

Application No: R.10-05-006

Exhibit No.: _____

Witness: Robert Anderson

Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long-Term Procurement Plans.

Rulemaking 10-05-006
(Filed May 6, 2010)

PREPARED DIRECT TESTIMONY

OF ROBERT ANDERSON

ON BEHALF OF

SAN DIEGO GAS & ELECTRIC COMPANY

PUBLIC VERSION

REDACTED INFORMATION

IS HIGHLIGHTED IN BLACK

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

March 25, 2011



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**PREPARED DIRECT TESTIMONY OF
ROBERT ANDERSON
ON BEHALF OF SDG&E**

I. INTRODUCTION

The purpose of my testimony is to sponsor Sections III through VI, and Appendices A and G, of the draft 2012 Long-Term Procurement Plan (“2012 LTPP”) of San Diego Gas & Electric Company (“SDG&E”) submitted in Track II of Rulemaking (“R.”) 10-05-006. I am also sponsoring testimony to explain how SDG&E developed an illustrative bundled plan based on the assumptions set forth in the *Assigned Commissioner and Administrative Law Judge’s Joint Scoping Memo and Ruling*, issued December 3, 2010 (the “Scoping Memo”), and then performed the calculation of the required metrics.

II. PROCUREMENT PLAN UPDATES

The first part of my testimony covers the updates and changes SDG&E has made to Sections III through VI of its 2006 LTPP. A general description of the updates to each section is provided below. Table RBA- 1 (see Attachment 1) discusses the changes that were made in each sub-section. In addition, Attachment 2 provides a road map of the changes to the organization, structure and numbering from the 2006 LTPP to the 2012 LTPP.

A. Section III – Resource Plan

This section was updated to remove outdated data and to make the section more descriptive of the sources of data and processes that SDG&E will use to estimate its long-term resource needs. Since the data values that are used to determine procurement needs becomes outdated more quickly than the Plan is updated, the Plan can be more informative if it clearly describes the process and sources upon which SDG&E will base its actual procurement decisions.

1 While this section generally follows the same order and headings as in the 2006 LTPP, an
2 exception is the sections on need, which are re-ordered. Since the Plan's focus is on SDG&E's
3 bundled customer needs, the bundled customer system and local resource need discussions were
4 moved ahead of the section that describes the need for new generation.

5 **B. Section IV – Procurement Strategy by Resource Type**

6 This section provides an overview of how each of the resource types that makes up the
7 resource plan will be procured. Like Section III, this section was updated to remove obsolete
8 data. This section highlights the fact that many of the elements of the resource plan are
9 determined or updated in other Commission proceedings. As these other proceedings determine
10 program levels, they influence the remaining amount of procurement. In this section, the 2012
11 LTPP follows the same order and headings as in the 2006 LTPP, with two exceptions. A new
12 section was added to discuss Self-Serve load, which is load service by resources on the customer
13 side of the meter and the Approved Resource Plan sub-section was removed since it overlapped
14 with the material in Section V.

15 **C. Section V – Evaluation of Resource Plan**

16 The evaluation section has been updated to remove outdated data and to include a
17 description of how SDG&E's planning process will result in a resource plan that follows the
18 preferred loading order and meets other State and Commission policies. It should be noted that
19 the Scoping Memo's requested metrics based on the Commission-ordered assumptions are
20 presented later in my testimony. The subsection on Integration of Transmission and Procurement
21 Planning that appeared in the 2006 LTPP was removed from the 2012 LTPP since transmission
22 planning is performed on a system-wide basis rather than solely for bundled customers.

1 **D. Section VI – Cost Recovery Issues**

2 The cost recovery section was updated to clarify ERRRA costs and to simplify the
3 discussion.

4 **E. Appendix A – Capacity and Energy Tables**

5 Appendix A includes tables which show SDG&E’s bundled customers’ capacity position,
6 both on a system resource adequacy (“RA”) basis and a local RA basis, and an energy table. The
7 development of these tables was based on assumptions in the Scoping Memo and is discussed
8 below.

9 **F. Appendix G – Request for Offer Evaluation Methodology**

10 This Appendix was updated to clarify the general process SDG&E uses to evaluate non-
11 renewable RFO bids.

12 **III. BUNDLED PLAN REQUIRED ASSUMPTIONS**

13 The majority of SDG&E’s LTPP is focused on explaining the processes and products that
14 SDG&E will use to meet its obligation to reliably serve its bundled customers’ capacity and
15 energy needs while meeting the State’s policy objectives. The following testimony provides an
16 illustrative example of how SDG&E’s bundled plan could look, consistent with carrying out the
17 processes described in the LTPP. This example is based on the assumptions provided in the
18 Scoping Memo.

19 The capacity and energy tables in Appendix A must be viewed as being illustrative
20 because many of the assumptions that go into these tables change frequently and are outside of
21 SDG&E’s or the Commission’s control. The load forecast is a good example of such an
22 assumption. The Scoping Memo directed the investor-owned utilities (“IOUs”) to develop their
23 respective plans using the 2009 Integrated Energy Policy Report (“IEPR”) forecast developed by
24 the California Energy Commission (“CEC”), which at that time it was adopted in December of

1 2009, was the State’s best estimate of future demand. However, the CEC issued a new short
2 term forecast in March, 2011 that substantially lowers the demand forecast. In a little over a
3 year, the forecast for SDG&E service area for 2011 was reduced by 235 MW, or 4.7%. Each of
4 the load forecasts was the CEC’s best view of the future demand at the time each was produced,
5 but the underlying fundamentals changed dramatically in the year or so between forecasts. In
6 each case, the forecast was the best available assumption at that time. And in less than a year
7 from now, the CEC will produce a new forecast that will likely be different than the previous
8 two.

9 The load forecast is just one example of an assumption that will change with time and
10 will have an impact on bundled customer’s capacity and energy needs. The on-line date of
11 resources change, the net qualifying capacity (“NQC”) rating of resources change, and the
12 relative prices between resources will change, resulting in changes to the least-cost dispatch.
13 Thus the tables provided in Appendix A should be viewed as one possible outcome based on a
14 given set of assumptions. Actual procurement will vary over time, based on the best available
15 data at that time.

16 **A. Required Case Input Assumptions**

17 As noted above, the Scoping Memo set out a specific set of assumptions that the
18 Commission required the IOUs to use in order to develop a bundled customer plans. The
19 Scoping Memo input assumptions included loads, uncommitted energy efficiency (“EE”)
20 impacts, demand response and incremental combined heat and power (“CHP”). For the
21 renewable assumptions the IOUs were directed to base their resources on the “Trajectory Case”
22 presented for Track I with guidance from the Commission’s Energy Division. The Scoping
23 Memo also specified other inputs such as the natural gas price methodology and Green House
24 Gas (“GHG”) prices that should be used to develop a table showing the possible dispatch of the

1 units. Although the Scoping Memo specified many of the assumptions necessary to build a
2 bundled plan, it did not specify all of the necessary assumptions. To the extent SDG&E had to
3 fill in missing data, SDG&E explains its assumptions below.

4 One of the challenges in developing a Track II bundled customer resource plan from
5 Track I system data is the fact that the Track I data is not utility-specific. Track I specifies
6 resources by their physical locations. However, there is no requirement that the units physically
7 located in a given IOU's service area will contract with that utility. In many cases that is not the
8 case. For example, SDG&E has contracts for resources that are physically located in the service
9 territories of Southern California Edison Company ("SCE") and Pacific Gas & Electric Company
10 ("PG&E"). Thus, these resources would show up in SCE and PG&E's service area for Track I
11 but will be in SDG&E's plan for Track II. SDG&E also has resources that are physically outside
12 the locations specified in the Scoping Memo and, thus, were not included in the Track I
13 assumptions at all. Likewise, the renewable data in the Trajectory Case was a plan of renewable
14 resources and their physical location, not a listing of which renewable resources were assigned to
15 which utility.

16 The values taken directly from the Track I assumptions are:

- 17 • System Load forecast: the 2009 CEC system load forecast system.
- 18 • Split between bundled and direct access ("DA") customers: based on the 2009 CEC
19 load forecast split.
- 20 • Committed Energy Efficiency: embedded in the 2009 CEC IEPR load forecast, thus
21 no assumption needed.

- 1 • Uncommitted Energy Efficiency: the values specified for SDG&E’s service area in
2 Track I.¹
- 3 • Demand Response: The values specific for SDG&E service area in Track I.
- 4 • Demand Side CHP: The incremental demand side CHP value for SDG&E’s service
5 area in Track I.
- 6 • Resource Adequacy Capacity Values: Consistent with NQC rating per the Scoping
7 Memo.
- 8 • Planning Reserve Margin: 15-17%. SDG&E’s tables show need based on 15%
9 planning reserve margin.

10 In two areas, the Scoping Memo required the use of assumptions from Track I that were
11 only locational information, but no contractual information was provided. Thus to apply the
12 Track I information SDG&E made the following assumptions regarding its bundled plan:

- 13 • Renewable Resources: Based on guidance from the Energy Division, SDG&E
14 developed a renewable portfolio that is consistent, although not is a perfect match,
15 with the Trajectory Case. The year-by-year Renewable Portfolio Standard (“RPS”)
16 targets were set at 20% for 2010-2014; 24% for 2015-2017; 28% for 2018-2019 and
17 33% in 2020. To build up the portfolio, SDG&E first used its currently producing
18 and signed contracts to fill in its renewable needs. Since these alone will not meet a
19 33% standard in the later years of the plan, SDG&E assumed 75% of it expiring
20 contracts will be re-signed. SDG&E then assumed the remaining need would be
21 filled by the expected capacity from the Commission recently adopted Renewable
22 Auction Mechanism (“RAM”) program, which was used to represent the distributed

¹ The assumptions for uncommitted EE, DR and demand side CHP in Track I are for the total service area, SDG&E has assumed the impact of these programs will be shared proportionately between bundled and DA customers.

1 resources in the Trajectory Case. Since the Trajectory Case assumed that 33%
2 renewable power would actually be delivered in 2020, SDG&E added some generic
3 wind power in 2019 and 2020 to reach 33% renewable power being delivered in
4 2020.

- 5 • Supply Side CHP: SDG&E assumed all existing and the incremental supply side
6 CHP in SDG&E's area from Track I would be part of SDG&E's bundled plan.

7 SDG&E made the following assumptions regarding other existing and committed resources that
8 were not specified in the Track I or II scoping memos:

- 9 • Contracted Fossil Resources: SDG&E assumed that all existing signed contracts in
10 its bundled customer portfolio will continue for the study period or their contract
11 term, whichever is shorter.
- 12 • IOU Owned Resources: All SDG&E owned resources will continue in service for the
13 planning period.²

14 The following assumptions were then used to fill the remaining need:

- 15 • A combined cycle resource will replace the Otay Mesa combined cycle contract after
16 it expires;
- 17 • Peaking and intermediate type units that are currently under negotiation in SDG&E's
18 current RFO will be added to its portfolio. Additional generic peaking resources will
19 be added as these contracts expire.
- 20 • System RA purchases will then be used to fill the remaining need to meet resource
21 adequacy needs.

² SDG&E has filed an application to acquire the Cal Peak El Cajon unit (A.11-01-004). In this plan SDG&E has assumed the application will be approved.

1 **B. Required Case Portfolio Evaluation**

2 The Scoping Memo required that the IOU provide a required set of metrics based on the
3 required assumptions. These include two cost metrics (the Net Present value [“NPV”] of the
4 revenue requirement [utility cost] and the utility average rate, include a present value of the
5 average rate³), a risk measures based on a Time-to-Expiration Value at Risk (“TeVaR”), and
6 GHG emissions. The Scoping Memo also required sensitivity analysis based on natural gas
7 prices, CO₂ prices and need level. In conducting the sensitivity analysis, the Scoping Memo
8 stated that the utility can assume that the resource portfolio and dispatch would not change.

9 In performing the metric calculations and the sensitivity analysis, the Scoping Memo
10 required the use of the following:

- 11 • Gas Price: the Scoping Memo required the use of the market price referent (“MPR”)
12 methodology for the base case based on data from a specific date. The gas price
13 sensitivities were to use values
14 of \$2/mmbtu and \$10/mmbtu.
- 15 • GHG Prices: the Scoping Memo direction to use the Base, High and Low prices
16 shown in the Track I Scoping Memo.
- 17 • Generic Renewable Prices: should be based on the RPS calculator.
- 18 • Need level: Each portfolio used a high and low need case assuming a 10% change
19 from the base case.

20

³ The Scoping Memo specified that the present value of the average rate should be calculated by dividing the present value of the revenue requirement by the present value of the sales.

1 In order to complete the analysis, SDG&E needed to make several additional cost
2 assumptions in addition to those that were specified. For the most part, these assumptions were
3 for the fixed costs of the generic resources. For this analysis SDG&E assumed the following
4 generation resource costs will be used to fill the need:

- 5 • Capacity prices for resources used from the current RFO were based on prices
6 currently under negotiation.
- 7 • Incremental CHP capacity will cost \$100/kw-yr.
- 8 • System RA will cost \$50/kw-yr.

9 Lastly, in order to determine a total revenue requirement, an estimate of all other utility
10 costs, including distribution, transmission, and the current level of spending on public purpose
11 programs was needed. In order to develop this estimate, SDG&E used costs consistent with its
12 2012 General Rate Case filing and then escalated the costs at 2.5%.

13 Table RBA-2 shows all the required metrics and sensitivities except the TeVaR
14 calculation. The TeVaR calculation and results are explained in the testimony of James Magill.

15 In reviewing these metrics, it is important to keep things in mind. First, these values
16 should be viewed as informational and directional but not as specific yearly forecasts. Second,
17 the rate and revenue requirement metrics make a number of simplifying assumptions and do not
18 include all factors that could influence rates. As an example, the Scoping Memo required the
19 IOUs to assume that they do not receive any free allowances as part of the cap and trade
20 program. Thus, the rates reflect an increase in costs from the cap and trade but not the return of
21 revenues from the sale of allowances that the California Air Resources Board (“CARB”) is

1 proposing to provide the IOUs. Likewise the GHG emission data is “informational in a nature”
2 as required by the Scoping Memo. It is important to note that under CARB’s implementation of
3 Assembly Bill 32, generators and power importers, rather than the IOU’s bundled portfolio, are
4 the regulated entities.

5 Lastly, the need sensitivity assumed that the bundled portfolio did not change in response
6 to the changes in load. The tables show the reduction in the amount of capacity SDG&E would
7 need to procure in the low case, or how much additional capacity SDG&E would need to procure
8 in the high case. In actual practice, SDG&E would adjust procurement as the load trend
9 unfolded, thereby avoiding ending up either long or short. Although not specifically spelled out
10 in the Scoping Memo, the table also shows how the bundled customers’ RPS procurement
11 percentage in each year would vary with the higher and lower loads, also assuming no change in
12 procurement.

13 **IV. DISCUSSION OF SDG&E’S BUNDLED PLAN USING THE SCOPING MEMO** 14 **ASSUMPTIONS**

15 As discussed below, SDG&E does not support all of the Scoping Memo assumptions as
16 being the most likely path SDG&E portfolio will take; however, there are some general trends
17 that can be observed in SDG&E’s bundled portfolio, even with these assumptions. SDG&E
18 offers the following general observations regarding its customers’ bundled plan.

- 19 • Rates: SDG&E’s portfolio will be faced with upward cost pressures from renewable
20 power as it goes from its current portfolio to one that meets a 33% RPS.
- 21 • RPS compliance: SDG&E is well on its way towards meeting a 33% RPS based on
22 existing and signed contracts. SDG&E will continue to see some signed contract fail to
23 achieve commercial operation due to the remaining development risk inherent in many
24 renewables projects. SDG&E will see its portfolio increase rapidly between 2010 and

1 2014. To the extent the portfolio exceeds the yearly targets, these excess amounts of
2 procured generation will be used to fill past shortfalls or will be banked for compliance in
3 future years. An increase in renewables procurement over this period can also provide
4 cushion should loads end up higher than forecasted.

- 5 • GHG reductions: Although SDG&E's bundled customer portfolio is not a compliance
6 entity, the resource plan shows a substantial reduction in total GHG emissions over the
7 ten year period and an even greater reduction when considered on an lbs/MWHR basis.
8 However a shift in the pattern of energy usage, such as a rapid shift in the transportation
9 sector to electric vehicles could result in a different view over the planning period.
- 10 • Minimum Load Concerns: SDG&E is concerned with the potential cost exposure its
11 customers could face to large amounts of must-take power from nuclear, renewable and
12 CHP. The exposure results from having to pay the source a fixed price but receiving only
13 very low or negative market prices.

14 **V. CONCERNS WITH SCOPING MEMO REQUIRED ASSUMPTIONS**

15 As discussed above, the bundled plan resources needs will constantly be changing based
16 on new information regarding loads, resources and costs. The Scoping Memo provided a set of
17 assumptions that SDG&E was directed to use in preparing its LTPP filing. There are a large
18 number of other assumptions that may have the same or an even higher probability of occurring
19 in the future. Thus, the one outcome contemplated in the LTPP, based on this one set of
20 assumptions, should not be viewed as SDG&E's preferred or the most likely set of resources
21 over the next ten years. Likewise, the assumptions referenced in the Plan should not be viewed
22 as targets, or as setting a ceiling or floor on SDG&E's procurement authority.

1 SDG&E has several concerns with the required assumptions. These concerns include,
2 but are not limited to, the following:

- 3 • Load Forecast: The Scoping Memo required the use of the 2009 IEPR load forecast.
4 This forecast fails to recognize the economic downturn that has occurred since this
5 forecast was prepared. Thus, the 2009 IEPR load forecast overstates near-term loads.
- 6 • Energy Efficiency: The required EE assumptions are based on speculative programs that
7 are not tied to any specific set of cost-effective programs. Resource planning should be
8 based on Public Utilities Code § 454.5, which requires each IOU to demonstrate that its
9 procurement plan “will first meet its unmet resource need through all available energy
10 efficiency resources . . . “that are cost effective, reliable and feasible.” While proposing
11 stretch goals and aggressive new measures may be appropriate in certain non-LTPP
12 contexts, these aspirational goals should not be relied upon as the base case.
- 13 • Demand Response: The program impacts were based on a past SDG&E filing that
14 assumed load growth that would be inconsistent with the load and EE assumptions
15 presented in the Scoping Memo. SDG&E has recently filed updates updated values with
16 the Commission that are lower than those set forth in the Scoping Memo.
- 17 • New Demand and Supply Side CHP: According to the Scoping Memo, the incremental
18 CHP was developed by the Energy Division by simply splitting the assumption regarding
19 growth between the IOUs’ and other parties’ assumptions. That amount was then evenly
20 split between supply and demand side, and the ratio between service areas remained
21 constant at 2010 percentages for supply and demand side CHP. Finally, the 2020
22 percentages were evenly distributed back to 2010. In essence, there was no factual basis
23 for determination of the CHP allocation, if it will be supply or demand, or where it will

1 be located. The Scoping Memo also assumed that the demand side CHP capacity would
2 be operating at 100% of capacity at time of peak and that 100% of the installed capacity
3 of supply side CHP would be counted towards resource adequacy. Neither of these
4 assumptions has historically been true. Also, for SDG&E's service area, the assumed
5 reduction in sales from the demand side CHP would require the CHP units to run at 196%
6 capacity factor, or in other words, to produce almost twice the power the units would
7 theoretically be able to produce.

- 8 • Renewable Assumptions: Although SDG&E used best efforts to fit its existing
9 commitments within the requirements of having renewable power meet the Trajectory
10 Case, The Commission must keep in mind the uncertainty inherent in any forecast of new
11 renewable resources.

1 **VI. WITNESS QUALIFICATIONS**

2 My name is Robert B. Anderson. My business address is 8330 Century Park Court, San
3 Diego, California, 92123.

4 I am employed by San Diego Gas & Electric Company as Director - Resource Planning.
5 My responsibilities mainly include electric resource planning. I have been employed by SDG&E
6 since 1980, and have held a variety of positions in resource planning, corporate planning, power
7 plant management, and gas planning and operations.

8 I have a BS in Mechanical Engineering and a MBA - Finance. I am a registered
9 professional engineer in Mechanical Engineering in California.

10 I have previously testified before this Commission.

11 This concludes my prepared direct testimony.

ATTACHMENT 1

Table RBA-1

Section	Section Heading	Description
Section III. Resource Plan:		
A. Introduction to Resource Planning and Planning Approach		<ul style="list-style-type: none"> No major changes
B. Load Forecast		<ul style="list-style-type: none"> Updated to remove outdated forecast values and added more description as to how the load forecast will be developed.
C. Supply Forecast for Existing Resources		<ul style="list-style-type: none"> Removed outdated resource list. Updated to describe the process that is used to determine which supply resources are to be included in its supply tables. The existing and committed resources are listed in the Appendix A capacity and energy tables.
D. Need Determinations		<ul style="list-style-type: none"> No major changes.
E. Bundled Customer Systems Resource Need		<ul style="list-style-type: none"> Removed outdated need calculations and directs the reader to Appendix A that shows the forecasted system need. Highlights the fact that the data and assumptions that are used to calculate capacity need change and thus the tables in Appendix A represent the needs based on a specific set of assumptions. Actual procurement will vary from these tables as the situation changes.
F. Bundled Customer Local Capacity		<ul style="list-style-type: none"> Removed outdated need values and directs the reader to Appendix A

Section	Section Heading	Description
Need		that shows the latest tables that show the forecasted local need.
G. Need for New Generation in Service Area		<ul style="list-style-type: none"> Now includes a short description of this resource need but moved the actual authorization to Appendix A. In this filing, Appendix A includes the need for new generation which was approved by the CPUC in D. 07-12-052. Appendix A will be updated once the Commission completes Track I of the 2010 LTPP process and determines a new system need.
H. Resources to Fill Identified Need		<ul style="list-style-type: none"> Minor wording changes to improve clarity. Also additional text was added to recognize that storage technologies may be added to the bundled customers plan in the future, to both meet peaking needs and to integrate intermittent renewable power.
Section IV: Procurement Strategy By Resource Type		
A. Introduction to Resource Acquisition Strategy		<ul style="list-style-type: none"> Minor wording changes.
B. Energy Efficiency		<ul style="list-style-type: none"> Removed outdated data and updated wording to clarify that energy efficiency targets and funding are set in a separate proceeding.
C. Demand Response		<ul style="list-style-type: none"> Removed outdated data and updated wording to clarify that energy efficiency targets and funding are set in a separate proceeding.

Section	Section Heading	Description
D. Self Service Load		<ul style="list-style-type: none"> This is a new section that discusses resources that are located behind the meter, thus are used to reduce load forecast.
E. Renewable Energy Procurement		<ul style="list-style-type: none"> Reduced discussion to remove sections that would have been repetitive with the expanded renewable procurement discussion in Section II.
F. QF and Combined Heat and Power Generation		<ul style="list-style-type: none"> Add a reference to the expanded CHP discussion in Section II.
G. Other Generation Supply Resources		<ul style="list-style-type: none"> Minor wording changes.
Section V- Evaluation of Resource Plan		
		<ul style="list-style-type: none"> The evaluation section has been updated to remove outdated data and include a description of how SDG&E's planning process will result in a resource plan that follows the preferred loading order and meets other state and Commission policies.
Section VI- Cost Recovery Issues		
A. Existing Recovery Mechanisms for Procurement Costs		<ul style="list-style-type: none"> The cost recovery section was updated to clarify ERRR costs shorten the CDWR costs responsibility section.
B. Current Commission Guidance Related to Debt Equivalence		<ul style="list-style-type: none"> No changes.
C. Current Commission Guidance related to FIN 46 ®		<ul style="list-style-type: none"> No changes.

ATTACHMENT 2

Table RBA-2

	Required Case Metrics										
	NPV	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Price Metric											
Revenue Requirement (\$ MM)	\$ 24,143	\$ 3,206	\$ 3,376	\$ 3,531	\$ 3,620	\$ 3,682	\$ 3,752	\$ 3,899	\$ 3,932	\$ 4,114	\$ 4,201
Rate (c/kwh)	20.6	18.4	19.2	20.0	20.4	20.7	21.0	21.8	21.9	22.8	23.2
Gas Price Sensitivity											
@ \$10 Gas Price											
Revenue Requirement (\$MM)	\$ 26,546	\$ 3,667	\$ 3,749	\$ 3,909	\$ 3,992	\$ 4,033	\$ 4,098	\$ 4,241	\$ 4,254	\$ 4,421	\$ 4,504
Rate (c/kwh)	22.7	21.0	21.3	22.1	22.5	22.6	23.0	23.7	23.7	24.5	24.9
@ \$2 Gas Price											
Revenue Requirement (\$MM)	\$ 22,055	\$ 2,903	\$ 3,105	\$ 3,239	\$ 3,313	\$ 3,372	\$ 3,430	\$ 3,555	\$ 3,585	\$ 3,756	\$ 3,823
Rate (c/kwh)	18.8	16.6	17.7	18.3	18.6	18.9	19.2	19.9	20.0	20.8	21.1
Renewable Portfolio											
Base Case %		16.6%	27.8%	31.3%	31.6%	32.1%	32.1%	31.4%	32.2%	32.8%	32.6%
Base Case - Bank (GWh)		██████	██████	██████	██████	██████	██████	██████	██████	██████	██████
High Load Case %		15.1%	25.3%	28.5%	28.7%	29.1%	29.2%	28.6%	29.3%	29.8%	29.6%
High Load - Bank (GWh)		██████	██████	██████	██████	██████	██████	██████	██████	██████	██████
Low Load Case %		18.5%	30.9%	34.8%	35.1%	35.6%	35.7%	34.9%	35.8%	36.4%	36.2%
Low Case - Bank (GWh)		██████	██████	██████	██████	██████	██████	██████	██████	██████	██████
GHG Metrics											
Total Metric Tons (Millions)		5.63	4.88	4.39	4.47	4.37	4.38	4.50	4.40	4.38	4.48
lbs/mwhr		711	612	548	554	540	541	555	540	535	545
GHG Cost (\$ Millions)											
Low Case		\$ 56	\$ 65	\$ 69	\$ 82	\$ 91	\$ 103	\$ 119	\$ 130	\$ 142	\$ 160
Medium Case		\$ 59	\$ 87	\$ 93	\$ 109	\$ 122	\$ 138	\$ 159	\$ 173	\$ 190	\$ 216
High Case		\$ 73	\$ 109	\$ 116	\$ 136	\$ 152	\$ 172	\$ 199	\$ 216	\$ 237	\$ 266

ATTACHMENT 3

MAP OF CHANGES FROM 2006 TO 2012 LTPP

Legend: Section references from the 2006 LTPP are provided in the left column with changes to location or deletion from the 2012 LTPP shown in right column. Note revisions to the section headings from 2006 to 2012, are shown in redline. Descriptions of changes/updates are found in a table included in each witness' testimony.

2006 LTPP Section/Page Number (denoted in black) Revisions/Deletions from 2006 LTPP (denoted in redline)	2012 LTPP Location Changes ¹ New Section and Title
I. Introduction (p.2)	Same location and title
II. Procurement Implementation Plan (p.3)	Same location and title
A. <u>SDG&E</u> Procurement Processes (p.3) Description of the Procurement Process from Planning Through Transaction, Execution, and Dispatch (p.3) The <u>Market</u> Transaction Process Flow	Same location and title First portion of discussion moved to Section II.A.2.a. Remaining discussion moved to Section II.A.2.c. Moved to Section II.A.2.c. Removed restatement of Commission decision language related to Standards of Conduct.
Description of the Proposed Procurement Products for Electric and <u>Fuel</u> Gas Procurement (p.10) Reliability-Must-Run Energy (p.13A) Must-Offer Energy (p14) <u>Spot Markets/ Spot Energy (14)</u> <u>Forward Products (p.15)</u> <u>Tolling (p.15)</u>	Table 1 moved to Section II.A.3. Description of market products moved to Section II.A.4. Deleted Deleted Re-titled and moved to Section II.A.4 Moved to Section II.A.4 Moved to Section II.A.4

¹ Page numbers will be different in the 2012 LTPP due to all the other changes, but location is the same in terms of the order presented in the 2006 LTPP.

2006 LTPP Section/Page Number (denoted in black) Revisions/Deletions from 2006 LTPP (denoted in redline)	2012 LTPP Location Changes ¹ New Section and Title
Indexed Energy (p.15)	Moved to Section II.A.4
Heat Rate Call Options (p.16)	Moved to Section II.A.4
Firm Transmission Rights-(FTRs) (p.16)	Deleted
Congestion Revenue Rights (CRRs) (p.16)	Moved to Section II.A.4
FTR/CRR Locational Swaps (p.17)	Deleted
CRR and Non-FTR/CRR Locational Swaps (p.18)	Moved to Section II.A.4
Third-Party Transmission Capacity (p.18)	Moved to Section II.A.4
Ancillary Services (p.19)	Moved to Section II.A.4
Inter-Utility Exchanges (IUEs) (p.20)	Moved to Section II.A.4
Counterparty Sleeves (p.20)	Moved to Section II.A.4
Resource Adequacy Products (p.21)	Moved to Section II.A.4
Emission Reduction Credits (p.22)	Moved to Section II.A.4
SO2 Allowances (p.22)	Moved to Section II.A.4
RA Import Counting Rights (p.22)	Moved to Section II.A.4
Contract Duration Pre-Approval Limits (p.23)	Moved to Section II.A.5.a
Description of Proposed Market and or Selection Process for Each Procurement Related Product (p.24)	Moved to Section II.A.5.a
Bilateral Contracts (p.24)	Moved to Section II.A.4
Exchanges (p.26)	Moved to Section II.A.4
Spot Markets (p.27)	Moved to Section II.A.4
Competitive Bid Solicitations (Request for Offers (p.29)	Divided between short-medium and long term RFO process and moved to Section II.A.5.a and II.A.5.b
Utility Owned Generation (UOG) and Participation in Competitive Solicitations (p.35)	Moved to Section II.A.5.b
Code of Conduct (p.36)	Moved to Appendix H

2006 LTPP Section/Page Number (denoted in black) Revisions/Deletions from 2006 LTPP (denoted in redline)	2012 LTPP Location Changes ¹ New Section and Title
Utility Ownership Proposals Outside of a Competitive Solicitation (p.37)	Moved to Section II.A.5.b
Other Markets and Processes (p.38)	Portion of discussion related to short-term procurement moved to Section II.A.4 and Section II.A.5.a
Procurement Positions (p.39)	Moved to Section II.A.5.b
Description-Application of Least-Cost Best Fit Analysis (p.39)	Moved to Section II.A.5.b
Description of the Use of the Loading Order in Procurement (p.41)	Moved to Section V.
Current/Upcoming RFOs (p.42)	Moved to Section II.A.5.b
Requests for Bids/Offers for Local and System RA (p.43)	Moved to Section II.A.5.b
Price Forecasting (p.43)	Moved to Section II.A.5.b
Description of "Ratable-Rates" (p.44)	Deleted
Description of SDG&E's Consultation Process With its Independent Review Groups (p.45)	Moved to Appendix H
The Independent Evaluator Requirement (p.45)	Moved to Appendix H
SDG&E use of the PRG Process and Consultation with PRG (p.49)	Moved to Section II.A.5.b
CAM PRG (p.51)	Moved to Section II.A.5.b
Objective (p.51)	Moved to Section II.A.5.b
Rationale for Separate Advisory Group (51)	Moved to Section II.A.5.b
When Use of the Separate Advisory is Required (p.52)	Moved to Section II.A.5.b
Triggering the Separate Advisory Group (p.52)	Moved to Section II.A.5.b
Activities of the Separate Advisory Group (p.52)	Moved to Section II.A.5.b
Access to Information (p.53)	Moved to Section II.A.5.b
Meetings of Separate Advisory Group (p.53)	Moved to Section II.A.5.b
Requirements of CAM Group Members (p.53)	Moved to Section II.A.5.b
Description of Barriers-to-Contracting- (p.55)	Deleted
B. Risk Management Policy and Strategy (p.55)	Same location and title

2006 LTPP Section/Page Number (denoted in black) Revisions/Deletions from 2006 LTPP (denoted in redline)	2012 LTPP Location Changes ¹ New Section and Title
Current Risk Management Practices – SDG&E’s Hedge Plan, including Hedging Targets (p.55)	Hedging Targets moved to Appendix B. New section number added - II.B.1
5 Year Short-term Procurement Plan and Hedging Strategy (p.56)	Moved to Appendix B
Overview (p.56)	Deleted
First Rolling 12 Months and Year 1 (p.57)	Moved to Appendix B
Year 2 (p.60)	Moved to Appendix B
Intermediate Term – For Years 3 through 5 of the Rolling 5 Year Plan (p.61)	Moved to Appendix B
Long Term (Years 6 Through 10) (65)	Moved to Appendix B
Portfolio Risk Assessment – A Discussion of Forecast SDG&E Risk Positions, Risk Management Products and Selection Criteria	New section number added - II.B.2
Risk Management Products (p.70)	New section number added - II.B.5
Electricity Exposure (p.71)	New section number added - II.B.5.a
Bilateral Structured Contracts (p.71)	Deleted
Fixed-price Forward Trades for Power (p.71)	New section number added - II.B.5.b
Exchange of Risk Exposure (p.72)	New section number added - II.B.5.c
Felling Capacity Purchase (p.72)	Deleted
NYMEX Gas Futures, Options and Gas Basis Swaps (p.72)	New section number added - II.B.5.d
Gas Price Exposure (p.73)	New section number added - II.B.5.e
Risk Management Products Selection Considerations (p.74)	New section number added - II.B.6
Security Requirements (Collateral and Credit) (p.80)	Moved to Appendix B
Collateral and Credit-Related Responsibilities	Deleted
Collateral Requirements (p.81)	Moved to Appendix B
Daily Margin (p.82)	Deleted
Initial Margin (p.83)	Deleted

2006 LTPP Section/Page Number (denoted in black) Revisions/Deletions from 2006 LTPP (denoted in redline)	2012 LTPP Location Changes ¹ New Section and Title
Liquidity Requirements (p.83)	Moved to Appendix B
Products that Contribute to the Need for Collateral (p.84)	Moved to Appendix B
Exchange Cleared Products (p.85)	Moved to Appendix B
ICE Traded Products (p.85)	Moved to Appendix B
Other OTC "Liquidity Demanding" Products (p.85)	Moved to Appendix B
Size of Requirements for Liquidity Associated with Plan (p.86)	Deleted
SDG&E's Established Liquidity Limit (p.87)	Moved to Appendix B
Operation of the Liquidity Limit (p.88)	Deleted
Products that Do Not Contribute to the Need for Collateral (89)	Moved to Appendix B
Credit Requirements (p.92)	Combined with Recovery of Credit Related Costs and new section number added - II.B.7
Recovery of Credit-Related Costs (p.93)	Combined with Credit Requirements (Section II.B.7)
Calculation of Unsecured Credit Lines (p.93)	Moved to Appendix B
Contractual Credit Provisions (p.94)	Moved to Appendix B
Measurement (p.99)	Combined with Credit Requirements (Section II.B.7)
Credit Risk Monitoring and Mitigation Strategy (p.101)	Combined with Credit Requirements (Section II.B.7)
Customer Risk Tolerance and VaR-to-Expiration (p.103)	Moved to new section number II.B.3
VaR-to-Expiration (VtE) (p.104)	Moved to new section number II.B.4
VtE Methodology (p.104)	Deleted
C. Fuel Supply Procurement Strategy (p.107)	Moved to Appendix C
SDG&E-Owned Generation Units (p.108)	Moved to Appendix C
SDG&E-Controlled Units (Tolling Agreements) (p.109)	Moved to Appendix C
CDWR Units (p.109)	Moved to Appendix C
Natural Gas Procurement (p.112)	Moved to Appendix C
Products (p.112)	Moved to Appendix C

2006 LTPP Section/Page Number (denoted in black) Revisions/Deletions from 2006 LTPP (denoted in redline)	2012 LTPP Location Changes ¹ New Section and Title
Baseload Gas (p.113)	Moved to Appendix C
Intra-month (swing) Gas (p.113)	Moved to Appendix C
Transportation Services (p.113)	Moved to Appendix C
Operational transactions (p.113)	Moved to Appendix C
Park and Loan Services (p.114)	Moved to Appendix C
Brokerage Services (p.114)	Moved to Appendix C
Sleeve Fees (p.114)	Moved to Appendix C
Sunrise (p114A)	Moved to Appendix C
Miramar Generating Facility (p.118)	Moved to Appendix C
Palomar (p.118)	Moved to Appendix C
CDWR Gas (p.120)	Moved to Appendix C
Gas Supply Plans (p.120)	Moved to Appendix C
Interaction with UEG Portfolio (p.121)	Moved to Appendix C
Natural Gas Hedging (p125)	Moved to Appendix C
Other Products/Other Fuels (p.127)	Moved to Appendix C
Nuclear Fuel (p.127)	Moved to Appendix C
Residual Fuel-Oil-and-Distillate (p.127)	Deleted
Storage and Transportation (p.127)	Moved to Appendix C
Summary (p.127)	Moved to Appendix C
Gas Pipeline Capacity (p.128)	Moved to Appendix C
Gas Storage Capacity (p.129)	Moved to Appendix C
III. Long-Term Procurement Resource Plan 2007-2016 (p.131)	Same location and title.
A. Introduction to Resource Planning and Planning Approach	Same location and title

2006 LTPP Section/Page Number (denoted in black) Revisions/Deletions from 2006 LTPP (denoted in redline) (p131)	2012 LTPP Location Changes ¹ New Section and Title
B. Load Forecast (p.131)	Same location and title
C. Supply Forecast for Existing or Planned Resources (p.132)	Same Location. Existing and committed resources are in Appendix A tables.
D. Need Determinations (p.136)	Same location and title
E. Need Determinations – Total Service Area (p.136)	Moved to Section III.G and to Appendix A.
F. Need Determination – Bundled Customer System Need (p139)	Moved to Section III.E
G. Bundled Customer Local Capacity Need (p.139)	Moved to Section III.F
H. Resource to Fill Identified Need (p.140)	Same location and title
I. Approved Resource Plan (p.141)	Deleted section. Some contents combined with Section V.
IV. Procurement Strategy by Resource (p.143)	Same location and title
A. Introduction to Resource Acquisition Strategy (p.143)	Same location and title
B. Energy Efficiency (p.143)	Same location and title
C. Demand Response (p.144)	Same location and title
D. Renewable Energy Procurement Strategy (p.146)	Moved to Section IV.E
E. Distributed Generation (California Solar Incentive and Self Served Load) (P.150)	Moved to Section IV.F
F. Other Generation Supply Resources (p.150)	Moved to Section IV.F
G. Integration of Transmission and Procurement Planning (p.151)	Deleted
Key Transmission Projects that are Critical to SDG&E's Procurement Resource Plan (p.151)	Deleted
V. Evaluation of Resource Plan (P.153)	Same location and title
Environmental Impacts (p.153)	Move to Testimony of Robert Anderson for the Required

2006 LTPP Section/Page Number (denoted in black) Revisions/Deletions from 2006 LTPP (denoted in redline)	2012 LTPP Location Changes ¹ New Section and Title
	Assumptions
VI. Cost Recovery Issues (p.156)	Same location and title
Existing Cost Recover Mechanisms For Procurement Costs (p.156)	New section number - VI.A
Current Commission Guidance Related to Debt Equivalence (p.157)	New section number - VI.B
Current Commission Guidance Related to FIN 46(R) (p.158)	New section number - VI.B
Appendices	
A. SDG&E Advice Letter 1920-E (p.160)	Old Appendix A deleted and replaced with new Appendix A: Energy and Capacity Tables, System Need.
B. SDG&E Advice Letter 1926-E (p.165)	Old Appendix B deleted and replaced with new Appendix B: Electricity and Gas Hedging Plan
C. Requirements for the PRG, IE, and RFOs from D.07-12-052 (p.171)	Moved to Appendix H; New Appendix C: Gas Supply Plan
D. Glossary of Terms (p.176)	Moved to Appendix J; New Appendix D: Congestion Revenue Rights
E. Exhibits to Section II (p.184)	Old Appendix E deleted and replaced with new Appendix E: Convergence Bidding
Exhibit II - 1: Physical Procurement Positions (p.184)	Deleted
Exhibit II - 2: SDG&E's Request for Offer Evaluation Methodology Offer Processing and Evaluation (p.192)	Moved to Appendix G
Exhibit II - 3: Portfolio Financial Positions (p.196)	Deleted
Exhibit II - 4: Physical Gas Positions (p.202)	Deleted
F. Exhibits to Section III (p.209)	Old Appendix F moved to Appendix A; and replaced with new Appendix F: GHG (Placeholder)
Exhibit III - 1: SDG&E Service Area System Need (p.210)	Deleted
Exhibit III - 2: Electricity Resource Planning Capacity Resource	Moved to Appendix A

2006 LTPP Section/Page Number (denoted in black) Revisions/Deletions from 2006 LTPP (denoted in redline)	2012 LTPP Location Changes ¹ New Section and Title
Accounting Table (p.211)	
Exhibit III - 3: SDG&E Service Area High Need Detail (p.245)	Deleted
Exhibit III - 4: SDG&E Service Area Low Need Detail (p.247)	Deleted
Exhibit III - 5: Energy Tables (p.219)	Moved to Appendix A
N/A	New Appendix G. RFO Evaluation Methodology
N/A	New Appendix H. Requirements for the Independent Evaluator
N/A	New Appendix I. Glossary of Terms
N/A	New Appendix J. Acronym List
N/A	New Appendix K. Energy Procurement Organization

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

**DECLARATION OF ROBERT ANDERSON
REGARDING CONFIDENTIALITY OF CERTAIN DATA**

I, Robert Anderson, do declare as follows:

1. I am a Director of Resource Planning for San Diego Gas & Electric Company (“SDG&E”). I have reviewed Appendix A of the Long-Term Procurement Plan, and the Testimony of Robert Anderson submitted concurrently herewith (the “LTPP”). In addition, I am personally familiar with the facts and representations in this Declaration and, if called upon to testify, I could and would testify to the following based upon my personal knowledge and/or belief.

2. I hereby provide this Declaration in accordance with D.06-06-066, *et seq.*, to demonstrate that the confidential information (“Protected Information”) provided in the LTPP submitted concurrently herewith (described below) falls within the scope of data protected as confidential pursuant to the IOU Matrix attached to the Commission’s confidentiality decision, D.06-06-066 (the “IOU Matrix”) and/or under relevant statutory provisions.^{1/}

^{1/} The Matrix is derived from the statutory protections extended to non-public market sensitive and trade secret information. (See D.06-06-066, *mimeo*, note 1, Ordering Paragraph 1). The Commission is obligated to act in a manner consistent with applicable law. The analysis of protection afforded under the Matrix must always produce a result that is consistent with the relevant underlying statutes; if information is eligible for statutory protection, it must be protected under the Matrix. (See *Southern California Edison Co. v. Public Utilities Comm.* 2000 Cal. App. LEXIS 995, *38-39) Thus, by claiming applicability of the Matrix, SDG&E relies upon and simultaneously claims the protection of applicable statutory provisions including, but not limited to, Public Utilities Code §§ 454.5(g) and 583, Govt. Code § 6254(k) and General Order 66-C.

3. In D.06-06-066, the Commission adopted rules governing confidentiality of certain categories of electric procurement data submitted to the Commission by investor owned utilities (“IOUs”) and energy service providers (“ESPs”). The Commission established two matrices – one applicable to IOUs, the other to ESPs – setting forth categories and sub-categories of data and providing a confidentiality designation for each.^{2/}

4. To the extent information matches a Matrix category, it is entitled to the protection the Matrix provides for that category of information. In addition, the Commission has made clear that information must be protected where “it matches a Matrix category exactly . . . or consists of information from which that information may be easily derived.”^{3/} In order to claim the protection afforded by the relevant Matrix, the party seeking confidential treatment must establish:

- 1) That the material it is submitting constitutes a particular type of data listed in the Matrix,
- 2) Which category or categories in the Matrix the data correspond to,
- 3) That it is complying with the limitations on confidentiality specified in the Matrix for that type of data,
- 4) That the information is not already public, and
- 5) That the data cannot be aggregated, redacted, summarized, masked or otherwise protected in a way that allows partial disclosure.^{4/}

^{2/} See, D.06-06-066, as amended by D.07-05-032, *mimeo*, Appendices 1 and 2.

^{3/} See, *Administrative Law Judge’s Ruling on San Diego Gas & Electric Company’s April 3, 2007 Motion to File Data Under Seal*, issued May 4, 2007 in R.06-05-027, p. 2 (emphasis added).

^{4/} D.06-06-066, as amended by D.07-05-032, *mimeo*, p. 81, Ordering Paragraph 2.

5. The Protected Information, consisting of the information described below, is protected pursuant to the following Matrix categories:

Description of Data	Matrix Category	Period of Confidentiality
Table RBA – 2 SDG&E Bundled Customer RPS bank which is SDG&E’s renewable short MWHR position	VI. B – Utility bundled net open (long or short) for Energy (MWh)	Three years
Appendix A – Energy Table forecast of QF energy	IV.B Forecast of Qualifying Facility Generation- front three years	Three years
Appendix A – Energy Table forecast of DWR contract energy	IV.B Forecast of DWR Contracts	Three years
Appendix A – Energy Table, Fossil Energy Supply, Nuclear Energy Supply, Hydro Plan Energy Supply, Energy supply from others, Total Energy from Existing and Committed, (Energy Need or Energy Surplus), Incremental CHP Energy, Generic Non-Renewable Energy	VI.B Utility bundled net open (long or short) for Energy (MWh)	Three years
Appendix A – Energy Table Short term and spot market Energy	IV.J Forecast of Wholesale market Purchases	Three years

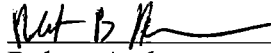
6. SDG&E intends to comply with the limitations on confidentiality specified in the Matrix for the type of data that is provided herewith.

7. I am not aware of any instance of public disclosure of the Protected Information.

8. The Protected Information cannot be provided in a form that is further aggregated, redacted, or summarized and still provide the level of detail requested and expected by the Commission.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct to the best of my knowledge.

Executed this 24th day of March, 2011, at San Diego, California.



Robert Anderson
Director – Resource Planning