

Application of SAN DIEGO GAS & ELECTRIC  
COMPANY For Authority to Update Marginal Costs,  
Cost Allocation, And Electric Rate Design (U 902-E)

---

)  
)  
)  
)  
)

Application No. 07-01-\_\_\_\_  
Exhibit No.: (SDGE-08) \_\_\_\_\_

**PREPARED DIRECT TESTIMONY  
OF CYNTHIA S. FANG  
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY**

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

**JANUARY 31, 2007**

**TABLE OF CONTENTS**

**I. INTRODUCTION..... 1**

**II. STREET LIGHTING RATE DESIGN PROPOSALS..... 1**

    A. Distribution Rate Design Proposal..... 2

    B. Commodity Rate Design Proposal..... 3

**III. SUMMARY OF RESULTS ..... 3**

**IV. TARIFF CLEANUP PROPOSALS ..... 4**

**V. QUALIFICATIONS OF CYNTHIA S. FANG ..... 6**

1 **PREPARED DIRECT TESTIMONY**

2 **OF**

3 **CYNTHIA S. FANG**

4 **CHAPTER 8**

5 **I. INTRODUCTION**

6 The purpose of my testimony is to present rate design implementation details for  
7 street lighting that support San Diego Gas and Electric Company's (SDG&E) allocation  
8 and rate design proposals for street lighting. My testimony describes: (1) proposed  
9 revisions to distribution unit charges that will allow recovery of the allocated revenue  
10 requirement for street lighting presented by SDG&E witness Parsons in Chapter 5, (2)  
11 proposed revisions to commodity unit charges to comport with the generation marginal  
12 cost study and revenue allocation proposals for street lighting presented by SDG&E  
13 witness Parsons in Chapter 5, and (3) miscellaneous rate design and tariff revision  
14 proposals for street lighting. The methods described in my testimony are consistent with  
15 the proposals described by SDG&E witness Hansen in Chapter 2.

16 My testimony is organized as follows:

- 17 • Street Lighting Rate Design Proposals addressing Distribution Rate  
18 Design Proposals and Commodity Rate Design Proposals (Section II); and
- 19 • Tariff Clean Up Proposals (Section III).

20  
21 **II. STREET LIGHTING RATE DESIGN PROPOSALS**

22 The following are the rate design proposals for street lighting developed using the  
23 Lighting Rate Design Model most recently approved as part of the Settlement Agreement

1 to SDG&E's 2006 Rate Design Window (RDW), which was approved by the California  
2 Public Utilities Commission (Commission) in Decision (D.) 05-12-003. Modifications to  
3 the Lighting Rate Design Model include:

- 4 • updated billing determinants;
- 5 • escalation of updated lighting facilities and maintenance costs to 2008  
6 dollars (\$); and
- 7 • escalation of surcharges for series service to 2008\$. SDG&E proposes to  
8 simplify the procedure for updating surcharges for series service charges  
9 in this proceeding by applying an escalating factor from 2006\$ to 2008\$.

10 A. Distribution Rate Design Proposal

11 Street lighting distribution rates have been adjusted to recover the revenue  
12 allocated to the class by using an Equal Percent of Marginal Cost (EPMC) methodology  
13 as proposed in Chapter 5 by SDG&E witness Parsons. Present and proposed lighting  
14 distribution rates are shown in Attachment SMC-11. Unlike the other sectors, the  
15 schedules for street lighting, excluding the LS-3 schedule which is closed to new  
16 customers, are primarily based on a fixed monthly per lamp charge. The proposed rate is  
17 based on three marginal cost components: facilities, maintenance, and distribution and  
18 customer. To ensure recovery of the allocated distribution revenue requirement SDG&E  
19 calculates the total distribution rate for each lamp type by multiplying the EPMC rate  
20 adjustment factor by the distribution customer marginal cost component. Previously this  
21 adjustment factor was a value less than one. However, due to the magnitude of the  
22 allocated increase in distribution revenue requirement, which is discussed in greater detail  
23 below, and the relatively fixed value of the facilities revenue requirement, the EPMC

1 adjustment factor for the distribution-customer component is greater than one in the  
2 updated study.

3 Furthermore, Schedule LS-2 is distinct from the other street lighting schedules in  
4 that there is no facilities component in the determination of the distribution rate due to the  
5 nature of the services provided. This causes changes in the distribution-customer  
6 marginal cost component to have a much larger impact on the distribution rate for  
7 Schedule LS-2 than the other schedules.

#### 8 B. Commodity Rate Design Proposal

9 Street lighting commodity rates have been adjusted to recover the revenue  
10 allocated to the class by using EPMC as proposed in Chapter 5 by SDG&E witness  
11 Parsons. Unlike the other rate components for street lighting the commodity rate is  
12 determined on a per kilowatt-hour (kWh) basis. Present and proposed commodity rates  
13 for all lighting rates schedules are illustrated in Attachment SMC -7.

14

### 15 **III. SUMMARY OF RESULTS**

16 The present and proposed Total Utility Distribution Company (UDC) rates,  
17 without commodity, for street lighting are presented in Attachments SMC-9 and SMC-  
18 10, respectively, with a comparison of present and proposed in Attachment SMC-12. The  
19 current proposals result in an approximately 13 percent increase in average rates for the  
20 lighting customer class. The primary reason for this increase is the increase in  
21 distribution revenue requirement allocated to this customer class. The proposed  
22 distribution revenue allocation increase to the lighting customer class, as presented in  
23 Chapter 5 by SDG&E witness Parsons, is approximately 38 percent. The proposed

1 commodity revenue allocation decrease to the lighting customer class, also presented in  
2 Chapter 5 by SDG&E witness Parsons is approximately 11 percent. The offsetting  
3 impacts of the decrease in the commodity revenue allocation and increase in the  
4 distribution revenue allocation to the lighting customer class results in a net revenue  
5 allocation increase to the class of approximately 13 percent.

6 Street lighting consists of five different schedules, each offering a distinctly  
7 different set of services.

- 8 • Schedule DWL – Residential Walkway Lighting;
- 9 • Schedule OL-1 – Outdoor Area Lighting Service;
- 10 • Schedule LS-1 – Lighting - Street and Highway - Utility-Owned Installations;
- 11 • Schedule LS-2 and Lighting - Street and Highway - Customer-Owned  
12 Installations; and
- 13 • Schedule LS-3 Lighting - Street and Highway - Customer-Owned Installations,  
14 which provides metered lighting service and is closed to new customers.

15 Due to the distinct nature of the services provided under each of these schedules,  
16 the impact of increased revenue requirement proposed varied widely across the  
17 schedules. The resulting increases for the individual schedules are presented in  
18 Attachment SMC-12.

#### 19 20 **IV. TARIFF CLEANUP PROPOSALS**

21 SDG&E requests modification to the language found in the Special Conditions  
22 section of SDG&E Schedules LS-1, OL-1 and DWL. As shown below, under the Special  
23 Conditions of the identified Schedules a customer is currently required to pay the cost

1 incurred by SDG&E for relocation of a SDG&E streetlight requested by the customer.  
2 SDG&E's requested modification, identified below, would provide that customers pay in  
3 advance for any customer-requested modifications to a streetlight, such as shielding of  
4 lights, changing the lamp size or type, and changing the position of a light on a pole.

5 Current Language

6 5. Relocation of Facilities. Relocation of Utility's Facilities at the  
7 customer's request, or because of governmental requirements, will be  
8 made providing the customer pays the actual costs incurred by the utility  
9 for such relocation.

10 Proposed Language

11 5. Relocation or Modification of Facilities. Relocation or modification of  
12 Utility's Facilities at the customer's request, or because of governmental  
13 requirements, will be made providing the customer pays in advance a  
14 nonrefundable amount equal to the estimated cost of such relocation or  
15 modification.

16 This concludes my prepared testimony.

1 **V. QUALIFICATIONS OF CYNTHIA S. FANG**

2 My name is Cynthia Fang. My business address is 8330 Century Park Court, San  
3 Diego, California, 92123-1530.

4 I am employed as a Regulatory Economic Advisor in the Regulatory Affairs  
5 department for San Diego Gas & Electric Company. My primary responsibilities include  
6 analytical support for rate design, cost allocation, and tariff language proposals prepared  
7 in regulatory rate filings and exhibits related to electric proceedings before the California  
8 Public Utilities Commission (Commission).

9 I received a Bachelor of Science degree in Political Economics of Natural  
10 Resources from the University of California at Berkeley and a Doctor of Philosophy  
11 degree (ABD) in Applied Economics from the University of Minnesota. From December  
12 2003 to May 2006, I worked for the Minnesota Department of Commerce, Energy  
13 Division, as a Public Utilities Rates Analyst with various responsibilities including  
14 reviewing and providing comments in response to utility petitions before the Minnesota  
15 Public Utilities Commission and developing and presenting the position of the Minnesota  
16 Department of Commerce before the Minnesota Public Utilities Commission. In May  
17 2006, I assumed my current position. Since assuming this position, I have performed  
18 analysis for the purpose of preparing advice letters before this Commission.