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

Application 11-10-002
Exhibit No.: (SDG&E-103-R)

# SECOND REVISED PREPARED DIRECT TESTIMONY OF

# WILLIAM G. SAXE

# CHAPTER 3

# ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

**BEFORE THE PUBLIC UTILITIES COMMISSION**

**OF THE STATE OF CALIFORNIA**

**MARCH 30, 2012**


Doc # 264182

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**SECOND REVISED PREPARED DIRECT TESTIMONY OF**
**WILLIAM G. SAXE**
**(CHAPTER 3)**

## I. OVERVIEW AND PURPOSE

The purpose of my revised prepared direct testimony is to present San Diego Gas & Electric Company's (SDG&E) proposals for allocations of distribution, commodity and Ongoing Competition Transition Charge (CTC) revenue requirements to customer classes.

My testimony is organized as follows:

- **Section II – Background**: describes revenue allocation, including SDG&E's current distribution, commodity and CTC revenue allocations;
- **Section III – Distribution Revenue Allocation**: presents the proposal to use marginal costs coupled with the Equal Percent of Marginal Costs (EPMC) methodology to allocate the authorized distribution revenue requirement;
- **Section IV – Commodity Revenue Allocation**: presents the proposal to use marginal costs coupled with the EPMC methodology to allocate the authorized commodity revenue requirement;
- **Section V – CTC Revenue Allocation**: presents the proposal to update the top 100 load data used to allocate the CTC revenue requirement under the current "Top 100 hours" allocation methodology;
- **Section VI – Summary and Conclusion**: provides a summary of recommendations; and
- **Section VII – Statement of Qualifications**: presents my qualifications.

## II. BACKGROUND

Revenue allocation is the assignment of authorized revenue requirements to customers. SDG&E allocates revenues to the customer classes separately for the different

rate components that make up total electric rates.[1] Nine rate components make up total electric rates: 1) Distribution; 2) Transmission; 3) Public Purpose Program (PPP); 4) Nuclear Decommission (ND); 5) CTC; 6) Reliability Service (RS); 7) Total Rate Adjustment Component (TRAC); 8) Department of Water Resources Bond Charges (DWR-BC); and 9) Commodity. The revenue allocations for these different rate components are determined in various proceedings. In this proceeding, SDG&E proposes changes or updates to the revenue allocations for three of the rate components: (1) Distribution; (2) Commodity; and (3) CTC.

SDG&E's current distribution and commodity revenue requirement allocations are based on allocations agreed to in settlement and adopted by the California Public Utilities Commission (Commission) in D.08-02-034, SDG&E's Test Year (TY) 2008 GRC Phase 2 decision. SDG&E's current CTC revenue requirement allocation is based on the "Top 100 hours" allocation methodology, as adopted by the Commission in D.00-06-034.

Consistent with the Commission's long history of allocating revenues based on marginal costs, SDG&E is proposing that distribution and commodity revenue requirements be allocated to classes using the updated marginal costs proposed in this Application. Using marginal costs to determine the customer's class allocation for distribution and commodity revenues balances fairness and equity with providing customers clear and accurate price signals for the services they receive. The proposed distribution revenue allocation is based on the marginal distribution costs presented in the direct testimony of Robert M. Ehlers (Chapter 6). The proposed commodity revenue allocation is based on the marginal generation capacity and energy costs presented in the direct testimony of David T. Barker (Chapter 5). In addition, the proposed CTC revenue allocation is based on the Commission-adopted "Top 100 hours" allocation methodology for CTC revenues updated to reflect the top 100 hours of load data for years 2006-2008.

[1] As required by the Settlement adopted by Decision (D.)08-02-34 in SDG&E's 2008 General Rate Case (GRC) Phase 2 proceeding (Application (A.) 07-01-047, Attachment 1 of "Motion For Adoption of All Party and All Issue Settlement", Attachment A of Settlement, analysis and studies requirement 7G), SDG&E presents the allocation of distribution, commodity and CTC revenues on a rate schedule basis rather than a customer class basis. The distribution, commodity and CTC revenue allocations by rate schedule are presented in the testimony workpapers of Cynthia Fang (Chapter 2).

## III. DISTRIBUTION REVENUE ALLOCATION

SDG&E proposes to use the EPMC revenue allocation methodology to allocate the authorized distribution revenue requirement to customer classes. The EPMC methodology scales the customer class distribution marginal cost revenue responsibilities up or down by a single factor such that the sum equals the authorized distribution revenue requirement.

Under SDG&E's distribution revenue allocation proposal, the authorized distribution revenue requirement, minus any revenues that are directly assigned to the particular rate classes,[2] is allocated among the customer classes based on the proposed marginal distribution cost revenue responsibilities by customer class. The customer class marginal costs revenue responsibilities for the distribution function is the sum of marginal customer, feeders and local distribution, and substation costs. The unit marginal costs of distribution, presented by Mr. Ehlers (Chapter 6), are multiplied by the appropriate cost drivers to develop the marginal distribution revenue allocations by customer class. Marginal customer cost revenues by customer class is developed by multiplying each class' unit marginal customer cost ($/customer/year) by the forecasted number of customers in that class. Marginal distribution demand-related cost revenues by customer class is developed by multiplying the unit marginal feeder and local distribution and substation costs ($/kW/year) by the estimated class loads at circuit and substation levels, respectively.[3] The sum of the marginal distribution customer and demand-related revenues is used to develop the distribution EPMC allocation factor. The EPMC allocation factor is then used to scale the marginal distribution class revenue allocations to equal the authorized distribution revenue requirement.

The distribution revenue allocation by customer class is provided in Attachment A. Attachment A.1 presents the distribution marginal cost allocation factors by customer class. Attachment A.2 presents the allocation of distribution revenues to each customer class based on the distribution marginal cost allocations factors. Attachment A.3 presents the resulting distribution EPMC rates and revenues by customer class before any capping is applied. As explained in the direct testimony of Cynthia Fang (Chapter 2), SDG&E proposes to cap the

[2] SDG&E's directly assigned distribution revenues are labeled Non-Marginal Revenue Requirement Components and identified in Attachment A.2.

[3] Because circuit and substation load data is not available for the lighting class, the total distribution revenue allocation for the lighting class was set equal to its current total distribution revenue allocation.

distribution revenue allocation increase for small commercial customers at 20% to mitigate bill impacts.

## IV. COMMODITY REVENUE ALLOCATION

SDG&E proposes to also use the EPMC revenue allocation methodology to allocate the authorized commodity revenue requirement to customer classes. This revenue requirement consists of adopted revenue requirements for Utility Retained Generation (URG) and the California Department of Water Resources (DWR).

Under SDG&E's commodity revenue allocation proposal, the authorized commodity revenue requirement is allocated among customer classes based on the proposed marginal generation capacity and energy revenue responsibilities by customer class. The unit marginal generation capacity and energy costs, presented by Mr. Barker (Chapter 5), are multiplied by the appropriate cost drivers to develop the marginal commodity revenue allocations by customer class. Marginal capacity cost revenues by customer class is developed by multiplying the unit marginal generation capacity cost ($/kW/year) by each class' estimated contribution to peak load. Marginal energy cost revenues by customer class is developed by multiplying the applicable marginal energy prices ($/kWh) by the 2012 forecasted energy usage for each customer class. The sum of the resulting marginal generation capacity and energy revenues are used to determine the commodity EPMC allocation factor. The EPMC allocation factor is then used to scale the commodity class allocations to equal the authorized commodity revenue requirements.

The commodity revenue allocation by customer class is provided in Attachment B. Attachment B.1 presents the commodity marginal cost allocation factors by customer class. Attachment B.2 presents the proposed allocation of commodity revenues to each customer class based on the marginal commodity cost allocations factors. Attachment B.3 presents the resulting commodity EPMC rates and revenues by customer class.

## V. CTC REVENUE ALLOCATION

CTC revenues are allocated based on the "Top 100 hours" allocation methodology, as adopted by the Commission in D.00-06-034. The "Top 100 hours" methodology allocates revenues based on the customer classes' contribution to the top 100 hours of system load during a given annual period. It is a measure of when a marginal generation

capacity unit might be required to serve a customer class. In this proceeding, SDG&E proposes to update the top 100 hour data used to allocate the CTC revenue requirement to customer classes under the "Top 100 hours" methodology.

The CTC revenue allocation by customer class based on the updated "Top 100 hours" load data is provided in Attachment C. Because the CTC revenue allocation for the lighting class is only 0.02%, and this class currently does not pay CTC rates, SDG&E is proposing to set the CTC revenue allocation for the lighting class at zero, as explained in Ms. Fang's direct testimony (Chapter 2).

## VI. SUMMARY AND CONCLUSION

SDG&E recommends that the Commission adopt its proposal to use marginal costs coupled with the EPMC methodology to allocate distribution and commodity authorized revenue requirements. In addition, SDG&E recommends that the Commission adopt its proposal to update the top 100 load data used to allocate the CTC authorized revenue requirement under the current "Top 100 hours" allocation methodology.

This concludes my revised prepared direct testimony.

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## VII. STATEMENT OF QUALIFICATIONS

My name is William G. Saxe. My business address is 8330 Century Park Court, San Diego, California 92123. I am employed as Program Manager III in the Strategic Analysis & Pricing Department of SDG&E. I have worked for SDG&E since February 2001. Prior to joining SDG&E, I was employed by Sempra Energy, the parent company of SDG&E, from April 1999 through January 2001. In addition, I was employed by the Illinois Commerce Commission (ICC) from September 1990 through April 1999 where I submitted expert testimony on rate design and financial issues before the ICC.

I received a Bachelor of Science degree in Economics from the University of Wisconsin-Madison in 1985. I received a Master of Business Administration degree, with a concentration in Finance, from the University of Wisconsin-Madison in 1990.

I have previously testified before this Commission on rate design, marginal cost and other issues.

# ATTACHMENT A

# DISTRIBUTION REVENUE ALLOCATION

**ATTACHMENT A.1**

**SAN DIEGO GAS & ELECTRIC COMPANY - ELECTRIC DEPARTMENT**
**2012 GENERAL RATE CASE PHASE 2**
**ELECTRIC DISTRIBUTION REVENUE ALLOCATION - CHAPTER 3 (SAXE)**

**Distribution Marginal Cost Allocation Factor by Customer Class**

| Line No. | Customer Class (A) | Customer Marginal Cost Revenue ($000) (B) | Percentage Allocation (%) (C) | Demand-Related Marginal Cost Revenue ($000) (D) | Percentage Allocation (%) (E) | Total Distribution Marginal Cost Revenue ($000) (F) | Distribution Marginal Cost Allocation Factor (%) (G) | Line No. |
|---|---|---|---|---|---|---|---|---|
| 1 | Residential | $322,422 | 69.9% | $353,582 | 42.3% | $676,004 | 52.1% | 1 |
| 2 | | | | | | | | 2 |
| 3 | Small Commercial | $74,909 | 16.2% | $91,948 | 11.0% | $166,858 | 12.9% | 3 |
| 4 | | | | | | | | 4 |
| 5 | Medium/Large C&I | $58,365 | 12.7% | $386,065 | 46.2% | $444,431 | 34.2% | 5 |
| 6 | | | | | | | | 6 |
| 7 | Agricultural | $2,438 | 0.5% | $3,149 | 0.4% | $5,587 | 0.4% | 7 |
| 8 | | | | | | | | 8 |
| 9 | Lighting | $3,031 | 0.7% | $1,768 | 0.2% | $4,799 | 0.4% | 9 |
| 10 | | | | | | | | 10 |
| 11 | System Total | $461,165 | 100.0% | $836,512 | 100.0% | $1,297,678 | 100.0% | 11 |

**Note:**

(1) **Customer Marginal Cost Revenue**: reflects customer-related distribution marginal costs.

(2) **Demand-Related Marginal Cost Revenue**: reflects demand-related distribution marginal costs such as Feeder & Local Distribution and Substation marginal costs.

**ATTACHMENT A.2**

**SAN DIEGO GAS & ELECTRIC COMPANY - ELECTRIC DEPARTMENT**
**2012 GENERAL RATE CASE PHASE 2**
**ELECTRIC DISTRIBUTION REVENUE ALLOCATION - CHAPTER 3 (SAXE)**

**Distribution Revenue Allocation by Customer Class**

| Line No. | Customer Class (A) | Updated Distribution Revenue Allocation: Distribution Allocation Factors (%) (B) | Non Marginal Distribution Revenue ($000) (C) | Marginal Distribution Revenue Allocation ($000) (D) | Total Distribution Revenue Allocation ($000) (E) | Current Total Distribution Revenue Allocation ($000) (F) | Percentage Change (%) (G) | Line No. |
|---|---|---|---|---|---|---|---|---|
| 1 | **Residential** | **52.1%** | | **$534,119** | **$534,119** | **$573,261** | **-6.8%** | 1 |
| 2 | | | | | | | | 2 |
| 3 | **Small Commercial** | **12.9%** | | **$131,836** | **$131,836** | **$119,152** | **10.6%** | 3 |
| 4 | | | | | | | | 4 |
| 5 | **Medium/Large C&I** | **34.2%** | **6,536** | **$351,151** | **$357,687** | **$330,455** | **8.2%** | 5 |
| 6 | | | | | | | | 6 |
| 7 | **Agricultural** | **0.4%** | | **$4,414** | **$4,414** | **$5,189** | **-14.9%** | 7 |
| 8 | | | | | | | | 8 |
| 9 | **Lighting** | **0.4%** | **4,600** | **$3,791** | **$8,391** | **$8,391** | **0.0%** | 9 |
| 10 | | | | | | | | 10 |
| 11 | **System Total** | **100.0%** | **11,136** | **$1,025,312** | **$1,036,448** | **$1,036,448** | **0.0%** | 11 |
| 12 | | | | | | | | 12 |
| 13 | Distribution Revenue Requirement ($000): | **$1,036,448** | | | | | | 13 |
| 14 | | | | | | | | 14 |
| 15 | Non Marginal Revenue Requirement Components ($000): | | | | | | | 15 |
| 16 | Lighting Facilities Charges: | **$4,600** | | | | | | 16 |
| 17 | Standby Revenue: | **$4,183** | | | | | | 17 |
| 18 | Distance Adjustment Fees: | **$2,353** | | | | | | 18 |

**Note:**

(1) **Updated Allocation of Total Distribution Revenue**: allocation of the current distribution revenue requirement based on the marginal Distribution Allocation Factors presented in this Application.
(2) **Current Total Distribution Revenue Allocation**: allocation of current distribution revenue requirement based on the current class distribution allocation percentages reflected in current rates; rates . effective January 1, 2012, pursuant to SDG&E Advice Letter 2323-E.
(3) **Distribution Revenue Requirement**: the $1,036,448,000 Distribution Revenue Requirement reflects the current distribution revenues being collected in rates effective January 1, 2012, excluding Self Generation Incentive Program (SGIP) and Demand Response costs which have separate allocation treatment.
(4) **Lighting Updated Total Distribution Revenue Allocation**: as stated in footnote 3 of the testimony of William G. Saxe (Chapter 3), circuit and substation load data is not available for the lighting class. For this reason, the Updated Total Distribution Revenue Allocation for lighting is set equal to its Current Distribution Revenue Allocation, using the Goal Seek Factor in Cell O26.

**ATTACHMENT A.3**

**SAN DIEGO GAS & ELECTRIC COMPANY - ELECTRIC DEPARTMENT**
**2012 GRC PHASE 2 (A.11-10-002)**
**DISTRIBUTION REVENUE ALLOCATION WORKPAPERS - CHAPTER 3 (SAXE)**

**Distribution Equal Percentage of Marginal Cost (EPMC) Rates and Revenue by Customer Class**

| Line No. | Customer Class (A) | Determinants (B) | Marginal Distribution Rate (C) | EPMC Distribution Rate (D) | EPMC Distribution Revenue Allocation ($000) (E) | Line No. |
|---|---|---|---|---|---|---|
| 1 | **Residential** | | | | | 1 |
| 2 | Customer Marginal Cost ($/Customer-Month) | 14,935,485 | $21.59 | $17.06 | $254,750 | 2 |
| 3 | Demand-Related Marginal Cost ($/Non-Coincident kW) | 55,240,653 | $6.40 | $5.06 | $279,370 | 3 |
| 4 | Total | | | | $534,119 | 4 |
| 5 | | | | | | 5 |
| 6 | **Small Commercial** | | | | | 6 |
| 7 | Customer Marginal Cost ($/Customer-Month) | 1,497,825 | $50.01 | $39.52 | $59,187 | 7 |
| 8 | Demand-Related Marginal Cost ($/Non-Coincident kW) | | | | | 8 |
| 9 | Secondary | 10,151,416 | $9.05 | $7.15 | $72,609 | 9 |
| 10 | Primary | 5,753 | $9.01 | $7.12 | $41 | 10 |
| 11 | Total | | | | $131,836 | 11 |
| 12 | | | | | | 12 |
| 13 | **Medium/Large Commercial & Industrial** | | | | | 13 |
| 14 | Customer Marginal Cost ($/Customer-Month) | | | | | 14 |
| 15 | | | | | | 15 |
| 16 | Secondary | | | | | 16 |
| 17 | < 500 kW | 292,944 | $183.99 | $145.37 | $42,586 | 17 |
| 18 | > 500 MW | 7,177 | $536.12 | $423.59 | $3,040 | 18 |
| 19 | | | | | | 19 |
| 20 | Primary | | | | | 20 |
| 21 | < 500 kW | 1,765 | $39.51 | $31.22 | $55 | 21 |
| 22 | 500 kW - 12 MW | 2,817 | $44.66 | $35.29 | $99 | 22 |
| 23 | > 12 MW | 36 | $272.17 | $215.05 | $8 | 23 |
| 24 | | | | | | 24 |
| 25 | Transmission | | | | | 25 |
| 26 | < 500 kW | 212 | $647.54 | $511.63 | $109 | 26 |
| 27 | > 500 kW | 231 | $1,196.14 | $945.09 | $218 | 27 |
| 28 | | | | | | 28 |
| 29 | | | | | | 29 |
| 30 | Demand-Related Marginal Cost ($/Non-Coincident kW) | | | | | 30 |
| 31 | Secondary | 22,696,420 | $14.14 | $11.18 | $253,658 | 31 |
| 32 | Primary | 4,620,852 | $14.07 | $11.12 | $51,377 | 32 |
| 33 | Transmission | 1,436,702 | $0.00 | $0.00 | $0 | 33 |
| 34 | Total | | | | $351,151 | 34 |
| 35 | | | | | | 35 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 36 | **Agricultural** | | | | | 36 |
| 37 | **Customer Marginal Cost ($/Customer-Month)** | **40,176** | **$60.68** | **$47.95** | **$1,926** | 37 |
| 38 | **Demand-Related Marginal Cost ($/Non-Coincident kW)** | **588,979** | **$5.35** | **$4.22** | **$2,488** | 38 |
| 39 | **Total** | | | | **$4,414** | 39 |
| 40 | | | | | | 40 |
| 41 | **Lighting** | | | | | 41 |
| 42 | **Customer Marginal Cost ($/kWh)** | **114,788,000** | **$0.02641** | **$0.02086** | **$2,395** | 42 |
| 43 | **Demand-Related Marginal Cost ($/Non-Coincident kW)** | **114,788,000** | **$0.01540** | **$0.01217** | **$1,397** | 43 |
| 44 | **Total** | | | | **$3,791** | 44 |
| 45 | | | | | | 45 |
| 46 | **System** | | | | | 46 |
| 47 | **Customer Marginal Cost ($/Customer-Month)** | | | | **$364,373** | 47 |
| 48 | **Demand-Related Marginal Cost ($/Non-Coincident kW)** | | | | **$660,939** | 48 |
| 49 | **Total** | | | | **$1,025,312** | 49 |
| 50 | | | | | | 50 |

| | | | |
|---|---|---|---|
| 51 | GRC Phase 1 Distribution Revenue Requirement: | 1,036,448 | 51 |
| 52 | Non-Marginal Revenue Requirement | 11,136 | 52 |
| 53 | Marginal Distribution Revenue Requirement Allocation | 1,025,312 | 53 |
| 54 | | | 54 |
| 55 | Marginal Customer Distribution Revenue Requirement | 461,165 | 55 |
| 56 | Marginal Demand-Related Distribution Revenue Requirement | 836,512 | 56 |
| 57 | Total Marginal Distribution Revenue Requirement | 1,297,678 | 57 |
| 58 | | | 58 |
| 59 | EPMC Allocation Factor | 79.01% | 59 |

**Note:**

(1) **Determinants**: sum of the 2012 determinants by class.
(2) **Marginal Distribution Rate**: equals the marginal cost by class and by voltage level for demand-related margin cost divided by the class determinants.
(3) **EPMC Distribution Rate**: equals the Marginal Distribution Rate multiplied by the EPMC Distribution Allocation Factor.
(4) **EPMC Distribution Revenue Allocation**: equals the EPMC Distribution Rate multiplying by the applicable determinants.

# ATTACHMENT B

# COMMODITY REVENUE ALLOCATION

**ATTACHMENT B.1**

**SAN DIEGO GAS & ELECTRIC COMPANY - ELECTRIC DEPARTMENT**
**2012 GENERAL RATE CASE (GRC) PHASE 2 - APPLICATION 11-10-002**
**ELECTRIC COMMODITY REVENUE ALLOCATION - CHAPTER 3 (SAXE)**

**Commodity Marginal Cost Allocation Factor by Customer Class**

| Line No. | Customer Class (A) | Commodity Capacity-Related Marginal Cost Revenue ($000) (B) | Percentage Allocation (%) (C) | Commodity Energy-Related Marginal Cost Revenue ($000) (D) | Percentage Allocation (%) (E) | Total Commodity Marginal Cost Revenue ($000) (F) | Commodity Marginal Cost Allocation Factor (%) (G) | Line No. |
|---|---|---|---|---|---|---|---|---|
| 1 | Residential | $201,197 | 47.96% | $406,447 | 44.16% | $607,645 | 45.35% | 1 |
| 2 | | | | | | | | 2 |
| 3 | Small Commercial | $50,194 | 11.97% | $100,681 | 10.94% | $150,875 | 11.26% | 3 |
| 4 | | | | | | | | 4 |
| 5 | Medium/Large Commercial & Industrial | $166,306 | 39.64% | $403,003 | 43.79% | $569,309 | 42.49% | 5 |
| 6 | | | | | | | | 6 |
| 7 | Agricultural | $1,687 | 0.40% | $4,226 | 0.46% | $5,914 | 0.44% | 7 |
| 8 | | | | | | | | 8 |
| 9 | Lighting | $117 | 0.03% | $5,988 | 0.65% | $6,105 | 0.46% | 9 |
| 10 | | | | | | | | 10 |
| 11 | Bundled Total | $419,501 | 100.00% | $920,346 | 100.00% | $1,339,848 | 100.00% | 11 |

**Note:**

(1) **Commodity Capacity-Related Marginal Cost Revenue**: reflects marginal capacity commodity costs.
(2) **Commodity Energy-Related Marginal Cost Revenue**: reflects marginal energy commodity costs.

**ATTACHMENT B.2**

**SAN DIEGO GAS & ELECTRIC COMPANY - ELECTRIC DEPARTMENT**
**2012 GENERAL RATE CASE (GRC) PHASE 2 - APPLICATION 11-10-002**
**ELECTRIC COMMODITY REVENUE ALLOCATION - CHAPTER 3 (SAXE)**

**Commodity Allocations by Customer Class**

| Line No. | Customer Class (A) | Commodity Allocation Factors (B) | Updated Commodity Allocation (C) | Current Commodity Allocation (D) | Revenue Change (E) | Percentage Change (F) |
|---|---|---|---|---|---|---|
| 1 | Residential | 45.35% | $568,111 | $531,773 | $36,338 | 6.83% |
| 2 | | | | | | |
| 3 | Small Commercial | 11.26% | $141,059 | $152,868 | -$11,810 | -7.73% |
| 4 | | | | | | |
| 5 | Medium/Large Commercial & Industrial | 42.49% | $532,270 | $556,203 | -$23,934 | -4.30% |
| 6 | | | | | | |
| 7 | Agricultural | 0.44% | $5,529 | $6,238 | -$709 | -11.37% |
| 8 | | | | | | |
| 9 | Lighting | 0.46% | $5,708 | $5,593 | $115 | 2.05% |
| 10 | | | | | | |
| 11 | Bundled Total | 100.00% | $1,252,676 | $1,252,676 | $0 | 0.00% |

**Note:**

(1) **Updated Commodity Allocation**: allocation of Commodity Revenue Requirement based on marginal Commodity Allocation Factors presented in this Application.

(2) **Current Commodity Allocation**: allocation of Commodity Revenue Requirement based on current class commodity allocation percentages reflected in current rates; rates effective January 1, 2012, pursuant to SDG&E Advice Letter 2323-E.

(3) **Commodity Revenue Requirement**: the $1,252,676,000 Commodity Revenue Requirement reflects the commodity revenues being collected in rates on January 1, 2012.

**ATTACHMENT B.3**

**SAN DIEGO GAS & ELECTRIC COMPANY - ELECTRIC DEPARTMENT**
**2012 GRC PHASE 2 (A.11-10-002)**
**COMMODITY REVENUE ALLOCATION WORKPAPERS - CHAPTER 3 (SAXE)**

**Commodity Equal Percentage of Marginal Cost (EPMC) Rates and Revenue by Customer Class**

| Line No. | Customer Class (A) | Determinants (B) | Marginal Commodity Rate (C) | EPMC Commodity Rate (D) | EPMC Revenue Allocation ($000) (E) | Line No. |
|---|---|---|---|---|---|---|
| 1 | **Residential** | | | | | 1 |
| 2 | Marginal Energy Cost | | | | | 2 |
| 3 | Energy Charge-Summer ($/kWh) | 3,940,534,180 | $0.05156 | $0.04821 | $189,964 | 3 |
| 4 | Energy Charge-Winter ($/kWh) | 3,883,252,836 | $0.05234 | $0.04894 | $190,039 | 4 |
| 5 | Sub-Total | 7,823,787,016 | $0.05195 | $0.04857 | $380,004 | 5 |
| 6 | | | | | | 6 |
| 7 | Marginal Capacity Cost | | | | | 7 |
| 8 | Demand Charge-Summer On-Peak ($/kW) | 21,603,440 | $7.07 | $6.61 | $142,885 | 8 |
| 9 | Energy Charge-Summer ($/kWh) | 3,940,534,180 | $0.01227 | $0.01148 | $45,222 | 9 |
| 10 | Sub-Total | | | | $188,107 | 10 |
| 11 | | | | | | 11 |
| 12 | Total | | | | $568,111 | 12 |
| 13 | | | | | | 13 |
| 14 | **Small Commercial** | | | | | 14 |
| 15 | Marginal Energy Cost | | | | | 15 |
| 16 | Energy Charge-Summer ($/kWh) | 1,009,608,294 | $0.05161 | $0.04825 | $48,718 | 16 |
| 17 | Energy Charge-Winter ($/kWh) | 927,520,999 | $0.05237 | $0.04896 | $45,412 | 17 |
| 18 | Sub-Total | 1,937,129,293 | $0.05197 | $0.04859 | $94,130 | 18 |
| 19 | | | | | | 19 |
| 20 | Marginal Capacity Cost | | | | | 20 |
| 21 | Demand Charge-Summer On-Peak ($/kW) | 4,563,367 | $9.18 | $8.59 | $39,178 | 21 |
| 22 | Energy Charge-Summer ($/kWh) | 1,009,608,294 | $0.00821 | $0.00768 | $7,751 | 22 |
| 23 | Sub-Total | | | | $46,928 | 23 |
| 24 | | | | | | 24 |
| 25 | Total | | | | $141,059 | 25 |
| 26 | | | | | | 26 |
| 27 | **Medium/Large Commercial & Industrial** | | | | | 27 |
| 28 | Marginal Energy Cost | | | | | 28 |
| 29 | Energy Charge-Summer ($/kWh) | 3,901,085,495 | $0.05440 | $0.05086 | $198,402 | 29 |
| 30 | Energy Charge-Winter ($/kWh) | 3,554,393,172 | $0.05368 | $0.05019 | $178,382 | 30 |
| 31 | Sub-Total | 7,455,478,667 | $0.05405 | $0.05054 | $376,784 | 31 |
| 32 | | | | | | 32 |
| 33 | Marginal Capacity Cost | | | | | 33 |
| 34 | Demand Charge-Summer On-Peak ($/kW) | 10,110,310 | $13.63 | $12.74 | $128,846 | 34 |
| 35 | Energy Charge-Summer ($/kWh) | 3,901,085,495 | $0.00730 | $0.00683 | $26,639 | 35 |
| 36 | Sub-Total | | | | $155,486 | 36 |
| 37 | | | | | | 37 |
| 38 | Total | | | | $532,270 | 38 |
| 39 | | | | | | 39 |
| 40 | **Agricultural** | | | | | 40 |
| 41 | Marginal Energy Cost | | | | | 41 |
| 42 | Energy Charge-Summer ($/kWh) | 49,841,509 | $0.05156 | $0.04821 | $2,403 | 42 |
| 43 | Energy Charge-Winter ($/kWh) | 31,644,759 | $0.05234 | $0.04894 | $1,549 | 43 |
| 44 | Sub-Total | 81,486,268 | $0.05187 | $0.04849 | $3,951 | 44 |
| 45 | | | | | | 45 |
| 46 | Marginal Capacity Cost | | | | | 46 |
| 47 | Demand Charge-Summer On-Peak ($/kW) | 231,527 | $5.91 | $5.52 | $1,278 | 47 |
| 48 | Energy Charge-Summer ($/kWh) | 49,841,509 | $0.00642 | $0.00600 | $299 | 48 |
| 49 | Sub-Total | | | | $1,577 | 49 |
| 50 | | | | | | 50 |
| 51 | Total | | | | $5,529 | 51 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Lighting** | | | | | | |
| | **Marginal Energy Cost** | | | | | |
| | **Energy Charge-Summer ($/kWh)** | **57,363,520** | **$0.05222** | **$0.04883** | **$2,801** | |
| | **Energy Charge-Winter ($/kWh)** | **57,303,489** | **$0.05222** | **$0.04883** | **$2,798** | |
| | **Sub-Total** | **114,667,010** | **$0.05222** | **$0.04883** | **$5,599** | |
| | | | | | | |
| | **Marginal Capacity Cost** | | | | | |
| | **Demand Charge-Summer On-Peak ($/kW)** | **-** | **$0.00** | **$0.00** | **$0** | |
| | **Energy Charge-Summer ($/kWh)** | **57,363,520** | **$0.00204** | **$0.00191** | **$109** | |
| | | | | | **$109** | |
| | | | | | | |
| | **Total** | | | | **$5,708** | |
| | | | | | | |
| **Bundled Total** | | | | | | |
| | **Marginal Energy Cost** | | | | | |
| | **Energy Charge-Summer ($/kWh)** | **8,958,432,999** | **$0.05281** | **$0.04937** | **$442,288** | |
| | **Energy Charge-Winter ($/kWh)** | **8,454,115,255** | **$0.05291** | **$0.04946** | **$418,180** | |
| | **Sub-Total** | **17,412,548,254** | **$0.05286** | **$0.04942** | **$860,468** | |
| | | | | | | |
| | **Marginal Capacity Cost** | | | | | |
| | **Demand Charge-Summer On-Peak ($/kW)** | **36,508,644** | **$9.15** | **$8.55** | **$312,187** | |
| | **Energy Charge-Summer ($/kWh)** | **8,958,432,999** | **$0.00955** | **$0.00893** | **$80,021** | |
| | | | | | **$392,208** | |
| | | | | | | |
| | **Total** | | | | **$1,252,676** | |

| | |
|---|---|
| Commodity Revenue Requirement ($000) | $1,252,676 |
| | |
| Capacity MC Revenue ($000) | $419,501 |
| | |
| Energy MC Revenue ($000) | $920,346 |
| | |
| Total MC Revenue ($000) | $1,339,848 |
| | |
| **EPMC Allocation Factor** | **93.5%** |

**Note:**

(1) **Determinants**: sum of the 2012 determinants by class.
(2) **Marginal Commodity Rate**: equals the marginal commodity cost revenue by class and category divided by the applicable class determinants.
(3) **EPMC Commodity Rate**: equals the Marginal Commodity Rate multiplied by the EPMC Commodity Allocation Factor.
(4) **EPMC Revenue Allocation**: equals the EPMC Commodity Rate multiplying by the applicable determinants.

# ATTACHMENT C

# CTC REVENUE ALLOCATION

**ATTACHMENT C**

**SAN DIEGO GAS & ELECTRIC COMPANY - ELECTRIC DEPARTMENT**
**2012 GENERAL RATE CASE PHASE 2 (A.11-10-002)**
**ELECTRIC CTC REVENUE ALLOCATION - CHAPTER 3 (SAXE)**

**CTC Revenue Allocation By Customer Class**

| Line No. | Customer Class (A) | Current CTC Revenue Requirement Allocation ($000) (B) | Updated Top 100 hour load (MW) (C) | Updated Class Percent of Top 100 hour load (%) (D) | Updated CTC Revenue Requirement Allocation ($000) (E) | Percent Change (%) (F) | Line No. |
|---|---|---|---|---|---|---|---|
| 1 | Residential | $23,985 | 1,513,325 | 40.88% | $28,937 | 20.65% | 1 |
| 2 | | | | | | | 2 |
| 3 | Small Commercial | $8,784 | 429,738 | 11.61% | $8,217 | -6.46% | 3 |
| 4 | | | | | | | 4 |
| 5 | Medium/Large C&I | $37,705 | 1,742,963 | 47.08% | $33,328 | -11.61% | 5 |
| 6 | | | | | | | 6 |
| 7 | Agricultural | $312 | 14,960 | 0.40% | $286 | -8.19% | 7 |
| 8 | | | | | | | 8 |
| 9 | Street Lighting | $0 | 904 | 0.02% | $17 | NA | 9 |
| 10 | | | | | | | 10 |
| 11 | System Total | $70,786 | 3,701,891 | 100.00% | $70,786 | 0.00% | 11 |

**Note:**

(1) **Current CTC Revenue Requirement Allocation**: allocation of the CTC revenue requirement based on the current class CTC allocation percentages being collected in January 1, 2012, rates pursuant to SDG&E Advice Letter 2323-E.

(2) **Updated Top 100 hour load**: reflect the average top 100 hour loads based on 2006, 2007 and 2008 data.

(3) **Updated CTC Revenue Requirement Allocation**: the Updated CTC revenue reflects the allocation of the current revenue allocation based on Updated Class Percent of Top 100 hour load multiplied by the January 1, 2012 CTC revenue requirement.

(4) **CTC Revenue Requirement**: the $70,786,000 CTC Revenue Requirement reflects the CTC revenues being collected in rates on January 1, 2012.

**SDG&E 2012 GRC Phase 2 Testimony Errata Log**

| Exhibit | Witness | Page | Line | Errata Item |
|---|---|---|---|---|
| Exhibit No. SDG&E-103 | William G. Saxe | WGS-6 | 1-13 | Qualifications left out of revised testimony filed on February 17, 2012. |
| Exhibit No. SDG&E-103 | William G. Saxe | Attachment A.1 | | Attachment A.1 has been updated to reflect changes in Distribution Customer Marginal Costs, as identified in Chapter 6 workpapers. |
| Exhibit No. SDG&E-103 | William G. Saxe | Attachment A.2 | | Attachment A.2 has been updated to reflect changes in Distribution Customer Marginal Costs, as identified in Chapter 6 workpapers. |
| Exhibit No. SDG&E-103 | William G. Saxe | Attachment A.3 | | Attachment A.3 has been updated to reflect changes in Distribution Customer Marginal Costs, as identified in Chapter 6 workpapers. |
| Exhibit No. SDG&E-103 | William G. Saxe | Attachment B.1 | | Attachment B.1 has been updated to reflect corrections to cell links in Chapter 3 Marginal Commodity Capacity and Energy Revenue Allocation workpapers. |
| Exhibit No. SDG&E-103 | William G. Saxe | Attachment B.2 | | Attachment B.2 has been updated to reflect corrections to cell links in Chapter 3 Marginal Commodity Capacity and Energy Revenue Allocation workpapers. |
| Exhibit No. SDG&E-103 | William G. Saxe | Attachment B.3 | | Attachment B.3 has been updated to reflect corrections to cell links in Chapter 3 Marginal Commodity Capacity and Energy Revenue Allocation workpapers. |