

Application: A.17-04-XXX

Exhibit No.: \_\_\_\_\_

Witnesses: Woodruff; Vanderhye

**PREPARED DIRECT TESTIMONY OF  
MICHAEL R. WOODRUFF AND JAMES G. VANDERHYE JR.  
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY  
CHAPTER 7**



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

**April 28, 2017**

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**PREPARED DIRECT TESTIMONY OF**  
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**CHAPTER 7**

**I. INTRODUCTION**

The purpose of our direct testimony on behalf of San Diego Gas & Electric Company (“SDG&E”) is to present the revenue requirement resulting from the capital and operations and maintenance (“O&M”) costs and benefits forecasts for the Customer Information System (“CIS”) Replacement Program. The forecasted revenue requirement results in \$996.6 million in costs for the period 2017 to 2042. These costs are offset by \$1,289.6 million of future revenue requirement benefits for the period 2022 to 2042.

**II. REVENUE REQUIREMENT**

The revenue requirement associated with the program is based on the forecasted capital and O&M costs and benefits described in the Prepared Direct Testimony of Witness Atkinson (Chapter 4).<sup>1</sup> Table 1 below summarizes the direct costs and benefits of the CIS Replacement.

**Table 1: Direct Costs and Benefits Summary**  
*(In Millions of Dollars, Nominal)*

|                 | 2017 | 2018 | 2019 | 2020  | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027-2036 | Total |
|-----------------|------|------|------|-------|------|------|------|------|------|------|-----------|-------|
| Direct Costs    | 4.6  | 31.7 | 60.8 | 108.1 | 55.3 | 12.6 | 26.9 | 14.5 | 19.0 | 26.0 | 175.8     | 535.4 |
| Direct Benefits | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 39.4 | 35.8 | 36.0 | 39.1 | 36.1 | 374.0     | 560.3 |

The methodology to determine a revenue requirement involves several steps and considerations. First, the incremental capital and O&M costs and benefits are adjusted to include overhead allocations, consistent with their classification as company labor, contract labor, or purchased services and materials. Overhead allocations are those activities and services that are associated with direct costs and benefits, such as payroll taxes and pension and benefits, or costs

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<sup>1</sup> Prepared Direct Testimony of Witness Atkinson, Table LDA-5.

1 that cannot be economically direct-charged, such as administrative and general overheads. The  
 2 overhead allocations adhere to the methodology established by the Federal Energy Regulatory  
 3 Commission (“FERC”)<sup>2</sup> and were derived using the same methodology used in SDG&E’s most  
 4 recent General Rate Case (“GRC”) filing. SDG&E used January 2017 internal overhead  
 5 planning rates for illustrative purposes in this Application; however, actual overhead rates will be  
 6 applied in the determination of actual revenue requirement, and only overheads that are  
 7 incremental to the program will be included.

8 Next, the loaded incremental capital and O&M costs and benefits are escalated for  
 9 inflation. SDG&E applied the indices published in IHS Global Insight’s 4<sup>th</sup> Quarter 2016 Utility  
 10 Cost Forecast for this Application. Table 2 below summarizes the fully loaded and escalated  
 11 costs and benefits of the CIS Replacement Program, including capitalized property tax and  
 12 Allowance for Funds Used During Construction (“AFUDC”).<sup>3</sup>

13 **Table 2: Fully Loaded and Escalated Costs and Benefits Summary**  
 14 *(In Millions of Dollars, Nominal)*

| <b>COSTS (Capital)</b> | <b>2017</b> | <b>2018</b> | <b>2019</b> | <b>2020</b> | <b>2021</b> | <b>2022</b> | <b>2023</b> | <b>2024</b> | <b>2025</b> | <b>2026</b> | <b>2027-2036</b> | <b>Total</b> |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------|--------------|
| CPUC -Gas              | 1.2         | 6.2         | 14.7        | 23.5        | 10.5        | 2.0         | 5.6         | 2.7         | 4.0         | 5.5         | 38.0             | 113.8        |
| CPUC -Electric         | 2.9         | 15.7        | 37.3        | 59.5        | 26.6        | 5.0         | 14.2        | 6.8         | 10.0        | 14.1        | 96.2             | 288.3        |
| FERC -Electric         | 0.6         | 3.2         | 7.6         | 12.1        | 5.4         | 1.0         | 2.9         | 1.4         | 2.0         | 2.9         | 19.6             | 58.8         |
| <b>Total</b>           | <b>4.7</b>  | <b>25.1</b> | <b>59.7</b> | <b>95.1</b> | <b>42.6</b> | <b>8.0</b>  | <b>22.7</b> | <b>10.9</b> | <b>16.0</b> | <b>22.5</b> | <b>153.8</b>     | <b>461.0</b> |

  

| <b>COSTS (O&amp;M)</b> | <b>2017</b> | <b>2018</b> | <b>2019</b> | <b>2020</b> | <b>2021</b> | <b>2022</b> | <b>2023</b> | <b>2024</b> | <b>2025</b> | <b>2026</b> | <b>2027-2036</b> | <b>Total</b> |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------|--------------|
| CPUC -Gas              | 0.4         | 3.1         | 3.2         | 9.4         | 8.6         | 3.5         | 3.2         | 3.1         | 3.0         | 3.1         | 34.6             | 75.0         |
| CPUC -Electric         | 0.7         | 5.9         | 6.1         | 17.5        | 16.1        | 6.4         | 5.9         | 5.7         | 5.5         | 5.8         | 63.8             | 139.3        |
| FERC -Electric         | -           | 0.2         | 0.2         | 0.2         | 0.2         | -           | -           | -           | -           | -           | -                | 0.7          |
| <b>Total</b>           | <b>1.0</b>  | <b>9.2</b>  | <b>9.4</b>  | <b>27.1</b> | <b>24.8</b> | <b>9.9</b>  | <b>9.1</b>  | <b>8.7</b>  | <b>8.5</b>  | <b>8.9</b>  | <b>98.4</b>      | <b>215.0</b> |

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 2 FERC guidelines reference the Statement of Federal Financial Accounting Standards 4: Managerial Cost Accounting Standards and Concepts.

3 Total project costs and benefits are included in this testimony and are allocated based on the approved GRC methodology for allocating common accounts. SDG&E is only seeking approval of the CPUC portion of the costs and benefits and associated revenue requirements that are CPUC-jurisdictional. SDG&E will seek recovery of the FERC-jurisdictional portion of the costs and benefits and associated revenue requirements from the FERC.

| <b>BENEFITS (Capital)</b> | <b>2017</b> | <b>2018</b> | <b>2019</b> | <b>2020</b> | <b>2021</b> | <b>2022</b> | <b>2023</b> | <b>2024</b> | <b>2025</b> | <b>2026</b> | <b>2027-2036</b> | <b>Total</b> |
|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------|--------------|
| CPUC -Gas                 | -           | -           | -           | -           | -           | 8.5         | 7.3         | 7.5         | 8.5         | 8.0         | 96.6             | 136.4        |
| CPUC -Electric            | -           | -           | -           | -           | -           | 21.6        | 18.6        | 19.1        | 21.6        | 20.2        | 244.6            | 345.6        |
| FERC -Electric            | -           | -           | -           | -           | -           | 4.4         | 3.8         | 3.9         | 4.4         | 4.1         | 49.9             | 70.5         |
| Total                     | -           | -           | -           | -           | -           | 34.5        | 29.7        | 30.5        | 34.5        | 32.3        | 391.1            | 552.6        |

| <b>BENEFITS (O&amp;M)</b> | <b>2017</b> | <b>2018</b> | <b>2019</b> | <b>2020</b> | <b>2021</b> | <b>2022</b> | <b>2023</b> | <b>2024</b> | <b>2025</b> | <b>2026</b> | <b>2027-2036</b> | <b>Total</b> |
|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------|--------------|
| CPUC -Gas                 | -           | -           | -           | -           | -           | 8.6         | 10.1        | 10.5        | 10.9        | 11.1        | 128.5            | 179.7        |
| CPUC -Electric            | -           | -           | -           | -           | -           | 15.8        | 18.7        | 19.3        | 20.0        | 20.5        | 237.2            | 331.6        |
| FERC -Electric            | -           | -           | -           | -           | -           | -           | -           | -           | -           | -           | -                | -            |
| Total                     | -           | -           | -           | -           | -           | 24.4        | 28.8        | 29.8        | 30.9        | 31.7        | 365.8            | 511.3        |

1  
2 The revenue requirement calculation assumes all capital costs and benefits, including  
3 AFUDC, are recovered through depreciation over the current authorized book-life of the assets.  
4 In addition to all incremental capital and O&M spending, the revenue requirement includes the  
5 authorized return on investment, taxes, and franchise fees and uncollectibles.<sup>4</sup> The revenue  
6 requirement calculation uses the current authorized rate of return of 7.79%.<sup>5</sup>

7 Table 3 below summarizes the forecasted revenue requirement for costs and benefits for  
8 SDG&E to complete the CIS Replacement Program and maintain the new CIS during its useful  
9 life. In addition to the fully loaded and escalated costs and benefits shown in Table 2, this  
10 revenue requirement captures all capital-related costs and benefits such as income taxes and  
11 return needed to support the investment for its useful life.

<sup>4</sup> The revenue requirement components and the rate base calculations are computed based on the same standard, Commission-approved methodology used in the 2016 GRC and other incremental applications such as the Vehicle-Grid Integration (D.16-01-045).

<sup>5</sup> SDG&E's rate of return was authorized in the company's 2013 Test Year Cost of Capital proceeding (A.12-04-015, *et al.*) in D.12-12-034. A Petition for Modification of D.12-12-034 and D.13-03-015 was filed on February 7, 2017, and is pending before the Commission in proceeding A.12-04-015, *et al.* Similar to SDG&E's proposed treatment of overheads, SDG&E will apply the actual rate of return that is in effect when the actual revenue requirement is determined.

**Table 3: Forecasted Revenue Requirement Summary**  
*(In Millions of Dollars, Nominal)*

| <b>COSTS</b>   | <b>2017</b>  | <b>2018</b> | <b>2019</b>   | <b>2020</b>   | <b>2021</b> | <b>2022</b> | <b>2023</b> | <b>2024</b> | <b>2025</b> | <b>2026</b> | <b>2027-2042</b> | <b>Total</b> |
|----------------|--------------|-------------|---------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------|--------------|
| CPUC -Gas      | (0.5)        | 1.7         | (7.1)         | (2.3)         | 18.9        | 19.5        | 20.6        | 17.7        | 18.2        | 17.7        | 164.2            | 268.7        |
| CPUC -Electric | (1.5)        | 2.4         | (20.1)        | (12.2)        | 42.1        | 47.0        | 49.9        | 42.7        | 43.9        | 42.7        | 391.4            | 628.3        |
| FERC -Electric | (0.5)        | (0.6)       | (5.2)         | (6.0)         | 5.4         | 8.2         | 8.9         | 7.5         | 7.8         | 7.5         | 66.4             | 99.6         |
| <b>Total</b>   | <b>(2.5)</b> | <b>3.6</b>  | <b>(32.4)</b> | <b>(20.6)</b> | <b>66.4</b> | <b>74.8</b> | <b>79.4</b> | <b>67.9</b> | <b>69.9</b> | <b>68.0</b> | <b>622.1</b>     | <b>996.6</b> |

  

| <b>BENEFITS</b> | <b>2017</b> | <b>2018</b> | <b>2019</b> | <b>2020</b> | <b>2021</b> | <b>2022</b> | <b>2023</b> | <b>2024</b> | <b>2025</b> | <b>2026</b> | <b>2027-2042</b> | <b>Total</b>   |
|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------|----------------|
| CPUC -Gas       | -           | -           | -           | -           | -           | 5.0         | 10.6        | 14.0        | 17.6        | 20.7        | 305.5            | 373.6          |
| CPUC -Electric  | -           | -           | -           | -           | -           | 6.7         | 19.7        | 28.1        | 37.0        | 44.7        | 682.7            | 818.8          |
| FERC -Electric  | -           | -           | -           | -           | -           | (2.0)       | 0.1         | 1.7         | 3.3         | 4.8         | 89.3             | 97.1           |
| <b>Total</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>9.7</b>  | <b>30.4</b> | <b>43.8</b> | <b>58.0</b> | <b>70.2</b> | <b>1,077.5</b>   | <b>1,289.6</b> |

SDG&E will determine the actual capital and O&M costs and benefits of the CIS Replacement Program as it is completed, and will calculate the actual revenue requirements associated with those costs and benefits for recovery in rates. Further details of the regulatory accounting treatment of the actual revenue requirements are discussed in the direct testimony of Witness Jasso in Chapter 9.

SDG&E uses the forecasted revenue requirement for purposes of illustrating the potential rate impact as a result of the CIS Replacement Program. The details of the illustrated rate impacts are discussed in the co-sponsored direct testimony of Witnesses Browy and Schmidt-Pines in Chapter 8.

**III. CONCLUSION**

This concludes our joint direct testimony.

1 **IV. STATEMENT OF QUALIFICATIONS**

2 **WITNESS QUALIFICATIONS FOR MICHAEL R. WOODRUFF**

3 My name is Michael R. Woodruff. My business address is 8330 Century Park Court,  
4 San Diego, California 92123. I am employed by SDG&E as a Project Manager in Financial &  
5 Strategic Analysis. I am responsible for overseeing the financial analysis and development of  
6 revenue requirements for SDG&E projects.

7 I joined SDG&E in 2011. Prior to SDG&E, I was employed by Wells Fargo & Co. for  
8 twelve years, six years as a Financial Analyst and six years as a Finance Manager. I received a  
9 Bachelor of Science degree in Liberal Arts and Sciences from Iowa State University in 1994. I  
10 received a Master's of Business Administration degree with an emphasis in Finance from the  
11 University of Iowa in 1999.

12 This material was personally reviewed by me and I believe it to be correct and that it is  
13 factual in nature. Insofar as the material is in the nature of opinion or judgment, it represents my  
14 best judgment. I have previously testified before California Public Utilities Commission.

15 **WITNESS QUALIFICATIONS FOR JAMES G. VANDERHYE JR.**

16 My name is James G. Vanderhyye Jr. My business address is 8326 Century Park Court,  
17 San Diego, California 92123. I am employed by SDG&E as the Supervisor, Affiliate Billing &  
18 Costing. I am responsible for overseeing the application of SDG&E's overhead/indirect cost  
19 process. I joined SDG&E in 1993. I received a Bachelor of Science degree in Finance from San  
20 Diego State University in 2003. I have not testified before the California Public Utilities  
21 Commission.