

Exhibit No. _____

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

Application of San Diego Gas & Electric
Company (U 902-E) for Approval of the Results
from Its 2016 Track IV Local Capacity
Requirement Preferred Resources Request for
Offers

Application No. 17-04-____
(Filed April 19, 2017)

**PREPARED DIRECT TESTIMONY OF
MICHAEL R. WOODRUFF**

ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

*****PUBLIC REDACTED VERSION*****

APRIL 19, 2017



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1 **I. PURPOSE**

2 My testimony on behalf of San Diego Gas & Electric Company (“SDG&E”) presents the
3 SDG&E revenue requirement resulting from two utility owned battery storage projects (AES,
4 RES, or the “Proposed Projects”) capital spend forecasted for the year 2021 for AES, and 2019
5 for RES. The total revenue requirement¹ for AES is \$136 million, and \$90 million for RES, over
6 the period of 2018 to 2067.

7 **II. REVENUE REQUIREMENT**

8 The revenue requirements associated with the Proposed Projects are derived from the
9 forecasted incremental capital costs related to the new battery storage projects and
10 interconnection costs. The capital costs discussed elsewhere in the application and supporting
11 testimony, represent direct costs only. They do not include overhead costs necessary to support
12 the investment. A summary of the forecasted direct costs of the Proposed Projects are shown in
13 Tables 1A and 1B below.

14 The incremental capital costs are adjusted upward to include applicable overheads.
15 Overhead rates are applied to each direct cost input, consistent with its classification as company
16 labor, contract labor or purchased services, materials, and equipment. Overhead costs are those
17 activities and services that are associated with direct costs, such as payroll taxes and pension and
18 benefits, or are costs that cannot be economically direct-charged, such as administrative and
19 general overheads. The overhead allocations adhere to FERC methodology² and were derived
20 from the same methodology used in SDG&E’s most recent general rate case filing. SDG&E

¹ The total revenue requirement is the combined revenue requirements for CPUC-jurisdictional and FERC-jurisdictional revenues. “FERC” is the Federal Energy Regulatory Commission.

² 18 CFR, Part 101 Subchapter C - Uniform System of Accounts Prescribed for Public Utilities and Licensees Subject to the Provisions of the Federal Power Act, Electric Plant Instructions, Paragraph 3, Components of Construction Cost.

1 used January 2017 internal planning overhead rates for illustrative purposes for the revenue
2 requirement forecast in this application. However, actual overhead rates will be applied to
3 determine the actual revenue requirement, and will only include only overheads that are
4 incremental to the program.

5 The revenue requirement evaluation assumes all capital costs, including Allowance For
6 Funds Used During Construction (“AFUDC”), are recovered through depreciation over the book-
7 life of the assets. In addition to the actual expenditure amounts, the revenue requirements
8 include all other expenses required to support the investment,³ including authorized return on
9 investment, and income and property taxes.⁴ The revenue requirement calculation uses the
10 current authorized rate of return of 7.79% based on a 10.30% return on equity for CPUC-
11 jurisdiction capital.⁵ The revenue requirement calculation for the FERC-jurisdiction capital uses
12 a 7.76% rate of return based on a 10.05% return on equity.⁶

13 Tables 1A and 1B below summarize total incremental direct costs for the Proposed
14 Projects.
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³ Franchise Fees and Uncollectibles are not included in the revenue requirement figures, but are captured in the rate impact calculation in the testimony of Jeffrey Shaughnessy.

Citations to witness testimony herein are to the prepared direct testimony served concurrently in support of this application.

⁴ The revenue requirement components and the rate base calculations are computed based on Commission-approved methodology and are shown in work papers supporting this testimony.

⁵ D.12-12-034 (TY 2013 Cost of Capital for Major Utilities), ordering paragraph 2, p. 52.

⁶ Taken from SDG&E’s most current FERC formula rate filing, Docket No. ER17-470-000 (December 1, 2016), TO4, cycle 4 Formula Rate Spreadsheet, Statement BK-1, found at:

<https://www.sdge.com/docket-no-er17-000-to4-cycle-4-informational-filing>

1. Open the ‘TO4 Cycle 4 Formula Rate Spreadsheet,’
2. Scroll to the right to the tab ‘Statement AV-WP’, and
3. Go to line no. 31 – Return on Common Equity.

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TABLE 1A
AES Direct Costs Summary
(In Millions of Dollars)

	2019	2020	2021	2022	2023	2024 Thereafter	Total
CPUC Jurisdiction							
Capital							
O&M							
Total							
FERC Jurisdiction							
Capital							
O&M							
Total							

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TABLE 1B
RES Direct Costs Summary
(In Millions of Dollars)

	2019	2020	2021	2022	2023	2024 Thereafter	Total
CPUC Jurisdiction							
Capital							
O&M							
Total							
FERC Jurisdiction							
Capital							
O&M							
Total							

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Incremental direct costs are then loaded, and those costs not tied to a fixed-cost contract are escalated. Tables 2A and 2B below summarize the fully loaded and escalated direct costs from Tables 1A and 1B.

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TABLE 2A
AES Fully Loaded and Escalated Costs Summary
(In Millions of Dollars, Nominal)

	2019	2020	2021	2022	2023	2024 Thereafter	Total
CPUC Jurisdiction							
Capital							
O&M							
Total							
FERC Jurisdiction							
Capital							
O&M							
Total							

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TABLE 2B
RES Fully Loaded and Escalated Costs Summary
(In Millions of Dollars, Nominal)

	2019	2020	2021	2022	2023	2024 Thereafter	Total
CPUC Jurisdiction							
Capital							
O&M							
Total							
FERC Jurisdiction							
Capital							
O&M							
Total							

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Tables 3A and 3B below summarize the forecasted revenue requirements for SDG&E to construct the projects. In addition to the fully loaded and escalated costs shown in Tables 3A and 3B, this revenue requirement captures all costs necessary to support the investment, including AFUDC.

AES TABLE 3A
Revenue Requirement Summary
(In Millions of Dollars, Nominal)

	2019	2020	2021	2022	2023	2024 Thereafter	Total
CPUC Jurisdiction	-	0.1	11.4	12.2	12.6	82.1	118.3
FERC Jurisdiction	-	-	0.6	0.7	0.8	15.7	17.8

RES TABLE 3B
Revenue Requirement Summary
(In Millions of Dollars, Nominal)

	2019	2020	2021	2022	2023	2024 Thereafter	Total
CPUC Jurisdiction	0.0	10.6	10.6	10.0	9.5	47.6	88.3
FERC Jurisdiction	0.0	0.1	0.1	0.1	0.1	1.6	2.0

Upon project completion, SDG&E will compute the actual capital and O&M costs and will calculate the associated revenue requirement for recovery in rates. Details of the cost recovery of the actual revenue requirements associated with the Proposed Projects are discussed in the testimony of Jeffrey Shaughnessy.

III. QUALIFICATIONS

My name is Michael R. Woodruff. My business address is 8330 Century Park Court, San Diego, California 92123. I am employed by SDG&E as a Project Manager in Financial Services & Strategic Analysis. I am responsible for overseeing the financial analysis and development of revenue requirements for SDG&E projects. I joined SDG&E in 2011. Prior to SDG&E, I was employed by Wells Fargo & Co. for twelve years; six years as a Financial Analyst and six years as a Finance Manager. I received a Bachelor of Science degree in Liberal Arts and Sciences from Iowa State University in 1994. I received a Master of Business Administration degree with an emphasis in Finance from The University of Iowa in 1999.

I have previously testified before this Commission.

This concludes my prepared direct testimony.