

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

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Application No. 07-01-\_\_\_\_  
Exhibit No.: (SDGE-02) \_\_\_\_\_

**PREPARED DIRECT TESTIMONY  
OF ROBERT W. HANSEN  
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY**

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

**JANUARY 31, 2007**

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1 **PREPARED DIRECT TESTIMONY**

2 **OF**

3 **ROBERT W. HANSEN**

4 **CHAPTER 2**

5 **I. OVERVIEW AND PURPOSE**

6 This General Rate Case (GRC) Phase 2 Application presents San Diego Gas &  
7 Electric’s (SDG&E) electric revenue allocation and rate design proposals for  
8 implementing the GRC Phase 1 electric revenue requirement changes. SDG&E’s GRC  
9 Phase 1 Application (A.) 06-12-009 was filed on December 8, 2006. The GRC Phase 1  
10 Application proposed increases to SDG&E’s distribution and generation/commodity  
11 revenue requirements based on forecast test-year 2008 sales. Revenue allocation  
12 proposals, rate design proposals, and customer bill impacts presented in this filing are  
13 compared against rates effective January 1, 2007, and the proposed revenues and rate  
14 levels are revenue-neutral with SDG&E’s GRC Phase 1 increase proposals. Allocations  
15 and rate designs in this proceeding may need to be updated to reflect the final outcome of  
16 SDG&E’s GRC Phase 1 proceeding. Adoption of pending rate proposals such as those in  
17 SDG&E’s Energy Resource Revenue Allocation (ERRA) proceeding, or in SDG&E’s  
18 Advice Letter 1865-E addressing California Solar Initiative (CSI) cost recovery, will also  
19 cause variations in the rate and customer bill impacts presented in this filing. SDG&E  
20 proposes that changes approved in this proceeding be implemented on January 1, 2008  
21 consistent with SDG&E’s GRC Phase 1 implementation proposal.

22 The purpose of my testimony is to: (1) summarize the policies and guiding  
23 principles, sponsored by SDG&E witness Jeff Hartman in Chapter 1, that were followed

1 in developing revenue allocation and rate proposals; (2) describe how policies were  
2 considered in developing more “cost-based” rate designs for Distribution and  
3 Generation/Commodity components; (3) present SDG&E’s proposal for continuation of  
4 the “2006 Rate Design Settlement Component” “RDSC” which SDG&E proposes to  
5 rename the “Total Rate Adjustment Component” “TRAC”; and (4) present a  
6 methodology and example for the phase-out of residential rate caps and subsidies related  
7 to Assembly Bill (AB) 1X.

8           As previously mentioned, allocation and rate proposals in this proceeding are  
9 designed to recover SDG&E’s GRC Phase 1 increases to distribution and commodity  
10 revenue requirements. Rate proposal impacts as presented in Chapter 6 by SDG&E  
11 witness Susan M. Claffey are measured against rates effective January 1, 2007. SDG&E  
12 uses test-year 2008 sales, sponsored by SDG&E witness Gregory Katsapis in Chapter 3,  
13 in developing its allocation and rate proposals. As presented by SDG&E witness James  
14 S. Parsons in Chapter 5, SDG&E’s electric distribution revenues will increase \$138.8  
15 million, or 16.31%, and commodity revenues will increase \$11.8 million, or 0.86%.  
16 Fixed Transition Amount (FTA) bond revenues are shown as a revenue reduction due to  
17 the scheduled elimination of the rate component by 2008.

18           In the development of allocation and rate proposals, SDG&E has conformed to  
19 the overarching policies described by SDG&E witness Hartman. Allocation and rate  
20 proposals presented by myself and SDG&E witnesses Parsons, Claffey, David A.  
21 Borden, and Cynthia S. Fang are independent of SDG&E’s Advanced Metering  
22 Infrastructure (AMI) enabled dynamic rate proposals described by SDG&E witnesses  
23 Edward Fong and James R. Magill.

1 In this filing SDG&E proposes revisions to the categories of distribution,  
2 commodity (or generation), and a minor change to Ongoing Competition Transition  
3 Charges (CTC). No changes are proposed for transmission or reliability service (RS)  
4 rates that are subject to Federal Energy Regulatory Commission (FERC) jurisdiction.  
5 Also, no changes are proposed to the categories of Public Purpose Program (PPP), or  
6 nuclear decommissioning (ND) charges.

## 7 8 **II. REVENUE ALLOCATION PRINCIPLES**

9 SDG&E proposes revisions to revenue allocation for the categories of distribution  
10 and generation/commodity in this proceeding. The allocation proposals are based on an  
11 Equal Percent of Marginal Cost (EPMC) methodology. The proposed EPMC revenue  
12 allocations reflect the use of updated marginal cost of service studies for distribution and  
13 generation/commodity, and test-year 2008 sales. SDG&E proposes that revenue  
14 allocations be uncapped and therefore reflect SDG&E's estimate of "cost-based"  
15 allocations.

16 Methodological details and results of SDG&E's revenue allocation proposals are  
17 described in the testimony of SDG&E witness Parsons in Chapter 5. With the variations  
18 as described by SDG&E witness Parsons, the revenue allocation methodology for  
19 distribution is consistent with the methodology proposed by SDG&E in its most recent  
20 Rate Design Window (RDW) proceeding (A.05-02-019) which was implemented with  
21 RDW Decision (D.) 05-12-003.

22 The revenue allocation methodology for generation/commodity is similar to the  
23 methodology proposed by SDG&E in its most recent RDW proceeding (A.05-02-019).

1 | SDG&E again proposes an EPMC methodology for total costs including Utility Retained  
2 | Generation (URG) costs and California Department of Water Resources (DWR) costs.  
3 | Generation/Commodity marginal capacity costs are based on capacity costs of a  
4 | Combustion Turbine (CT) peaking unit. As more fully described by SDG&E witness  
5 | Parsons in Chapter 4, SDG&E proposes a value of \$76.40 per kW based on a real  
6 | economic carrying charge (RECC) approach. This RECC approach is consistent with  
7 | past marginal cost-of-service studies of SDG&E and complies with the California Public  
8 | Utilities Commission's (Commission or CPUC) decision in SDG&E's prior RDW  
9 | proceeding (D.05-12-003, Ordering Paragraph 4). SDG&E proposes that generation  
10 | capacity costs be allocated to customer classes based on the top-100 hours of system  
11 | load, using the results for 3 years of load data.

12 |         The proposed generation/commodity revenue allocation methodology  
13 | significantly differs from SDG&E's currently-adopted methodology that was approved in  
14 | SDG&E's most recent RDW proceeding in D.05-12-003. The current allocation  
15 | methodology was the result of a negotiated settlement in the RDW proceedings. The  
16 | RDW settlement methodology treated DWR above-market costs differently than other  
17 | costs because a portion of residential usage was excluded in the allocation process.

18 |         The adopted RDW settlement methodology allocated DWR above-market costs  
19 | on an equal-cent per kWh basis to all non-exempt bundled customer usage. DWR above-  
20 | market costs used in the settlement allocation methodology were based on an estimate  
21 | provided by Southern California Edison Company (SCE) in the DWR cost allocation  
22 | proceeding that was ongoing in 2005. DWR permanent allocation methods were  
23 | subsequently adopted by the Commission in D.05-06-060. Identification of DWR above-

1 market costs and SCE's proposed methodology for allocation of DWR above-market  
2 costs are no longer relevant. SDG&E believes that DWR above-market costs (if any such  
3 costs are quantified in other Commission proceedings) should be allocated in the same  
4 manner as other commodity revenue requirements using an EPMC methodology.

### 6 **III. RATE DESIGN PRINCIPLES**

7 SDG&E proposes rate design changes to the categories of distribution,  
8 generation/commodity, and CTCs. SDG&E's intent is to balance the objective of moving  
9 toward cost-based rates with the often conflicting objectives of rate simplicity, rate  
10 change continuity, increased customer understanding of rates, and legislative or  
11 Commission-directed mandates. In addition, SDG&E has taken into consideration  
12 adverse customer bill impacts that could result from more cost-based rates. In developing  
13 SDG&E's "traditional" rate proposals SDG&E proposes no major structure changes  
14 requiring new metering prior to AMI implementation. Therefore, rate proposals  
15 described in this chapter, and those sponsored by SDG&E witnesses Claffey and Borden  
16 in Chapters 6 and 7, respectively, are not dependent on AMI deployment. Whereas, the  
17 proposals related to dynamic pricing sponsored by SDG&E witness Magill in Chapter 10  
18 are dependent on AMI deployment.

19 Distribution rates for the various customer classes have been designed to recover  
20 the allocated class revenue requirements. To the extent possible, SDG&E proposes that  
21 distribution rates be set at marginal costs of providing service. For example, SDG&E  
22 proposes to adjust Basic Service Fees to more closely reflect marginal customer costs, but  
23 SDG&E proposes to mitigate customer bill impacts by increasing Basic Service Fees by

1 no more than 20 percent. Consistent with the Commission’s interpretation of AB1X rate  
2 cap requirements, SDG&E does not propose a Basic Service Fee for residential  
3 customers.

#### 4 A. Residential Rates

5 SDG&E proposes a new residential rate option that would be applicable to  
6 customers with photovoltaic (PV) systems. Proposed Schedule DR-SES (Solar Energy  
7 System) would provide a more cost-based Time-of-Use (TOU) rate structure as compared  
8 to current Schedule DR. Consistent with requirements in Senate Bill (SB) 1, proposed  
9 Schedule DR-SES would not be limited by AB1X rate capping or baseline rate discounts.  
10 Proposed Schedule DR-SES is designed without baseline credit provisions and it will  
11 therefore provide increased rate incentives for installation of PV systems for smaller  
12 usage residential customers. The PV installation incentives are significantly increased for  
13 most residential customers as compared to incentives provided under Schedule DR-TOU,  
14 which incorporates a baseline tier structure and AB1X rate caps.

15 Other notable residential rate proposal structure changes include: (1) reduction in  
16 the number of usage tiers from five usage tiers to four tiers, and (2) modification of rates  
17 applicable to low-income customers taking service under the California Alternate Rates  
18 for Energy (CARE) program.

19 SDG&E contends that the current five-tier residential rate structure is  
20 unnecessarily complex, and is not based on the costs of providing service. To make a  
21 relatively minor movement towards cost-based rates with SDG&E’s primary residential  
22 rate schedules, SDG&E proposes that all usage in excess of 200 percent of baseline usage



1 be priced at the same rate. The current structure of applying slightly higher rates for  
2 usage in excess of 300 percent of baseline allowances (tier 5) would be eliminated.

3 SDG&E proposes that rates for CARE customers be modified to bring discounts  
4 for large-use CARE customers in-line with discounts for low-use CARE customers. To  
5 accomplish this, SDG&E proposes that the tier structure applicable to CARE customers  
6 be the same as for non-CARE customers, i.e. a four-tier rate structure. Net discounts  
7 would be reduced for large-use CARE customers with the incorporation of a four-tier  
8 inverted rate structure (as described previously for Schedule DR). CARE customers  
9 would continue to receive the legislated 20 percent line-item discount on their bills, as  
10 well as: exemption from the CARE surcharge, exemption from CSI charges, and  
11 exemption from the DWR bond charge. Residential rate and customer impacts are  
12 sponsored by SDG&E witness Claffey in Chapter 6.

13 SDG&E proposes no changes to baseline allowances in this proceeding. SDG&E  
14 witness Magill in Chapter 10 presents a study of current baseline allowances for each  
15 climate zone and residential customer type. As described by SDG&E witness Magill, the  
16 present baseline quantities appear to still closely match the target usage identified with  
17 the implementation of D.02-04-026, which addressed baseline allowances in the context  
18 of AB1X.

#### 19 B. Commercial & Industrial (C&I) Rates

20 For medium and large C&I customers, SDG&E proposes that distribution revenue  
21 requirements in excess of Basic Service Fee revenue continue to be recovered primarily  
22 through non-coincident demand charges.

1           SDG&E proposes a new kWh-based charge applicable to the C&I customer class  
2 to recover allocated revenue requirements associated with: CSI program, Self-Generation  
3 Incentive Program (SGIP), hazardous substance cleanup costs, AMI Infrastructure costs,  
4 and the Advanced Metering and Demand Response Program costs. These cost categories  
5 are currently recovered in distribution rates of large C&I customers by means of demand  
6 charges. SDG&E's distribution demand charge structure is applicable only to C&I  
7 customers served at Primary and Secondary service voltages. The new kWh-based  
8 distribution rate would enable recovery from all retail C&I customers including  
9 customers at transmission and substation service voltages.

10           Transmission-level customers, as well as customers serviced under the Substation  
11 options, are currently bypassing costs being assessed through distribution rates. SDG&E  
12 therefore proposes a more equitable approach to eliminate the current intra-class C&I  
13 subsidies. SDG&E proposes that, similar to the method of PPP cost recovery, costs  
14 associated with the programs and cost categories described above be recovered through  
15 an equal-cent-per-kWh rate structure added to the large customer C&I tariffs. Details of  
16 the approach are described in the testimony of SDG&E witness Borden in Chapter 7.

17           Distribution facilities are designed to serve a circuit or customer maximum  
18 demand, no matter when the maximum demand may occur. Therefore, distribution cost  
19 recovery by means of a non-coincident demand charge is more appropriate than recovery  
20 through on-peak demand charges or through energy-based charges. Medium and Large  
21 C&I rate designs are sponsored by SDG&E witness Borden in Chapter 7.

22           //

23           //

1 C. Commodity Rates

2 Generation/commodity rates have also been designed to more closely reflect  
3 SDG&E’s marginal cost of providing service. Seasonal commodity rate differences are  
4 proposed to be incorporated in Schedule EECC (Electric Energy Commodity Cost) for  
5 several rate schedules that are currently non-seasonal. SDG&E proposes that current  
6 seasonal period definitions being used for distribution rate design also be applied to  
7 generation/commodity rate design.

8 SDG&E proposes that Schedule EECC TOU rates be updated to more closely  
9 reflect marginal energy cost estimates, with adjustments to reflect the class’ allocated  
10 revenue requirement and to mitigate adverse bill impacts. Rates are proposed to be  
11 differentiated by service voltage to account for variations in energy losses. Uncapped  
12 generation/commodity rates based on the marginal cost study are sponsored by SDG&E  
13 witness Parsons. These unit marginal costs are then translated into rates as described for  
14 the various “traditional” rate scheduled by SDG&E witnesses Claffey and Borden, in  
15 Chapters 6 and 7, respectively.

16 SDG&E’s current Schedule EECC generation/commodity rates are entirely  
17 energy based. SDG&E proposes that a generation demand charge be incorporated in  
18 Schedule EECC rates applicable to Medium and Large C&I rate schedules to more  
19 closely reflect costs of providing generation capacity. The demand charge should be  
20 phased-in over the next several rate design proceedings and should be designed to  
21 recover marginal generation capacity costs of \$76.40 per kW based on a RECC approach.  
22 SDG&E proposes to mitigate customer bill impacts related to the new generation on-peak  
23 demand charge structure by setting the rate level at 50 percent of the cost-based level.

1 Since marginal generation-related capacity costs are primarily related to serving  
2 SDG&E's system peak load, the demand charge would be highly seasonal. To avoid  
3 system and meter programming changes the season definitions for the demand charge  
4 would be unchanged from the currently defined summer definitions. The summer season  
5 for the C&I rate schedules would continue to be May through September.

6 To increase customer understanding of the new demand charge the structure of  
7 the generation demand charge should be dependent on and consistent with the existing  
8 demand rate structure of each C&I tariff. For Schedules AL-TOU, AY-TOU and PA-T-1  
9 the demand charge would be based on monthly summer on-peak demand, with no ratchet  
10 provision. For Schedule AD, which does not currently have an on-peak demand  
11 structure, the generation demand charge would be based on the customer's monthly  
12 maximum demand during each billing period. For Schedule A6-TOU the demand charge  
13 would be based on the monthly system peak demand charge during the summer season.  
14 As described in the testimony of SDG&E witness Borden, the generation demand charges  
15 are based on results of the generation marginal cost study sponsored by SDG&E witness  
16 Parsons, multiplied by a phase-in factor of 50 percent.

1 **IV. METHODOLOGY FOR APPLYING AB1X RATE CAP AND COST**  
2 **RECOVERY SURCHARGES**

3 A. Background

4 In response to the energy crisis that began in the summer of 2000, AB1X was  
5 signed into law on February 1, 2001, adding Water Code §80110 that authorized DWR to  
6 procure power for California retail customers that the three investor owned utilities could  
7 not provide from their own resources. To protect residential customers from further rate  
8 increases resulting from the energy crisis, AB1X capped electric rates of 130 percent of  
9 baseline residential usage at February 1, 2001 rate levels (AB1X rate cap).

10 The AB1X rate cap was first implemented for SDG&E in D.01-09-059  
11 when the Commission exempted 130 percent of baseline usage from the  
12 commodity rate increase adopted to recover higher DWR costs. The revenue  
13 shortfall resulting from the AB1X rate cap were recovered from all customer  
14 usage not protected under the rate cap through a surcharge implemented on  
15 commodity rates. Since approximately 70 percent of residential usage was  
16 protected under the AB1X rate cap provision<sup>1</sup>, the majority of the revenue  
17 shortfall resulting from the rate cap was being allocated and recovered from non-  
18 residential customers. This allocation policy resulted in significant cross-  
19 subsidies in the rates of non-residential customers and a distortion of commodity  
20 rates of all customers.

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<sup>1</sup> D.02-04-026 increased the residential baseline allowance in June and July 2002 which resulted in a higher percentage of residential usage being under 130 percent of baseline (increased the percentage from approximately 60 percent to 70 percent) and thus, more residential usage is under the AB1X rate cap.

1 The distortion of commodity rates due to these AB1X rate cap subsidies  
2 was exacerbated by the Commission's subsequent ruling in D.04-02-057 that the  
3 AB1X rate cap applies to total electric rates and not just commodity rates. For  
4 this reason, any rate increase implemented by SDG&E required residual  
5 adjustments to 130 percent of baseline commodity rates to ensure total rates do  
6 not exceed AB1X rate cap levels. This resulted in commodity rates of 130  
7 percent of baseline usage being set well below costs while the commodity rates of  
8 all other usage needed to be set above costs to fully recover costs.

9 In SDG&E's 2006 RDW proceeding (A.05-02-019), SDG&E proposed  
10 the adoption of non-bypassable rate component called the TRAC to implement the  
11 AB1X rate cap and recover the revenue shortfall resulting from the rate cap.  
12 Under SDG&E's proposed (and currently-adopted) methodology commodity rates  
13 can be set at cost-based levels while the subsidies resulting from the AB1X rate  
14 cap are passed-through and fully recovered within the TRAC rate component.  
15 SDG&E stated that the benefits of this proposal are as follows: (a) commodity  
16 rate distortion is removed which will hopefully lead to more efficient energy use;  
17 (b) adopting a separate, non-bypassable charge (or credit) will ensure that the cost  
18 of providing such subsidies cannot be avoided and shifted to bundled customers  
19 by electing Community Choice Aggregation (CCA) or Direct Access (DA)  
20 service; and (c) consolidating the AB1X subsidies into the TRAC rate component  
21 will provide better information and clarity about the magnitude of AB1X subsidies  
22 and their impact on the rates of various customer classes. In addition, SDG&E  
23 intent under its AB1X allocation proposal was to minimize and eventually

1 eliminate AB1X cross-subsidies by allocating and recovering as much of the  
2 AB1X revenue shortfall within the residential class, but only to the extent that  
3 total residential revenues are kept within capped increase levels.

4 In D.05-12-003 the Commission adopted the all-party settlement for SDG&E's  
5 2006 RDW Application with the exception of the TRAC terminology. Instead of  
6 approving the "TRAC" term the Commission changed the name of the mechanism from  
7 TRAC to 2006 RDSC and approved its use for allocating and recovering AB1X subsidies  
8 during the 2006 RDW term. The Commission changed the name of the rate component  
9 to 2006 RDSC to make it clear that this component is being approved for the current  
10 RDW term and that its approval does not set a precedent for approval of a similar non-  
11 bypassable rate component in SDG&E's next rate design proceeding.

#### 12 B. Continuation of Non-Bypassable AB1X Rate Cap Component

13 If the Commission were to be considering the 2006 RDSC concept as an  
14 experimental approach to dealing with AB1X subsidies and cost recovery, then SDG&E  
15 would contend the approach has been highly successful since its implementation on  
16 February 1, 2006. SDG&E therefore proposes continuation of the RDSC non-bypassable  
17 credit/rate concept, currently being used to implement the AB1X rate cap and recover the  
18 revenue shortfall resulting from the rate cap, until the AB1X rate cap is eliminated.  
19 SDG&E proposes that the name of the rate component be changed to the Total Rate  
20 Adjustment Component (TRAC) and remain in effect until the AB1X rate cap is  
21 eliminated. The TRAC rate component should apply to all residential customers,

1 including existing DA customers currently exempt from paying 2006 RDSC charges.<sup>2</sup>  
2 The rate component should continue to be included in SDG&E's electric rate schedules  
3 and the charges or credits should continue to be shown as a line-item on customer bills.  
4 Also, like the 2006 RDSC the TRAC component should allocate and recover all AB1X  
5 subsidies within the residential class to avoid any cross-subsidies.

6 The reasons for continuing the use of the non-bypassable rate component to  
7 implement the AB1X rate cap and recover the resulting revenue shortfall are as follows:  
8 (1) prevents commodity rate distortion that would occur if instead commodity rates were  
9 used to implement AB1X rate capping; (2) ensures that the cost of providing the AB1X  
10 subsidies cannot be avoided and shifted to bundled service customers by electing CCA or  
11 DA service; and (3) clearly identifies the level of AB1X subsidies being provided and the  
12 cost of providing such subsidies.

13 (1) Avoid Commodity Rate Distortion

14 Prior to using the 2006 RDSC to implement the AB1X rate cap, commodity rates  
15 were used to accomplish this task which resulted in distorted commodity rates. First, to  
16 maintain AB1X rate cap levels any residential rate change implemented required an  
17 offsetting adjustment to 130 percent of baseline commodity rates. Second, the revenue  
18 shortfall resulting from the AB1X rate cap were recovered by way of a commodity rate  
19 surcharge paid by usage not protected under the rate cap. The adjustments to residential  
20 commodity rates to maintain the AB1X rate cap requirement and recover the revenue

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<sup>2</sup> Under the settlement reached in the 2006 RDW proceeding that was approved in D.05-12-003, customers that were eligible for DA under laws and regulations existing as of July 26, 2005 were provided 2006 RDSC credits but were exempt from paying 2006 RDSC charges.



1 shortfall from the rate cap through a commodity rate surcharge resulted in distorted  
2 commodity rates which could lead to inefficient energy use decisions.

3 Under the proposed approach for handling the AB1X rate cap, commodity rates  
4 can be set at cost-based levels, without price variations by usage tier, since the non-  
5 bypassable rate component handles AB1X rate capping. This allows customers to get the  
6 correct price signal regarding the cost of SDG&E providing commodity service. Since  
7 utility commodity rates are a prime consideration of customers in making peak-period  
8 energy use decisions and in evaluating options such as energy efficiency investment,  
9 customer generation investments (such as PV or other forms of self-generation), CCA or  
10 DA service, it is important that commodity rates not be distorted by AB1X subsidies.  
11 Like the 2006 RDSC, the TRAC component will ensure that such distortion does not  
12 occur in commodity rates in the future.

### 13 (2) Ensure AB1X Cost Responsibility Can Not be Avoided

14 Another benefit of implementing the AB1X rate cap and recovering the resulting  
15 revenue shortfall through a non-bypassable rate component is that it ensures that  
16 customers can not avoid their responsibility for paying AB1X costs. Under the TRAC  
17 mechanism, the benefits and costs of the AB1X rate cap protection will be applicable to  
18 all customers, including CCA and DA customers.

19 The non-bypassable treatment of the AB1X rate cap protection is appropriate for  
20 two reasons. First, it is imperative that customers not be allowed to avoid the cost of  
21 providing AB1X subsidies by switching to CCA or DA service since this would put  
22 upward pressure on the rates of remaining bundled service customers. Second, the AB1X

1 rate cap protection applies to all utility rate components, not just commodity rates, and  
2 thus, it's appropriate to apply the AB1X rate cap benefits and costs to all customers.

### 3 (3) Clearly Identify AB1X Subsidies and Resulting Rate Impacts

4 As mentioned earlier, prior to the adoption of the 2006 RDSC to implement the  
5 AB1X rate cap, SDG&E's commodity rates were structured to address AB1X rate caps  
6 and to recover subsidy costs. This not only resulted in distorted commodity rates as  
7 discussed above but also hid the amount of AB1X subsidies being provided. SDG&E  
8 believes that not having this information, especially given the amount of the subsidy, can  
9 result in uneconomic energy use decisions on behalf of customers.

10 By using a separate rate component to implement the AB1X rate cap and to  
11 recover the resulting AB1X revenue shortfall both customers and the Commission will  
12 have better information and clarity about the magnitude of AB1X subsidies and their  
13 impact on the rates of various customer classes. Customers will have the information  
14 necessary to make efficient energy decisions and will know the price level and rate  
15 structure of the AB1X subsidies to which they are subject. In addition, using the non-  
16 bypassable component to identify the AB1X rate cap subsidies will also allow SDG&E to  
17 more easily adjust and phase-out the AB1X rate capping, as discussed in the next section.

## 18 19 **V. PHASE-OUT OF AB1X RATE CAP**

20 SDG&E proposes to phase-out the AB1X rate cap requirement, and associated  
21 rate subsidies, over the period that the DWR contracts expire. SDG&E's assigned  
22 contracts terminate by 2014. The duration of contracts assigned to SCE and Pacific Gas  
23 & Electric Company (PG&E) also vary and discontinue in their entirety by 2016.

1 Concurrent with the proposed January 1, 2008 implementation date of its GRC, SDG&E  
2 is proposing that the AB1X rate cap phase-out period begin on January 1, 2008 and be  
3 completed on January 1, 2016 when the last DWR contract assigned to any utility  
4 expires. Levelizing the phasing out of the AB1X rate cap over an eight year period will  
5 help mitigate the bill impact of eliminating the rate cap and subsidies.

6 SDG&E's proposal ties phase-out of the AB1X rate cap requirements with  
7 straight-line reductions each year until all of the DWR contracts have expired. AB1X  
8 rate subsidies would be phased-out by 11.1 percent per year, for 9 years, with AB1X  
9 capping and subsidies phase-out entirely by January 1, 2016.

10 Under SDG&E's proposal, the TRAC component consolidates all AB1X  
11 subsidies and surcharges. Therefore, AB1X capping and subsidies can be easily phased  
12 out by applying annual adjustment factors to the TRAC credits and surcharges. TRAC  
13 rates would continue to be designed to apply AB1X rate caps and subsidies, and would  
14 then be adjusted by a single annual adjustment effective January 1 of each year. SDG&E  
15 proposes the first factor of 0.89 be implemented on January 1, 2008. AB1X credits,  
16 surcharges and subsidies would be scaled to a reduced level by applying this single factor  
17 to all TRAC rates.

18 An alternative would be a utility-specific AB1X phase-out methodology.  
19 SDG&E could calculate an AB1X phase-out factor by multiplying the DWR contract  
20 MWs for the current year by the DWR contract MWs for the benchmark year. The  
21 benchmark year would be established as the current year of 2007, so the "TRAC  
22 Adjustment Factor" would be 100 percent, which would equate to no change. In 2008  
23 the adjustment factor would be 64 percent, so TRAC rates could be multiplied by a single

1 factor of 0.64 effective January 1, 2008. The TRAC Adjustment Factor could be  
2 multiplied by the current year's unadjusted TRAC rates to determine the Adjusted TRAC  
3 charges/credits for the current year.

4 Attachments RWH-1, RWH-2 and RWH-3 provide an illustrative calculation of  
5 TRAC rates and resulting total rates.

6 Attachment RWH-1 shows total of the DWR contracts (in MWs) for each utility  
7 by year based on information in Revised DWR Revenue Requirement Report, filed  
8 October 12, 2006. If a utility-specific phase-out methodology were applied, SDG&E's  
9 TRAC adjustment factors could be based on the forecasted yearly DWR contract MWs as  
10 made publicly available in the DWR's annual revenue requirement filings.

11 Attachment RWH-1 also shows annual AB1X phase-out factors if based on  
12 aggregate state-wide DWR contract MW levels by year, and SDG&E's proposed factors  
13 based on applying annual straight-line reductions. SDG&E proposal is that a straight-line  
14 AB1X phase-out factor be applied to TRAC credits and surcharges through 2015.

15 Attachment RWH-2 shows the proposed straight-line phase-out factor and  
16 SDG&E's current unbundled rates for Schedule DR. Column "(J)" shows the TRAC  
17 credits and surcharges which would be adjusted by the AB1X phase-out factor.

18 Attachment RWH-3 shows how TRAC rates would be adjusted annually by  
19 applying the AB1X phase-out factor. For clarity of illustrating the AB1X roll-off  
20 concept, all rate components other than the TRAC are held constant. The example shows  
21 how a phase-out of TRAC will ultimately, by 2016, allow AB1X capping and subsidies  
22 to be fully eliminated.

1 SDG&E currently redesigns TRAC (aka RDSC) rates with each and every retail  
2 rate change. Under SDG&E's proposal, the TRAC rates would continue to be redesigned  
3 with periodic retail rate changes. The TRAC adjustment factor would be modified only  
4 once per year. Applying the same TRAC adjustment factor to all TRAC rates ensures  
5 that AB1X credits (applicable to usage up to 130 percent of baseline) and AB1X  
6 surcharges are kept in sync. That is, when a single AB1X phase-out factor is applied to  
7 all TRAC credits and surcharges the forecast AB1X credit revenues will continue to  
8 equal the AB1X subsidy revenues that are collected.

## 9

## 10 **VI. SUMMARY AND RECOMMENDATIONS**

11 This chapter summarizes policies and "traditional" rate proposals related to  
12 recovery of the GRC Phase 1 revenue requirement requests. This chapter also describes  
13 several residential rate design proposals as well as SDG&E proposal for a TRAC  
14 component and phase-out proposal related to AB1X rate capping and subsidies.

15 Recommendations are as follows:

- 16 1. Revenue allocations to the classes should be uncapped. That is, class  
17 allocations should be set at cost-based levels.
- 18 2. Distribution rates should be set at cost-based levels, with no changes to  
19 distribution rate structures in this proceeding.
- 20 3. Basic Service Fees, where they currently exist, should be updated to more  
21 closely reflect SDG&E's updated estimates of marginal customer costs,  
22 but increases in Basic Service Fees should be capped at 20 percent.

- 1 4. New Schedule DR-SES should be adopted as the default Time-of-Use  
2 service option for residential customers installing new PV systems.
- 3 5. Discounts to CARE customers should be designed to pass through the  
4 legislated 20 percent bill discount. In addition, CARE customers would  
5 continue to be exempt from: DWR Bond charges, CSI costs, and the  
6 CARE surcharge.
- 7 6. Generation/commodity charges applicable to customers with demand  
8 metering should incorporate demand charges. The demand charges should  
9 be phased-in at 50 percent of the marginal cost-based level in 2008.
- 10 7. To allow cost recovery from all large C&I customers, including  
11 transmission and substation level customers, a kWh-based distribution  
12 charge should be implemented. The component would recover authorized  
13 revenue requirements associated with CSI, SGIP, DRP, hazardous  
14 substance cleanup costs, and AMI.
- 15 8. The current 2006 Rate Design Settlement component used to identify  
16 AB1X subsidies and surcharges should be renamed the Total Rate  
17 Adjustment Component (TRAC) and should continue for the duration of  
18 AB1X rate capping.
- 19 9. AB1X rate capping and associated subsidies should be rolled off in their  
20 entirety by January 1, 2016 though annual straight-line adjustments to  
21 TRAC rates.

22 This concludes my prepared testimony.

1 **VII. QUALIFICATIONS OF ROBERT W. HANSEN**

2 My name is Robert W. Hansen. My business address is 8330 Century Park Court,  
3 San Diego, California, 92123. I am Electric Rate Design Manager in the Regulatory  
4 Strategy Department for San Diego Gas & Electric Company (SDG&E). My primary  
5 responsibilities include the development of cost-of-service studies, determination of  
6 revenue allocation and electric rate design methods, analysis of ratemaking theories, and  
7 preparation of various regulatory filings.

8 I received a Bachelor of Science degree in Mining Engineering from South  
9 Dakota School of Mines & Technology in 1981. I received a Master of Science degree in  
10 Policy Economics from the University of Illinois in 1987, where my areas of  
11 specialization were natural resource and environmental economics. I am a Registered  
12 Professional Engineer in the State of Indiana.

13 From 1991 to 1998, I was employed by SDG&E as a Pricing Design Analyst and  
14 Senior Pricing Analyst. From 1998 to July 2000, I was employed by Sempra Energy as a  
15 Regulatory Policy Analyst in the Regulatory Affairs Division. From July 2000 to  
16 December 2001, I was employed by Enron Energy Services as Director – Utility Risk  
17 Management, and Director – Product Management. I have been employed in my current  
18 position since April 2002.

19 I have testified before the FERC and the CPUC in other proceedings.

# **ATTACHMENT**

**RWH -1**



**Attachment RWH-1  
 SAN DIEGO GAS & ELECTRIC COMPANY - ELECTRIC DEPARTMENT  
 GRC Phase 2 (A.07-01-\_\_\_\_)  
 AB1X ROLL-OFF PROPOSAL  
 DWR CONTRACTS BY YEAR, BY UTILITY AND AGGREGATE**

Line #		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Line #
1	Total Contract MWs	1,806	1,156	1,156	1,156	831	680	108	0	0	0	1
2	% of 2007 MW	100%	64%	64%	64%	46%	38%	6%	0%	0%	0%	2
<b>SDG&amp;E</b>												
3	Total Contract MWs	4,862	4,432	4,432	4,432	2,507	0	0	0	0	0	3
4	% of 2007 MW	100%	91%	91%	91%	52%	0%	0%	0%	0%	0%	4
<b>SCE</b>												
5	Total Contract MWs	4,354	4,534	4,534	2,634	2,234	1,028	277	277	277	0	5
6	% of 2007 MW	100%	104%	104%	60%	51%	24%	6%	6%	6%	0%	6
<b>PG&amp;E</b>												
<b>Total</b>												
7	State-wide Total MWs by Year	11,021	10,121	10,121	8,221	5,571	1,708	385	277	277	0	7
8	Aggregate Roll-off Factor	100%	92%	92%	75%	51%	15%	3%	3%	3%	0%	8
9	Straight-Line Roll-off Factor (Proposal)	<b>100.0%</b>	<b>88.9%</b>	<b>77.8%</b>	<b>66.7%</b>	<b>55.6%</b>	<b>44.4%</b>	<b>33.3%</b>	<b>22.2%</b>	<b>11.1%</b>	<b>0.0%</b>	9

Source: Revised DWR Revenue Requirement Report filed October 12, 2006

# **ATTACHMENT**

**RWH -2**

**ATTACHMENT RWH-2  
SAN DIEGO GAS & ELECTRIC COMPANY - ELECTRIC DEPARTMENT  
GRC Phase 2 (A.07-01-    )  
PROPOSED ABIX PHASE OUT FACTORS BY YEAR, AND CURRENT RDSC (TRAC) RATES**

LINE NO.		DWR CONTRACT SCHEDULE										LINE NO.		
		UNITS	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016		
1	TOTAL of DWR Contracts	MW	11,021	11,021	10,121	10,121	8,221	5,571	1,708	385	277	277	1	
2	PHASE OUT FACTOR (Levelized)		100.0%	88.9%	77.8%	66.7%	55.6%	44.4%	33.3%	22.2%	11.1%	0.0%	2	

  

RESIDENTIAL SCHEDULE DR -- CURRENT UNBUNDLED UNIT CHARGES (EFFECTIVE 1-1-07)														
LINE NO.	DESCRIPTION (A)	UNITS (B)	TRANSMISSION RATE (C)	DISTRIBUTION RATE (D)	PPP RATE (E)	ND RATE (F)	FTA		RS RATE (I)	RDS (TRAC) RATE (J)	TOTAL UDC RATE (K)	EECC RATE (L)	DWR BOND RATE (M)	TOTAL RATE (N)
							BOND PAYMENT RATE (G)	CTC RATE (H)						
3	Summer													
4	Baseline Energy	\$/kWh	0.00869	0.05754	0.00615	0.00046	0.00513	0.00140	0.00602	(0.04749)	0.03790	0.08608	0.00469	0.12867
5	101% to 130% of Baseline	\$/kWh	0.00869	0.07068	0.00615	0.00046	0.00513	0.00140	0.00602	(0.04046)	0.05807	0.08608	0.00469	0.14884
6	131% to 200% of Baseline	\$/kWh	0.00869	0.07068	0.00615	0.00046	0.00513	0.00140	0.00602	0.05475	0.15328	0.08608	0.00469	0.24405
7	201% to 300% of Baseline	\$/kWh	0.00869	0.07068	0.00615	0.00046	0.00513	0.00140	0.00602	0.06382	0.16235	0.08608	0.00469	0.25312
8	Above 300% of Baseline	\$/kWh	0.00869	0.07068	0.00615	0.00046	0.00513	0.00140	0.00602	0.07965	0.17818	0.08608	0.00469	0.26895
9	Winter													
10	Baseline Energy	\$/kWh	0.00869	0.05754	0.00615	0.00046	0.00513	0.00140	0.00602	(0.02052)	0.06487	0.05911	0.00469	0.12867
11	101% to 130% of Baseline	\$/kWh	0.00869	0.06295	0.00615	0.00046	0.00513	0.00140	0.00602	(0.00576)	0.08504	0.05911	0.00469	0.14884
12	131% to 200% of Baseline	\$/kWh	0.00869	0.06295	0.00615	0.00046	0.00513	0.00140	0.00602	0.07383	0.16463	0.05911	0.00469	0.22843
13	201% to 300% of Baseline	\$/kWh	0.00869	0.06295	0.00615	0.00046	0.00513	0.00140	0.00602	0.08265	0.17345	0.05911	0.00469	0.23725
14	Above 300% of Baseline	\$/kWh	0.00869	0.06295	0.00615	0.00046	0.00513	0.00140	0.00602	0.10073	0.19153	0.05911	0.00469	0.25533

# **ATTACHMENT**

**RWH -3**

**ATTACHMENT RWH-3  
SAN DIEGO GAS & ELECTRIC COMPANY - ELECTRIC DEPARTMENT  
GRC Phase 2 (A.07-01-\_\_\_\_)  
ILLUSTRATION OF RATES BY TIER, BY YEAR, WITH PHASE-OUT OF TRAC**

<b>RESIDENTIAL SCHEDULE DR -- TRAC RATES BY YEAR</b>												
LINE NO.	DESCRIPTION	UNITS	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	Summer											TRAC
2	Baseline Energy	\$/kWh	(0.04749)	(0.04221)	(0.03694)	(0.03166)	(0.02638)	(0.02111)	(0.01583)	(0.01055)	(0.00528)	PHASED OUT
3	101% to 130% of Baseline	\$/kWh	(0.04046)	(0.03596)	(0.03147)	(0.02697)	(0.02248)	(0.01798)	(0.01349)	(0.00899)	(0.00450)	0.00000
4	131% to 200% of Baseline	\$/kWh	0.05475	0.04867	0.04258	0.03650	0.03042	0.02433	0.01825	0.01217	0.00608	(0.00000)
5	201% to 300% of Baseline	\$/kWh	0.06382	0.05673	0.04964	0.04255	0.03546	0.02836	0.02127	0.01418	0.00709	(0.00000)
6	Above 300% of Baseline	\$/kWh	0.07965	0.07080	0.06195	0.05310	0.04425	0.03540	0.02655	0.01770	0.00885	(0.00000)
7	Winter											
8	Baseline Energy	\$/kWh	(0.02052)	(0.01824)	(0.01596)	(0.01368)	(0.01140)	(0.00912)	(0.00684)	(0.00456)	(0.00228)	0.00000
9	101% to 130% of Baseline	\$/kWh	(0.00576)	(0.00512)	(0.00448)	(0.00384)	(0.00320)	(0.00256)	(0.00192)	(0.00128)	(0.00064)	0.00000
10	131% to 200% of Baseline	\$/kWh	0.07383	0.06563	0.05742	0.04922	0.04102	0.03281	0.02461	0.01641	0.00820	(0.00000)
11	201% to 300% of Baseline	\$/kWh	0.08265	0.07347	0.06428	0.05510	0.04592	0.03673	0.02755	0.01837	0.00918	(0.00000)
12	Above 300% of Baseline	\$/kWh	0.10073	0.08954	0.07835	0.06715	0.05596	0.04477	0.03358	0.02238	0.01119	(0.00000)
<b>RESIDENTIAL SCHEDULE DR -- TOTAL RATES BY YEAR (WITH PHASE-OUT OF TRAC)</b>												
LINE NO.	DESCRIPTION	UNITS	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
13	Summer											AB1X
14	Baseline Energy	\$/kWh	0.12867	0.13395	0.13922	0.14450	0.14978	0.15505	0.16033	0.16561	0.17088	0.17616
15	101% to 130% of Baseline	\$/kWh	0.14884	0.15334	0.15783	0.16233	0.16682	0.17132	0.17581	0.18031	0.18480	0.18930
16	131% to 200% of Baseline	\$/kWh	0.24405	0.23797	0.23188	0.22580	0.21972	0.21363	0.20755	0.20147	0.19538	0.18930
17	201% to 300% of Baseline	\$/kWh	0.25312	0.24603	0.23894	0.23185	0.22476	0.21766	0.21057	0.20348	0.19639	0.18930
18	Above 300% of Baseline	\$/kWh	0.26895	0.26010	0.25125	0.24240	0.23355	0.22470	0.21585	0.20700	0.19815	0.18930
19	Winter											
20	Baseline Energy	\$/kWh	0.12867	0.13085	0.13323	0.13551	0.13779	0.14007	0.14235	0.14463	0.14691	0.14919
21	101% to 130% of Baseline	\$/kWh	0.14884	0.14948	0.15012	0.15076	0.15140	0.15204	0.15268	0.15332	0.15396	0.15460
22	131% to 200% of Baseline	\$/kWh	0.22843	0.22023	0.21202	0.20382	0.19562	0.18741	0.17921	0.17101	0.16280	0.15460
23	201% to 300% of Baseline	\$/kWh	0.23725	0.22807	0.21888	0.20970	0.20052	0.19133	0.18215	0.17297	0.16378	0.15460
24	Above 300% of Baseline	\$/kWh	0.25533	0.24414	0.23295	0.22175	0.21056	0.19937	0.18818	0.17698	0.16579	0.15460