054 at 192. The rate base component reduction is identified in D.16-06-054, Appendix B at 3.

anticipates a decrease of $0.3 million in the average balance of gas CAC for new construction deposits and refunds in TY 2019 as compared to recorded year 2016.

The forecast data begins with recorded December 2016 month-end balances, and then incorporates estimated activity for routine projects. Routine projects are projected based on non-farm employment forecasts for San Diego County and estimated activity for planned major projects based on construction forecasts for individual projects. The CAC balances include the receipts of cash advances, which are recorded as increases, and refunds and/or forfeitures of cash advances, which are recorded as decreases. Please see supporting my work papers for the detailed computation.

D. Deductions for Reserves - Gas

Table SDGE-RCG-11

Deductions For Reserves - Gas
(Thousands of Nominal Dollars)

Line No.	Account Description	Recorded Year 2016	Estimated Year 2017	Estimated Year 2018	Test Year 2019
	Deductions For Reserves				
1	Accumulated Depreciation Reserve	$ 994,289	$ 1,033,103	$ 1,073,036	$ 1,112,940
2	Accumulated Amortization Reserve	64,967	78,969	94,057	111,696
3	Accumulated Deferred Taxes	104,148	116,613	140,197	157,196
4	Total Deductions For Reserves	$ 1,163,403	$ 1,228,685	$ 1,307,291	$ 1,381,832

1. Accumulated Depreciation Reserve

The accumulated depreciation reserve represents a weighted average accumulated book reserve which includes a summation of depreciation accrual charges, plant retirements, net salvage, and other adjustments or transfers as prescribed by FERC's USofA. The amount is based on the recorded depreciation reserve as of December 31, 2016, and forecasted net activity (depreciation, retirements, and net salvage) of $117.7 million for years 2017 through 2019. Depreciation is sponsored in the testimony of Matthew Vanderbilt (Exhibit SDG&E-34).

2. Accumulated Amortization Reserve

Accumulated amortization reserve represents weighted average accumulated of the provision and salvage costs less retirement and removal costs for land rights, software, and limited-term investments. The amount is based on the recorded amortization reserve as of December 31, 2016, and forecasted net activity (amortization, retirements and net salvage) of

$48.8 million for years 2017 through 2019. Amortization is sponsored in the Depreciation testimony of Matthew Vanderbilt (Exhibit SDG&E-34).

3. Accumulated Deferred Taxes

Accumulated deferred taxes arises from accelerated tax over book depreciation and the tax normalization requirements enacted pursuant to ERTA of 1981. The tax normalization requirements provide that the federal tax basis of 1981 and future years' plant additions be depreciated for ratemaking tax purposes using book lives on a straight-line remaining life basis. The tax effect of the difference between this normalized depreciation method and the accelerated depreciation methods allowed for federal income tax return purposes is treated as a reduction to rate base, thereby reflecting this tax treatment as a benefit for the ratepayer.

SDG&E has computed deferred tax balances in accordance with the normalization requirements of Internal Revenue Code § 168(i)(9) and Treasury Regulation § 1.167(1)-(h)(6)(ii). The forecasted deferred tax balance that reduces rate base is the weighted average of the beginning of the period balance and the end of the period balance (derived using a pro rata portion of the projected change during the period). The derivation of the deferred tax balance is sponsored in the testimony of the Taxes witness Ragan Reeves (Exhibit SDG&E-35).

VI. SHARED ASSET RATE BASE

In April 2002, as part of the Commission-approved integration of SDG&E and SoCalGas (*see* D.01-09-056), certain utility capital assets were deemed to be shared by both utilities. These shared assets included computer software, computer equipment, structures and improvements, land, and telecommunication equipment. In order to recognize that ratepayers across both utilities are appropriately billed for the use of these assets, a process for inter-company billing of the associated revenue requirements was developed.

The rate base calculation for both the shared assets that are recorded in SDG&E plant balances, and future forecasted shared assets is computed in accordance with the same Commission-approved methodologies as described in Section III above. The Shared Assets witness James Vanderhye (Exhibit SCG-34/SDG&E-32) provides the details for SDG&E's shared assets.

VII. CONCLUSION

SDG&E requests that the Commission adopt all components of Weighted Average Rate Base, as summarized in Table SDGE-RCG-1 for TY 2019, as reasonable.

This concludes my prepared direct testimony.

VIII. WITNESS QUALIFICATIONS

My name is R. Craig Gentes. My business address is 8335 Century Park Court, San Diego, California, 92123. I am employed by SDG&E as the Director of Accounting Operations within the Controller's organization.

In 2017, I assumed my current role of Director of Accounting Operations. I am responsible for the Asset & Project Accounting, Accounts Payable and Financial Systems Client Support functions for SDG&E.

Previously, I have served as Director of Utility Accounting, responsible for the Financial Accounting, Regulatory Reporting, and Bank Reconciliation and Escheatment functions for both SDG&E and SoCalGas; Director of Accounting Operations, responsible for the Cost Accounting, the Affiliate Billing and Costing and Sundry Services functions for both SDG&E and SoCalGas; Director of Compliance, responsible for the CPUC and FERC Affiliate Compliance activities, the Accounts Payable function, and Financial Policies and Controls; Manager of Financial Policies and Controls, responsible for the implementation of the compliance process to meet the requirements of the Sarbanes-Oxley Act; and Financial Accounting Manager, primarily responsible for the monthly closing of the financial statements, Generally Accepted Accounting Principles (GAAP) accounting issues and research, and participating in Securities Exchange Commission (SEC) and CPUC financial reporting issues and requirements.

Prior to joining SDG&E, I worked for Deloitte Haskins & Sells, now Deloitte & Touche, in the auditing department. I obtained my California Certified Public Accountant (CPA) license in 1984, and that license is currently in active status.

I received a Bachelor of Science degree in Business Administration with a major in Accounting from the University of Nebraska-Lincoln in 1982.

I have previously testified before the CPUC.

APPENDIX A

GLOSSARY OF TERMS

AFUDC: Allowance for Funds Used During Construction
CAC: Customer Advances for Construction
CIAC: Contribution in Aid of Construction
CFR: Code of Federal Regulations
CPC: Capital Planning Committee
CPUC: California Public Utilities Commission
CWIP: Construction Work-in-Progress
EFC: Executive Finance Committee
ERTA: Economic Tax Recovery Act of 1981
FCC: Functional Capital Committees
FERC: Federal Energy Regulatory Commission
GRC: General Rate Case
IT: Information Technology
ITCC: Income Tax Component of Contribution in Aid of Construction
M&S: Materials & Supplies
NIBCWIP: Non-Interest Bearing Construction Work-in-Progress
O&M: Operations and Maintenance
RAMP: Risk Assessment and Mitigation Phase
RO: Results of Operations
ROE: Return on Equity
ROR: Rate of Return
SDG&E: San Diego Gas & Electric Company
SCG/SoCalGas: Southern California Gas Company
TY: Test Year
USofA: Uniform System of Accounts
WACOG: Weighted Average Cost of Gas