

Proceeding No.: A.12-10-002
Exhibit No.: _____
Witness: Andrew Scates

AMENDED DIRECT TESTIMONY OF
ANDREW SCATES
SAN DIEGO GAS & ELECTRIC COMPANY

*****redacted, public version*****

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA
January 8, 2013**



TABLE OF CONTENTS

I. INTRODUCTION.....	1
II. 2013 FORECAST OF LOAD AND SUPPLY RESOURCES.....	2
III. 2013 FORECAST OF ERRA EXPENSES	10
IV. QUALIFICATIONS	19

1 Forecast; Attachment B: Forecast Volumes by Resource Type for 2013; Attachment C:
2 Detail of Long-Term Competition Transition Charge (“CTC”) and Qualifying Facility
3 (“QF”) Contract Expense Forecast; and Attachment D: Detail of Renewable Expense
4 Forecast.

5 **II. 2013 FORECAST OF LOAD AND SUPPLY RESOURCES**

6 On January 1, 2003, SDG&E resumed procurement of its Residual Net Short
7 (“RNS”) position and assumed operational control of various California Department of
8 Water Resources (“CDWR”) long-term contracts, which SDG&E dispatches along with
9 its own supply resources as a single, integrated portfolio. The CDWR contracts allocated
10 to SDG&E included bilateral “must take” contracts, as-available wind resource contracts,
11 and dispatchable resource contracts. All but two wind contracts will have expired by the
12 beginning of 2013. Costs for these contracts are captured through CDWR’s retail
13 remittance rate, which is addressed in Rulemaking (“R.”) 11-03-006. SDG&E procures
14 resources from a diverse portfolio that includes nuclear, renewable, QFs and dispatchable
15 generation. Most of the costs for these resources are captured through the ERRA.

16 The results contained in this Amended Application were developed using the
17 production cost model ProSym from Global Energy Decisions, a Ventyx Company.
18 SDG&E and CDWR resources were modeled in ProSym, which produced generation
19 forecasts for these resources based on contract requirements and forecasts of 2013 natural
20 gas and electric prices. The price forecasts were based on a recent (August 31, 2012)
21 assessment of 2013 market prices based on the average of forward prices over a 22-day
22 period. In the new CAISO market structure following implementation of the Market
23 Redesign and Technology Upgrade (“MRTU”) on April 1, 2009, SDG&E’s bundled load

1 requirements – primarily of energy and ancillary services (“A/S”) – are purchased from
2 the CAISO Day-Ahead and Real-Time Markets (“DAM” and “RTM”) rather than
3 directly supplied from SDG&E portfolio resources. Similarly, the output from SDG&E’s
4 portfolio of resources is sold into the CAISO DAM and RTM rather than directly
5 scheduled to serve SDG&E’s bundled load. SDG&E’s ERRA forecast for 2013
6 addresses this market structure by separating the expected purchase cost of energy and
7 A/S for its bundled load from the expected sales revenue and supply cost of energy and
8 A/S from its resource portfolio.

9 **A. LOAD FORECAST**

10 The forecast of SDG&E’s 2013 bundled load requirement is based on the
11 California Energy Commission’s (“CEC’s”), recently approved load forecast. This
12 forecast was developed in the CEC’s 2012 Integrated Energy Policy Report (“IEPR”)
13 Proceeding. Using the CEC’s forecast and adjusting for direct access load, SDG&E
14 projected that its bundled load for 2013 will be [REDACTED]. This forecast is [REDACTED]
15 or [REDACTED] lower than SDG&E’s forecasted bundled load for 2012 ([REDACTED]).
16 SDG&E’s A/S obligations were forecasted to be 6% of load for operating reserves and
17 2.5% of load for regulation capacity based on the CAISO’s historical levels of
18 procurement for these products.

19 **B. SUPPLY RESOURCE FORECAST**

20 **1. SONGS**

21 SDG&E has a 20% ownership interest in SONGS Units 2 and 3 for a combined
22 capacity of 450 MW.² SDG&E sells the output from SONGS into the CAISO market as

² Capacity ratings provided in this testimony are the maximum operating levels defined in the CAISO Resource Data Template for each resource.

1 baseload energy. The forecasted supply of SONGS energy for 2013 is [REDACTED] for
2 SONGS Unit 2, a decrease of [REDACTED] from the forecast for 2012 ([REDACTED]). For
3 this Application, SDG&E assumed [REDACTED]

4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]

12 **2. BOARDMAN**

13 SDG&E has a long-term power purchase agreement with Portland General
14 Electric (“PGE”) for 15% of the output of the Boardman coal-fired power plant
15 (“Boardman”). SDG&E’s current share of plant output is nominally 86 MW at the plant
16 and 83 MW after transmission losses delivered to the CAISO grid at Malin. Based on its
17 variable cost of delivery to the CAISO of about [REDACTED], the forecast supply of
18 Boardman energy for 2013 is [REDACTED], about a [REDACTED] increase from the forecast for
19 2012 ([REDACTED]).

20 This contract contains curtailment provisions whereby SDG&E can reduce its
21 schedule on an hourly basis. The implementation of MRTU allows SDG&E to bid in
22 Boardman energy into the CAISO market at a price to ensure that SDG&E receives
23 revenues sufficient to offset the delivery cost for Boardman. While the relatively low

1 energy price suggests that the contract will be fully scheduled for most available hours,
2 economic bids may result in the amount of energy supplied by Boardman to the CAISO
3 being lower than forecast.

4 **3. QUALIFYING FACILITIES**

5 In 2013, SDG&E will have about 230 MW of capacity under contract with eight
6 QFs.³ The five largest QF contracts account for 220 MW or 96% of total QF capacity.
7 All QFs are located in the SDG&E service area except for the Yuma Cogeneration
8 Associates plant (“YCA”), a 56.5 MW natural gas-fired plant in Arizona whose output is
9 imported into the CAISO.

10 QF contracts are must-take resources. SDG&E is obligated to pay the contract
11 price for all delivered QF generation and schedule it into the CAISO market, with the
12 exception of limited price replacement rights in the YCA and Goal Line contracts. To the
13 extent allowed in these contracts, SDG&E exercises these rights during low-priced hours
14 to maximize ratepayer savings. Typically, these plants will choose to shut down during
15 these hours to avoid operating at a loss. Accounting for these economic curtailments and
16 forecast availability, the forecast of QF energy supply in 2013 is [REDACTED] a decrease
17 of [REDACTED] from the forecasted amount for 2012 ([REDACTED]).

18 **4. RENEWABLE ENERGY CONTRACTS**

19 SDG&E procures renewable energy through competitive solicitations and
20 bilateral agreements to meet the Renewable Portfolio Standard (“RPS”)⁴ established by

³ The actual number of active QF contracts is over 50, but many of these QF resources only serve on-site load and do not deliver net energy to SDG&E. As a result, these are not included in the production cost model run. The nine QFs referenced above deliver net energy to SDG&E and are modeled in ProSym.

⁴ Some renewable resources have QF contracts and also qualify to meet the Renewable Portfolio Standard. Those resources are reported in the QF sections of this testimony.

1 Senate Bill (“SB”) 1078, *et seq.*⁵ The forecast of renewable energy supply from
2 Commission approved contracts for 2013 is 4,540 GWh, which includes 1,514 GWh of
3 Renewable Energy Credits (“RECs”) quantities that are delivered to SDG&E in
4 conjunction with existing non-renewable imports. This forecast is an increase of 1,652
5 GWh from the forecast for 2012 (2,887 GWh).

6 SDG&E expects to receive the following in 2013 in order to meet its RPS target:

- 7 • 14 GWh of renewable energy under existing QF agreements. The quantity and
8 ERRA cost associated with these contracts is included under QFs for the purposes
9 of this testimony.
- 10 • 1,514 GWh of anticipated renewable energy credits from various wind contracts.

11 The renewable energy credits are delivered using physical deliveries of energy
12 that SDG&E has already accounted for in its 2013 forecast or which are provided
13 for under separate contract, specifically the Morgan Stanley contract. The Morgan
14 Stanley contract provides firm and shaped deliveries at the Northern Oregon
15 Border (“NOB”) of brown energy which partially offsets expected energy from
16 the Rim Rock project. However, costs associated with these renewable energy
17 credits are incremental to ERRA and are included in the 2013 ERRA cost
18 forecast.

19 SDG&E included renewable energy quantities of wind and solar projects which
20 are currently under negotiation but have a reasonable probability of success. SDG&E
21 aggregated these and called them Generic Wind or Generic Solar contracts (under
22 negotiation). SDG&E did not include renewable energy quantities or costs associated

⁵ See e.g., Decision (“D.”) 03-06-071; D.04-07-029; D.05-07-039; D.06-10-019.

1 with the Sustainable Communities Photovoltaic program because costs for this program
2 are not charged to ERRA.

3 SDG&E continues to pursue new renewable energy resources to add to its
4 portfolio for 2013, which will increase ERRA-related quantities and costs. A detailed
5 table of the renewable contracts discussed above is provided in Attachment D.

6 **5. SDG&E-OWNED DISPATCHABLE GENERATION**

7 SDG&E owns the following power plants:

- 8 • the 575 MW Palomar Energy Center (“Palomar”) combined cycle power
9 plant that commenced commercial operation in April 2006,
- 10 • the 48 MW Miramar Energy Facility (“Miramar I”) peaking combustion
11 turbine that commenced commercial operation in July 2005,
- 12 • the second 48 MW Miramar peaker (“Miramar II”) that commenced
13 commercial operation in August 2009,
- 14 • the 495 MW Desert Star Energy Center (“Desert Star”) combined cycle
15 power plant, and newly acquired in 2011, and
- 16 • the 45 MW Cuyamaca Peak Energy Plant, (formerly Calpeak El Cajon)
17 acquired by SDG&E in January 1, 2012.

18 These units are dispatched for generation and A/S awards based on economic merit and
19 SDG&E’s requirements. For the 2013 forecast, SDG&E’s dispatch model considered
20 only generation dispatched for energy rather than for A/S. The rationale for this
21 approach is that the CAISO co-optimizes market awards between energy and A/S based
22 on the opportunity cost of capacity and, therefore, the economic benefit (and ERRA
23 contribution) of using capacity for generation is equivalent to using capacity for A/S.

1 The forecasted generation for Palomar in 2013 is [REDACTED], a decrease of [REDACTED]
2 [REDACTED] from the forecast for 2012 ([REDACTED]). The forecasted generation for Miramar I
3 & II (collectively, “Miramar”) in 2013 is [REDACTED], an increase of [REDACTED] from the
4 forecast for 2012 ([REDACTED]). The forecasted generation for Desert Star in 2013 is [REDACTED]
5 [REDACTED], an increase of [REDACTED] from the forecast for 2012 ([REDACTED]). The net
6 increase in forecasted generation for existing resources reflects the replacement energy
7 for the expiration of the Sunrise CDWR contract and the reduced output of SONGS.

8 6. SDG&E-CONTRACTED GENERATION

9 SDG&E has a number of generation units under contract in its resource portfolio
10 in 2013. SDG&E’s Power Purchase Agreement (“PPA”) for Otay Mesa Energy Center
11 (“OMEC”), a combined-cycle plant, is expected to provide a significant quantity of
12 generation to the CAISO market. The primary benefit of the other contracts will be to
13 offset SDG&E’s load requirements from a capacity standpoint. The larger of these
14 contracts is further described below.

15 The OMEC tolling agreement between SDG&E and Calpine began in October
16 2009. OMEC is an air-cooled 2x1 combined cycled plant that provides up to 604 MW of
17 efficient, gas fired generation capacity. The forecasted generation from OMEC for 2013
18 is [REDACTED], an increase of [REDACTED] from the forecast for 2012 ([REDACTED]).

19 The Orange Grove contract provides 99 MW of peaking capacity and is
20 forecasted to generate [REDACTED] during 2013 and increase of [REDACTED] from the forecast
21 for 2012 ([REDACTED]).

22 The Wellhead contract, El Cajon Energy Center, provides 48 MW of peaking
23 capacity and is forecasted to generate about [REDACTED] during 2013 an increase of [REDACTED]

1 from the forecast for 2012 (██████). The difference in forecast between the El Cajon
2 Energy Center and Orange Grove contracts is due primarily to a higher fuel
3 transportation cost for the El Cajon Energy Center.

4 **7. MARKET PURCHASES AND SURPLUS SALES**

5 Under MRTU, quantities purchased from the CAISO for SDG&E's load are based
6 on load schedules and economic bids. Quantities sold to the CAISO from SDG&E's
7 resource portfolio are based on completely separate generation schedules and economic
8 bids. Therefore, there is no requirement that SDG&E's bundled load and SDG&E-
9 controlled generation quantities that clear the market must balance.

10 If in any hour, the quantity of SDG&E's bundled load requirements purchased
11 from the CAISO is greater than SDG&E-controlled generation sold to the CAISO, the
12 difference may be viewed as equivalent to a market purchase. If in any hour, the quantity
13 of SDG&E's bundled load requirements purchased from the CAISO is less than SDG&E-
14 controlled generation sold to the CAISO, the difference may be viewed as equivalent to a
15 market sale.

16 SDG&E forecasts that the quantity of equivalent market purchases will be ██████
17 ██████ in 2013, an increase of ██████ from the forecast for 2012 (██████). This
18 increase is due primarily to a combination of the expiration of the Sunrise CDWR
19 contract and reduced SONGS operation, creating additional need in the portfolio, and a
20 lower market heat rate which makes market purchases more economic.

21 **8. CDWR ALLOCATION**

22 CDWR contracts will supply an estimated ██████ of energy to the CAISO in
23 2013, a decrease of ██████ from 2012's expected CDWR energy volumes (██████)

1 [REDACTED]). This decrease is due to the expiration of the Sunrise Power Plant contract in June
2 of 2012. For 2013, the CDWR share of load is projected to be approximately [REDACTED] (less
3 than the [REDACTED] projected for 2012).

4 **III. 2013 FORECAST OF ERRA EXPENSES**

5 Electric procurement expenses incurred by SDG&E to serve bundled load are
6 recorded to the ERRA. These expenses include, but are not limited to, costs and revenues
7 for energy and capacity cleared through the MRTU markets, power purchase contract
8 costs, generation fuel costs, market energy purchase costs, CAISO charges, brokerage
9 fees and hedging costs. Deviations between forecast and actual costs for any of these
10 items will create variances between forecast and actual ERRA costs.

11 Expenses associated with CDWR resources, including contract costs, gas tolling
12 expenses, and gas hedging expenses are recovered by CDWR through its retail remittance
13 rate and not recorded as an ERRA expense. The ERRA balance may be impacted by
14 CDWR resources, however. For example, lower-than-forecast generation from CDWR
15 contracts would require additional supply from SDG&E's portfolio that is paid by ERRA
16 funds.

17 SDG&E expects to incur \$1,004 million of ERRA costs in 2013, before franchise
18 fees and uncollectibles ("FF&U") costs (see Attachment A). This forecast is \$192
19 million more than the \$812 million implemented in 2012. The key drivers behind the
20 increase are the contract expiration of the CDWR Sunrise Power Plant which caused an
21 increase in generation of SDG&E's portfolio, the increase of renewable generation costs
22 of more than \$146 million, and the expected reduced operation of SONGS. These
23 contributing drivers are largely outside of SDG&E's control, as achieving RPS goals are

1 a direct result of policies enacted by the California’s Legislators. Excluded from these
2 costs are the forecasted costs for Greenhouse Gas (“GHG”) compliance obligations under
3 the California Cap-and-Trade Program pursuant to Assembly Bill (“AB”) 32. Although
4 Decision (“D.”) 12-04-046, approving Tracks I and III of the Long-Term Procurement
5 Plan (“LTPP”) proceeding, and Advice Letter (“AL”) 2387-E have granted SDG&E the
6 authority to recover GHG costs associated with the Cap-and-Trade Program through
7 ERRA, D.12-12-033, adopting the Cap-and-Trade GHG allowance revenue allocation
8 methodology in the Order Instituting Rulemaking (“R.”) 11-03-012 (“GHG OIR”)
9 approved on December 20, 2012, further directs the creation of a separate sub-account for
10 GHG costs and an account for GHG revenues. D.12-12-033 considers authorizing the
11 utilities to defer recovery of some GHG compliance costs until the Commission has
12 finalized the methodology. As there continues to be discussion surrounding the
13 methodology with respect to both compliance costs and revenues, SDG&E will defer
14 seeking the recovery of all GHG costs at this time pending further directions from the
15 Commission. The deferment will apply to direct costs (both current and future) and
16 indirect costs. Direct costs are those incurred from procuring compliance instruments for
17 current and for future compliance years. Indirect costs are embedded in the electricity
18 prices charged by third parties. In accordance with the D.12-12-033, in this Amended
19 Application, SDG&E has removed the separate line item associated with the GHG direct
20 costs seen in the 2013 ERRA revenue requirement as well as the indirect costs from Load
21 ISO charges and from CTC above-market costs booked to Transition Cost Balancing
22 Account (“TCBA”). The amended direct testimony of SDG&E witness Amanda D.
23 Jenison further describes the components of the 2013 ERRA revenue requirement. GHG

1 cost forecasts are not discussed herein, but can be found in the 2013 ERRA forecast
2 amended direct testimony of SDG&E witness Ryan Miller.

3 The remainder of this testimony will discuss the cost of specific ERRA items in
4 more detail.

5 **A. LOAD**

6 Under MRTU, the CAISO supplies and sells all energy and A/S to SDG&E to
7 meet SDG&E’s bundled load requirement. Based on expected prices for energy and A/S,
8 SDG&E expects to incur charges totaling [REDACTED] for load requirements in 2013
9 from the CAISO. This cost excludes indirect GHG costs.

10 **B. SUPPLY ISO REVENUES**

11 Under MRTU, all generation from SDG&E’s resource portfolio is sold to the
12 CAISO. Based on expected prices for energy, SDG&E expects to receive revenues
13 totaling [REDACTED] for generation produced in 2013. These revenues are largely offset
14 by costs incurred for generation fuel & variable operation and maintenance (“O&M”),
15 contracted energy purchases and generation capacity. These costs are described in more
16 detail below.

17 **C. GENERATION FUEL & VARIABLE O&M**

18 **1. SONGS**

19 Only SONGS nuclear fuel expense and fuel carrying charges are booked to
20 ERRA. Other SONGS costs, such as O&M and capital addition, are recorded in the Non-
21 fuel Generation Balancing Account (“NGBA”). The projected ERRA expense for
22 SONGS nuclear fuel and carrying charge expenses for 2013 is [REDACTED].

23 **2. PALOMAR, DESERT STAR, MIRAMAR, & CUYAMACA (fuel**
24 **expenses that are recovered through ERRA)**

1 In 2013, the ERRA expense for generation fuel purchased by SDG&E for
2 Palomar, Miramar I & II, Desert Star, and the newly acquired Cuyamaca Peak Energy
3 Plant is forecasted to be [REDACTED]. Capital and non-fuel operating costs for these
4 plants are recovered through the NGBA as required by D.05-08-005, Resolution E-3896
5 and D.07-11-046.

6 **D. CONTRACTED ENERGY PURCHASES**

7 **1. PGE BOARDMAN CONTRACT**

8 The costs incurred under the PGE Boardman long-term PPA include energy,
9 capacity, transmission losses, transmission capacity from the plant to the CAISO, and
10 SDG&E's share of any capital additions to the unit. The contract energy payment is
11 based on an energy price (approximately [REDACTED]) which is applied to SDG&E's share
12 of the plant output. However, the high capacity payment for this contract causes this
13 contract to be a CTC contract; therefore, the expense recorded to the ERRA is determined
14 by multiplying the forecast energy production by the proposed market benchmark price
15 of [REDACTED]. The 2013 ERRA expense for this contract is projected to be [REDACTED]

16 [REDACTED]

17 **2. QUALIFYING FACILITIES**

18 All QFs are under contract with SDG&E through as-available capacity or firm
19 capacity PURPA contracts. These contracts include provisions for both energy and
20 capacity payments. The energy payment is determined using the SDG&E Short-Run
21 Avoided Cost ("SRAC") formula⁶. QF contracts are eligible for CTC recovery due to
22 their high capacity payments. Like the PGE Boardman contract, the ERRA expenses for

⁶ The derivation of the SRAC price for QF contracts is posted monthly on an SDG&E website (URL: <http://www2.sdge.com/SRAC/>).

1 CTC QF contracts are based on delivered energy multiplied by the market benchmark
2 price. Any costs, including capacity payments, greater than the market benchmark price
3 are booked to the TCBA and exclude indirect GHG costs. For the purposes of ERRA
4 accounting, ERRA expenses for CTC QF contracts are recorded on Line 30 of
5 Attachment C, “Qualifying Facilities (Up To Market),” and are forecast to be [REDACTED]
6 in 2013. Any gas hedging costs incurred to mitigate SRAC-priced QF contracts would
7 also be recovered in ERRA, but those expenses are captured in Line 49 Attachment A,
8 “Hedging Costs.” Attachment C details the breakdown of all the units discussed in this
9 section and shows the associated costs, both ERRA and TCBA, and the forecast energy
10 deliveries.

11 **3. RENEWABLE ENERGY CONTRACTS**

12 SDG&E’s renewable energy contracts usually contain an energy payment only
13 and no capacity payment. There are some slight differences between renewable contracts
14 regarding energy payments based on schedules or metered energy, and the treatment of
15 CAISO imbalance charges, depending on the type of resource. In 2013, SDG&E’s
16 renewable energy portfolio will include a cost for the renewable energy credits described
17 in Section II under “Renewable Energy Contracts.” None of the renewable energy
18 contracts in the SDG&E portfolio is for CTC contracts. All costs associated with these
19 contracts are booked as an ERRA expense and are forecast to be \$331 million for 2013.
20 Attachment D details the renewable projects by fuel type, their costs and forecasted
21 energy deliveries.

22 **4. OTHER PURCHASED POWER CONTRACTS**

1 SDG&E's forecast of total costs for non-renewable power purchase contracts in
2 2013 is [REDACTED]. These costs cover capacity payments and variable generation costs
3 for OMEC, Lake Hodges, Kelco and several peakers. The largest components in this
4 category are capacity and generation costs for the OMEC unit, expected to be [REDACTED]
5 [REDACTED], and Resource Adequacy capacity costs for [REDACTED] and Calpeak, expected to be
6 [REDACTED]. The Morgan Stanley contract is also included in this category and is
7 expected to cost [REDACTED].

8 **5. INTER-SCHEDULING COORDINATOR TRADES ("ISTs")**

9 Under MRTU, SDG&E may transact ISTs bilaterally with counterparties to hedge
10 long or short positions. Under an IST purchase, SDG&E would pay the counterparty the
11 contracted energy price and in return receive payment from the CAISO based on the
12 MRTU market clearing price. Under an IST sale, SDG&E would receive payment from
13 the counterparty based on the contracted energy price and in return pay to the CAISO the
14 MRTU market clearing price. For IST purchases and sales, the payment to, or revenue
15 from, the counterparty would be largely offset by the respective credit from, or payment
16 to, the CAISO. Because ISTs are used as a hedge against unknown MRTU prices,
17 SDG&E does not include a forecast of the net cost or benefit from these transactions.

18 **E. CAISO RELATED COSTS**

19 SDG&E forecasts CAISO grid management charges ("GMCs") that are allocated
20 to load and resources, which include energy usage charges, energy transmission service
21 charges, and reliability services costs. The forecast of these charges is based on historical
22 data. SDG&E's forecast of these CAISO costs is expected to be [REDACTED] in 2013.

23 **F. UTILITY RETAINED GENERATION (URG) HEDGING COSTS**

1 SDG&E’s resource portfolio has substantial exposure to gas price volatility as a
2 result of fuel requirements for its gas-fired resources as well as the gas price-based
3 pricing formula for its QF contracts. To manage this exposure, SDG&E expects to
4 continue its hedging activity, and to book the resulting hedging costs and any realized
5 gains and losses from hedge transactions to ERRA. The current estimate of hedging
6 costs for 2013 is [REDACTED], calculated as the marked-to-market profit/loss of hedges
7 already in place, plus expected broker fees. The profit/loss of these and future hedges
8 placed will rise and fall with market prices. Therefore, the final cost or savings will not
9 be known until the settlement process has been completed for the hedge transactions.

10 SDG&E may also trade short-term financial power products to hedge its long or
11 short position against potentially volatile MRTU market clearing prices. Similar to ISTs
12 described above, SDG&E does not include a forecast of net cost or benefit from these
13 power hedges due to the unpredictability of market prices relative to the price of the
14 hedges.

15 **G. CONVERGENCE BIDS**

16 SDG&E’s primary use of convergence bids would be to hedge certain operational
17 risks in the day-to-day management of its portfolio. It is not possible to forecast the gains
18 or losses associated with potential convergence bidding activity because of the
19 unpredictable relationship between day-ahead and real-time prices. Therefore, SDG&E
20 did not forecast an ERRA revenue/charge for convergence bids.

21 **H. CONGESTION REVENUE RIGHTS**

22 The CAISO day-ahead market establishes a market clearing price (which may
23 include a congestion charge component) at each price node (“Pnode”). If congestion

1 occurs where a generator is located, the market clearing price will be lower at that Pnode
2 and the CAISO will consequently pay a lower price for energy delivered there. If
3 congestion occurs where a load is located, the market clearing price will be higher at that
4 Pnode and the CAISO will consequently charge a higher price for load served there.

5 Market participants, including SDG&E, were allocated Congestion Revenue
6 Rights (“CRRs”) for which they can nominate source and sink Pnodes to match those in
7 their portfolio. If congestion arises between the source and sink Pnodes, the CAISO will
8 pay the market participant holding the CRR the congestion charges to offset the
9 congestion costs incurred. SDG&E expects its CRRs to generate revenues from the
10 CAISO to offset congestion costs incurred within its portfolio. However, expected
11 revenues were not forecast for the 2013 ERRR forecast because SDG&E assumed
12 congestion-free clearing prices to develop forecasts for load requirement costs and
13 generation revenues. A forecast of CRR revenues would have required SDG&E to
14 forecast offsetting market-congestion prices at various Pnodes over the 2013 period,
15 which would have introduced complexity and additional uncertainty into the forecast.

16 Market participants, including SDG&E, are offered the ability to purchase CRRs
17 through an auction process. If the CRRs allocated were insufficient to hedge the
18 congestion on a volumetric level, SDG&E may elect to participate in the annual and
19 monthly auction processes to procure the incremental CRRs. Since the incremental
20 CRRs volumes cannot be forecasted, the CRR revenues also cannot be forecasted.

21 **I. GREENHOUSE GAS COMPLIANCE COSTS**

22 California’s new GHG initiative, AB 32, further addressed in R.11-03-012,
23 enacted the Cap-and-Trade Program that began in November 2012 with compliance

1 starting January 1, 2013. The Cap-and-Trade Program will require allowances for all
2 carbon emissions resulting from SDG&E generation, imports and tolling agreements. As
3 stated above, due to a Proposed Decision in the GHG OIR, GHG costs will be deferred
4 until the Commission has finalized the methodology of cost recovery and revenue
5 allocation associated with free allowances.

6

7 This concludes my amended direct testimony.

8

1 **IV. QUALIFICATIONS**

2 My name is Andrew Scates. My business address is 8315 Century Park Court,
3 San Diego, CA 92123. I am currently employed by SDG&E as a Market Operations
4 Manager. My responsibilities include overseeing a staff of schedulers involved in
5 dispatching the SDG&E bundled load portfolio of supply assets for the benefit of retail
6 electric customers. This includes operational administration of DWR contracts,
7 transacting in the real-time wholesale market and managing scheduling activities in
8 compliance with CAISO requirements. I assumed my current position in January 2011.

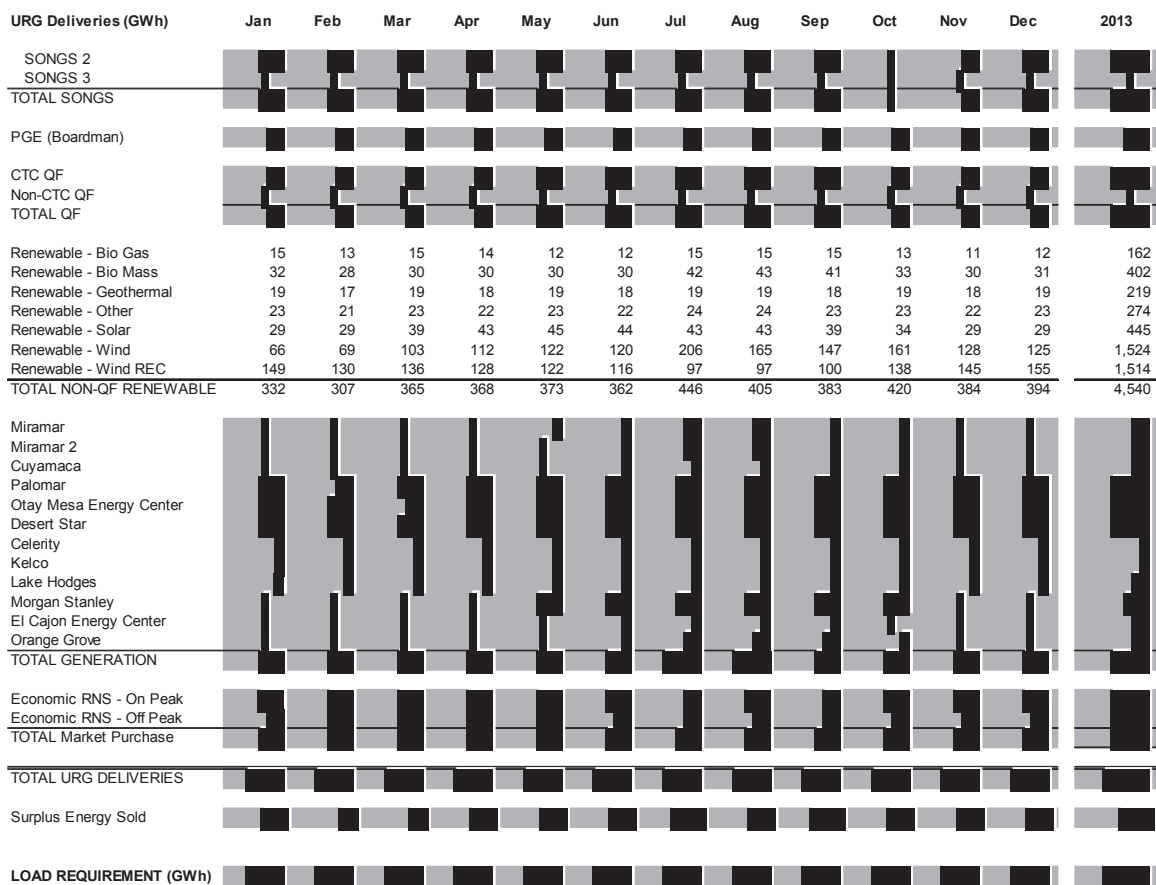
9 I previously managed the Electric Fuels Trading desks for SDG&E, primarily
10 managing day ahead and forward procurement of Natural Gas. Prior to joining SDG&E
11 in 2003, my experience included five years as an energy trader/scheduling manager.

12 I hold a Bachelors degree in Business Administration with an emphasis in Finance
13 from California State University, Chico.

14 I have previously testified before the Commission.
15

Attachment B

ATTACHMENT B - SDG&E 2013 URG DELIVERY VOLUMES



Note 1: Total URG deliveries do not include Wind REC

Note 2: Load Requirement is SDG&E bundled load including load served by CDWR contract energy and transmission losses.

Attachment D

ATTACHMENT D - SDG&E 2012 RENEWABLE RESOURCE DETAIL

URG Deliveries (GWh)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2012
BIO GAS													
GRS Sycamore Landfill Plant	1.6	1.3	1.6	1.5	1.6	1.5	1.7	1.6	1.6	1.6	1.5	1.6	18.7
San Marcos Landfill	0.9	0.9	1.0	0.9	0.9	0.9	1.0	1.1	1.0	1.0	0.9	0.9	11.3
Sycamore Landfill	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	0.9	1.0	0.9	11.4
MM Prima Deshecha Energy LLC	3.8	3.6	3.8	3.8	3.8	3.8	4.5	4.5	4.3	3.9	3.9	3.8	47.4
MM San Diego LLC - Miramar Landfill	2.2	2.0	2.2	2.1	-	-	-	-	-	-	-	-	8.5
MM San Diego LLC - North City Bio Plant	0.6	0.5	0.6	0.6	-	-	-	-	-	-	-	-	2.3
Otay Landfill 1	1.0	0.9	1.0	1.0	0.9	1.0	1.2	1.2	1.2	1.0	0.9	1.0	12.3
Otay Landfill 2	1.1	0.8	1.0	0.9	1.1	0.9	1.2	1.2	1.2	1.0	1.0	1.0	12.4
Otay Landfill 3	2.0	1.8	2.0	2.0	1.9	2.0	2.1	2.2	2.0	2.2	1.9	2.0	24.1
San Diego MWD	0.7	0.5	0.8	0.6	0.8	0.6	2.4	2.7	2.2	1.2	0.6	0.7	13.6
Subtotal	14.7	13.2	14.8	14.2	11.9	11.6	15.1	15.5	14.5	12.8	11.5	11.9	161.9
BIO MASS													
Covanta Delano	27.1	23.7	25.5	26.1	25.6	25.4	34.3	34.7	33.5	27.3	25.5	26.6	335.3
Blue Lake	4.8	4.0	4.9	4.3	4.8	4.7	8.2	8.2	7.9	5.4	4.5	4.8	66.6
Subtotal	31.8	27.7	30.5	30.4	30.4	30.2	42.4	42.9	41.4	32.7	30.0	31.5	401.8
GEOTHERMAL													
Calpine Geysers	18.6	16.8	18.6	18.0	18.6	18.0	18.6	18.6	18.0	18.6	18.0	18.6	219.0
Subtotal	18.6	16.8	18.6	18.0	18.6	18.0	18.6	18.6	18.0	18.6	18.0	18.6	219.0
OTHER													
SCE	21.6	19.5	21.6	20.9	21.6	20.9	21.6	21.6	20.9	21.6	20.9	21.6	254.1
Rnch Pnasquitos	1.4	1.3	1.3	1.4	1.4	1.3	2.7	2.6	2.6	1.5	1.6	1.4	20.4
Subtotal	23.0	20.8	22.9	22.3	23.0	22.2	24.3	24.1	23.5	23.0	22.4	22.9	274.5
SOLAR													
NRG Borrego Solar	4.1	3.9	5.3	5.8	6.1	5.9	5.8	5.7	5.2	4.5	3.9	3.8	60.0
Generic Solar contracts (under negotiation)	25.2	24.9	34.1	37.5	39.1	37.8	36.9	36.9	33.4	29.0	25.3	24.7	384.8
Subtotal	29.3	28.7	39.4	43.4	45.2	43.7	42.7	42.6	38.7	33.5	29.2	28.5	444.8
WIND													
Glacier Wind (TREC)	65.1	57.6	57.5	56.8	54.8	50.6	37.7	32.6	40.8	51.8	61.3	68.4	635.0
RimRock (TREC)	59.8	48.3	54.0	46.4	43.0	40.8	34.6	39.6	34.7	62.0	59.4	61.9	584.5
Shell Cabazon/Whitewater (TREC)	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	294.0
Generic Wind contracts (under negotiation)	17.9	16.8	17.8	18.2	12.1	11.0	6.7	7.8	11.4	16.9	13.7	12.9	163.3
Coram Energy	1.1	1.2	2.1	2.4	3.1	2.9	2.6	2.0	1.7	1.7	1.4	1.4	23.6
Pacific Wind	20.1	22.4	39.4	44.6	57.7	54.9	48.9	37.4	31.0	32.4	26.3	26.5	441.5
Kumeyaay	14.1	14.3	15.1	15.4	10.2	9.3	5.7	6.6	9.7	14.4	11.6	10.9	137.3
Pattern	-	-	-	-	-	4.0	110.1	84.2	69.8	72.9	59.2	59.5	459.7
Oasis Power Partners	8.6	9.6	16.9	19.1	24.7	23.5	21.0	16.0	13.3	13.9	11.3	11.3	189.2
PPM Energy	3.2	4.0	8.6	9.9	11.0	11.4	8.5	8.1	8.1	7.1	3.7	2.3	85.8
WTE Monocito	0.8	1.1	2.8	2.5	3.0	3.2	2.6	2.4	2.1	1.9	0.8	0.6	23.7
Subtotal	215.1	199.8	238.5	239.8	244.1	236.2	303.0	261.2	247.0	299.4	273.2	280.3	3037.7
Total Power Purchase Costs (K\$)													
BIO GAS	\$ 1,057	\$ 948	\$ 1,064	\$ 1,022	\$ 903	\$ 875	\$ 1,157	\$ 1,190	\$ 1,115	\$ 974	\$ 866	\$ 902	\$ 12,071
BIO MASS	\$ 2,693	\$ 2,344	\$ 2,586	\$ 2,567	\$ 2,581	\$ 2,559	\$ 3,627	\$ 3,663	\$ 3,540	\$ 2,779	\$ 2,542	\$ 2,666	\$ 34,148
GEOTHERMAL	\$ 2,120	\$ 1,915	\$ 2,120	\$ 2,052	\$ 2,120	\$ 2,052	\$ 2,120	\$ 2,120	\$ 2,052	\$ 2,120	\$ 2,052	\$ 2,120	\$ 24,966
OTHER	\$ 1,818	\$ 1,588	\$ 1,693	\$ 1,582	\$ 1,662	\$ 1,600	\$ 2,022	\$ 2,006	\$ 1,940	\$ 1,820	\$ 1,788	\$ 1,853	\$ 21,372
SOLAR	\$ 3,694	\$ 3,628	\$ 4,967	\$ 5,473	\$ 5,708	\$ 5,510	\$ 5,387	\$ 5,376	\$ 4,878	\$ 4,232	\$ 3,689	\$ 3,601	\$ 56,143
WIND	\$ 5,405	\$ 5,703	\$ 8,553	\$ 9,401	\$ 10,512	\$ 10,423	\$ 19,621	\$ 15,461	\$ 13,554	\$ 14,747	\$ 11,836	\$ 11,704	\$ 136,920
WIND (REC)	\$ 4,224	\$ 3,644	\$ 3,836	\$ 3,560	\$ 3,394	\$ 3,209	\$ 3,021	\$ 3,108	\$ 3,101	\$ 4,583	\$ 4,709	\$ 5,001	\$ 45,389
Subtotal	\$ 21,012	\$ 19,770	\$ 24,819	\$ 25,657	\$ 26,880	\$ 26,228	\$ 36,956	\$ 32,925	\$ 30,180	\$ 31,256	\$ 27,480	\$ 27,846	\$ 331,009

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

**DECLARATION
OF ANDREW SCATES**

A.12-10-002

Application of San Diego Gas & Electric Company (U 902-E)
for Adoption of its 2013 Energy Resource Recovery Account Revenue Requirement and
Competition Transition Charge Revenue Requirement Forecasts

I, Andrew Scates, declare as follows:

1. I am the Market Operations Manager for San Diego Gas & Electric Company (“SDG&E”). I included my Amended Prepared Direct Testimony (“Amended Testimony”) in support of SDG&E’s January 8, 2013 Amended Application for Adoption of its 2013 Energy Resource Recovery Account (“ERRA”) and Competition Transition Charge (“CTC”) revenue requirement forecasts. Additionally, as the Market Operations Manager, I am thoroughly 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 personal knowledge.

2. I am providing this Declaration to demonstrate that the confidential information (“Protected Information”) in support of the referenced Application falls within the scope of data provided confidential treatment in the IOU Matrix (“Matrix”) attached to the Commission’s Decision (“D.”) 06-06-066 (the Phase I Confidentiality decision). Pursuant to the procedure adopted in D.08-04-023, I am addressing each of the following five features of Ordering Paragraph 2 of D.06-06-066:

- that the material constitutes a particular type of data listed in the Matrix;
- the category or categories in the Matrix the data correspond to;
- that SDG&E is complying with the limitations on confidentiality specified in the Matrix for that type of data;
- that the information is not already public; and

- that the data cannot be aggregated, redacted, summarized, masked or otherwise protected in a way that allows partial disclosure.

3. The Protected Information contained in my Testimony constitutes material, market sensitive, electric procurement-related information that is within the scope of Section 454.5(g) of the Public Utilities Code.¹ As such, the Protected Information is allowed confidential treatment in accordance with the Matrix, as follows:

Confidential Information	Matrix Reference	Reason for Confidentiality and Timing
AS-3 lines 14-15	V.C	LSE Total Energy Forecast – Bundled Customer; confidential for the front three years
AS-4 lines 1-2	IV.A	Forecast of IOU Generation Resources; confidential for three years
AS-4 lines 3-11	II. B.1	Utility Retained Generation; confidential for three years
AS-4 lines 17-19	IV.E	Forecast of Pre-1/1/2003 Bilateral Contracts; confidential for three years
AS-5 lines 16-17	IV.B	Forecast of Qualifying Facility Generation; confidential for three years
AS-8 lines 1-5	IV.A	Forecast of IOU Generation Resources; confidential for three years
AS-8 lines 18, 20-21, 23, AS-9 line 1	IV.F	Forecast of Post-1/1/2003 Bilateral Contracts; confidential for three years
AS-9 line 16-17	IV.J	Forecast of Wholesale Market Purchases; confidential for the front three years
AS-9 lines 22-23, AS-10 lines 1-3	V.G	Total Energy Load Forecast; confidential for the front three years
AS-12 line 8	II.A.2, V.C	Utility Electric Price Forecasts; confidential for three years, LSE Total Energy Forecast, confidential for the front three years
AS-12 line 13	II.A.2, II.B.1, II.B.3, II.B.4	Utility Electric Price Forecasts; confidential for three years, Generation Cost Forecasts of Utility Retained Generation, confidential for three years, Generation Cost Forecasts of QF Contracts, confidential for three years, Generation Cost Forecasts of Non-QF Bilateral Contracts, confidential for three years

¹ In addition to the details addressed herein, SDG&E believes that the information being furnished in my Testimony is governed by Public Utilities Code Section 583 and General Order 66-C. Accordingly, SDG&E seeks confidential treatment of this data under those provisions, as applicable.

AS-12 line 22, AS-13 line 3	II.B.1 II.B.4	Generation Cost Forecasts of Utility Retained Generation, confidential for three years, Generation Cost Forecast of Non-QF Bilateral Contracts; confidential for three years
AS-13 lines 11, 15-16	II.B.4	Generation Cost Forecast of Non-QF Bilateral Contracts; confidential for three years
AS-14 line 5	II.B.3	Generation Cost Forecast of QF Contracts; confidential for three years
AS-15 lines 2, 4-7	II.B.4	Generation Cost Forecast of Non-QF Bilateral Contracts; confidential for three years
AS-15 line 22	II.A.2	Utility Electric Price Forecasts; confidential for three years
AS-16 line 6	I.A.4	Long-term Fuel (gas) Buying and Hedging; confidential for three years
Attachment A - SDG&E 2012 ERRA Expenses	XI	Monthly Procurement Costs; confidential for three years
Attachment B - SDG&E 2012 URG Delivery Volumes <ul style="list-style-type: none"> • SONGS, Palomar, Desert Star, and Miramar data • PGE-Boardman data • QF data • Otay Mesa, Celerity, Kelco, Lake Hodges, Wellhead, and Orange Grove data • Market Purchase data • Surplus Energy Sold data Load Requirement data	IV.A IV.E IV.B IV.F IV.J IV.K V.C	Forecast of IOU Generation Resources; confidential for three years Forecast of Pre-1/1/2003 Bilateral Contracts; confidential for three years Forecast of Qualifying Facility Generation; confidential for three years Forecast of Post-1/1/2003 Bilateral Contracts; confidential for three years Forecast of Wholesale Market Purchases; confidential for the front three years Forecast of Wholesale Market Sales; confidential for the front three years LSE Total Energy Forecast – Bundled Customer; confidential for the front three years
Attachment C - SDG&E 2012 Long-Term Power Purchase, CTC and Qualifying Facility Detail <ul style="list-style-type: none"> • PGE-Boardman data • QF data • Long-Term Power Purchase CTC data • CTC QF & Non CTC QF data • TCBA Expenses data 	IV.E IV.B II.B.4 II.B.3 II.B.3 and	Forecast of Pre-1/1/2003 Bilateral Contracts; confidential for three years Forecast of Qualifying Facility Generation; confidential for three years Generation Cost Forecast of Non-QF Bilateral Contracts; confidential for three years Generation Cost Forecast of QF Contracts; confidential for three years Generation Cost Forecast of QF Contracts;

	II.B.4	confidential for three years Generation Cost Forecast of Non-QF Bilateral Contracts; confidential for three years
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4. I am not aware of any instances where the Protected Information has been disclosed to the public. To my knowledge, no party, including SDG&E, has publicly revealed any of the Protected Information.

5. SDG&E will comply with the limitations on confidentiality specified in the Matrix for the Protected Information.

6. The Protected Information cannot be provided in a form that is aggregated, partially redacted, or summarized, masked or otherwise protected in a manner that would allow further disclosure of the data while still protecting confidential information.

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

Executed this 8th day of January, 2013, at San Diego, California.



Andrew Scates
Market Operations Manager
San Diego Gas & Electric Company