

Application No.: A.16-04-  
Exhibit No.: \_\_\_\_\_  
Witness: Ana Garza-Beutz

**PREPARED DIRECT TESTIMONY OF**  
**ANA GARZA-BEUTZ**  
**ON BEHALF OF**  
**SAN DIEGO GAS & ELECTRIC COMPANY**

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

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

**April 15, 2016**



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1 recommendation that California adopt a portfolio of emissions reduction measures, including a  
2 California GHG cap-and-trade program.<sup>4</sup>

3 In October 2011, ARB released its Final Regulation Order, which was approved by its  
4 Board and by the Office of Administrative Law (“OAL”) in December 2011.<sup>5</sup> The ARB  
5 regulations create a GHG emissions allowance cap-and-trade system, with compliance obligations  
6 in the electricity sector applicable to “first deliverers of electricity”<sup>6</sup> that emit more than 25,000  
7 Metric Tons (“MT”) of GHG. The regulation requires that first deliverers of electricity, including  
8 investor-owned utilities (“IOUs”) such as SDG&E, obtain all the compliance instruments required  
9 to meet their compliance obligations by November 1 of the year following the end of a compliance  
10 period. Compliance instruments consist of allowances and offsets. An allowance is a limited  
11 tradable authorization to emit up to one MT of carbon dioxide equivalent (“CO<sub>2</sub>e”) and an offset is  
12 a project that reduces GHG in sectors outside of those covered in the cap-and-trade program. See  
13 Section 95801 of ARB’s Final Regulation Order for these definitions. Section 95892(b) of ARB’s  
14 Final Regulation Order establishes that IOUs are required to sell all of their free allowances and  
15 acquire an amount equal to their direct compliance obligations. There are also annual  
16 requirements to surrender at least 30% of expected annual obligations each year by November 1 of  
17 the following year.

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<sup>4</sup> ARB Resolution 11-32 at 3.

<sup>5</sup> The ARB Final Regulation Order from December 2012 is codified at 17 CCR § 95800 *et seq.* and is also available at: <http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm>.

<sup>6</sup> “First deliverers of electricity” is defined in Section 95811(b) of ARB’s Final Regulation Order as electricity generators inside California and importers of electricity from outside of California.

1           **B.       GHG Actual Revenue**

2           The revenues discussed in my testimony result from the sale of allowances allocated to  
3 SDG&E by ARB for the benefit of its ratepayers. ARB requires that the allowances that are  
4 allocated annually to IOUs be made available for sale at the ARB auctions. Allowances given to  
5 the IOUs must all be consigned by the last auction of that year. Except for the November 2012  
6 auction, where ARB specified the amount that each IOU needed to auction, all other amounts  
7 consigned at auctions are up to the discretion of each IOU provided that the entire annual volume  
8 is consigned by the end of each year. Revenues are calculated by multiplying the volume sold by  
9 the auction settlement price. The revenues presented in this testimony consist of allowances sold  
10 at the 2015 February, May, August, and November auctions.

11           **C.       GHG Actual Emissions Volumes**

12           The 2015 direct emissions will be the actual/calculated GHG emissions for: (1) SDG&E's  
13 California utility-owned generation ("UOG"), (2) California generators with whom SDG&E has  
14 contracts where SDG&E is responsible for GHG costs, (3) estimated emissions associated with  
15 SDG&E imports of both specified electricity and unspecified electricity, and (4) Renewable  
16 Portfolio Standard ("RPS") adjustment. The RPS adjustment is calculated by multiplying the out-  
17 of-state renewable megawatt-hours ("MWh") eligible for RPS adjustment by the ARB assigned  
18 unspecified emission factor. The 2015 direct volumes may change because they are subject to: (1)  
19 emission estimates and emission reporting verification, (2) changing emission factors, and (3)  
20 contractual requirements for reviewing tolling agreement emissions for potential reductions. If  
21 there are such changes, they will be reflected in future testimony.

22           The 2015 "actual" indirect emissions are estimated emissions based on net purchases from  
23 the California electricity market controlled by the California Independent System Operator

1 Corporation (“CAISO”) measured in MWh and multiplied by the ARB assigned unspecified  
2 emission factor. Indirect emissions are not overseen by ARB. Indirect emissions are comprised of  
3 an estimated volume of GHG for which SDG&E was exposed as a result of purchasing power  
4 from third parties. The numbers for 2015 are subject to change if MWh change or if ARB  
5 publishes a new unspecified factor. If there are such changes, they will be reflected in future  
6 testimony.

7 **D. GHG Actual Cost Categories**

8 The costs outlined in my testimony are broken down into two categories of GHG actual  
9 costs: direct costs and indirect costs. SDG&E defines 2015 direct current costs as the net cost of  
10 procuring compliance instruments that can be used to satisfy SDG&E’s 2015 compliance year  
11 obligation. SDG&E defines 2015 indirect costs as the GHG compliance costs embedded in the  
12 price of electricity delivered in 2015, which are passed on from sellers.

13 Section III below addresses the carbon price for 2015. Section IV.A addresses direct GHG  
14 emissions associated with SDG&E’s UOG plants, procurement of electricity from tolling  
15 agreements, and electricity imports attributed to SDG&E for compliance. Section IV.B addresses  
16 the approximate 2015 indirect GHG emissions for which SDG&E paid as GHG costs embedded in  
17 electricity prices charged by third parties to SDG&E under contract for various supplies.<sup>7</sup> Section  
18 IV.C summarizes the GHG costs based on the carbon prices in Section III and emissions in  
19 Sections IV.A and IV.B.

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<sup>7</sup> Indirect GHG costs are estimated based on the assumptions described herein.

1 **III. CARBON PRICE METHODOLOGY**

2 **A. Price for Direct GHG Emissions**

3 SDG&E uses the Weighted Average Cost (“WAC”) of Compliance Instruments by  
4 compliance period recorded on a monthly basis, as described in Attachment C of Decision (D.) 15-  
5 01-024, to calculate its direct emissions pricing. The WAC<sup>8</sup> prices are listed in the table below:  
6

Year	WAC
2015	

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8  
9 **B. Price for Indirect Emissions**

10 The embedded GHG costs for 2015 indirect emissions are estimated by using the average  
11 2015 CAISO GHG Allowance Price Indices, as listed in the table below.<sup>9</sup> Indirect costs are  
12 estimated since it is assumed that the GHG cost was passed on by all sources of power from  
13 market purchases.  
14

2015 CAISO GHG Prices	
Q1 2015	\$12.86
Q2 2015	\$12.68
Q3 2015	\$12.74
Q4 2015	\$12.88
<b>Total</b>	<b>\$12.79</b>

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<sup>8</sup> Monthly WAC prices are provided in Appendix A of this testimony. The WAC calculations for 2015 are based upon SDG&E’s most recent estimate for the respective monthly emissions and on previous years’ WAC.

<sup>9</sup> Quarterly CAISO prices are a straight average of public daily GHG prices published on CAISO’s OASIS website.

1 **IV. ACTUAL GHG COMPLIANCE COSTS**

2 **A. Direct Greenhouse Gas Emissions**

3 Under ARB’s cap-and-trade program, the “first deliverer of electricity” within California  
4 must surrender one allowance or offset credit for each MT of GHG emissions. Accordingly,  
5 SDG&E had direct compliance obligations for GHGs emitted from burning natural gas at its UOG  
6 plants, namely, the Palomar Energy Center (“Palomar”) and Miramar Energy Facility I and II  
7 (collectively, “Miramar”).<sup>10</sup> SDG&E’s Cuyamaca Peak Energy Plant (“Cuyamaca”) was a  
8 covered entity in 2013 and 2014, however since its emissions were verified to be below the 25,000  
9 MT threshold for 2012-2014, as of 2015 Cuyamaca no longer has a compliance obligation.  
10 SDG&E’s UOG GHG emission volumes are derived from information extracted from each  
11 covered plant’s Continuous Emissions Monitoring Systems (“CEMS”) and that plant’s annual fuel  
12 usage. The data is reported to ARB (under the mandatory GHG reporting rule) and undergoes a  
13 rigorous quality assurance/quality control (“QA/QC”) process with supporting documentation from  
14 the CEMS systems. The data is then subject to third party verification by an ARB-certified  
15 verifier. The 2015 data will become final in September 2016. The 2015 UOG estimated actuals  
16 are as follows:

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<sup>10</sup> ARB’s Mandatory Reporting Regulations requires use of emission factors from federal regulations - 40 Code of Federal Regulation (“CFR”) Section 98. For pipeline natural gas, there are three components – CO<sub>2</sub>, CH<sub>4</sub>, and NO<sub>2</sub>. Table C-1 of 40 CFR Section 98 provides an emissions rate for CO<sub>2</sub> of 0.05302 MT/MMBtu. Table C-2 of 40 CFR Section 9 gives a default emission factor for CH<sub>4</sub> of 0.000001 MT/MMBtu. Using a Global Warming Potential of 21, the resulting CO<sub>2</sub>e emission rate is 0.00002 MT/MMBtu. The default NO<sub>2</sub> emission rate is given as 0.0000001 MT/MMBtu, and its Global Warming Potential is 310, resulting in a CO<sub>2</sub>e emission rate of 0.00003 MT/MMBtu. Combining the 3 elements results in an overall emission rate of 0.05307 MT/MMBtu.



2015 California UOG Plants	Est. Actual (in MT)
Palomar Energy Center	
Miramar Energy Facilities	
Total	

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In addition, SDG&E has agreements with some California generators, which stipulate that if SDG&E is dispatching the plant, then SDG&E will provide compliance instruments to the generator for its GHG compliance obligations. The generators covered by these agreements include, among others, the Otay Mesa Energy Center (“OMECE”), the Orange Grove Energy Center (“Orange Grove”), Goal Line (which became a dispatchable plant in 2015), and the Escondido Energy Center (“EEC”), whose estimated 2015 emissions have exceeded the 25,000 MT threshold. The estimated actuals for these plants were calculated by multiplying the MMBtu burned with the emission factor of 0.05307 MT/MMBtu associated with natural gas as the input fuel. These estimates are subject to change, not only because the emissions estimates are based on fuel calculations instead of emission meter read calculations, but also because the tolling agreement contracts state that SDG&E will only cover the emissions generated resulting from SDG&E dispatches of efficiently run plants. The 2015 Estimated SDG&E obligations to tolling agreement partners are shown below. SDG&E will be analyzing the 2015 data and could potentially adjust the 2015 emissions for actuals, non-SDG&E dispatches or for inefficiencies. . If there are such changes, they will be reflected in future testimony.

2015 California Tolling Generators	Est. Actual (in MT)
Otay Mesa Energy Center	
Orange Grove Energy Center	
Goal Line	
Escondido Energy Center	
Total	

An entity that delivers out-of-state electricity to a delivery point inside California is also responsible for the GHG emissions associated with generation of that electricity. For known imports, called “specified sources,” the estimated GHG emissions related to the portion of outputs of plants that delivered to California are covered in the cap-and-trade program and as such the importer of that electricity has a compliance obligation. SDG&E has a contract with Yuma Cogeneration Associates (“YCA”) in Arizona and owns the Desert Star Energy Center (“Desert Star”) combined cycle plant in Nevada. All of these out-of-state generators are specified sources. The compliance obligation for the power imported from each of these sources is calculated by the product of the imported power times the transmission loss correction factor as listed in section 95111 of ARB’s mandatory reporting regulation, and the specified emissions factor assigned to those facilities by ARB.<sup>11</sup> As with SDG&E’s other estimated obligations, specified imports are also subject to change, and those changes will be reflected in future testimony. The 2015 estimated actuals for SDG&E’s specified imports are as follows:

2015 Specified Imports	Est. Actual Specified (in MWh)	Emission Factor	Transmission Loss Factor	Est. Actual (in MT)
Desert Star		0.381	1.00	
YCA		0.410	1.02	
Total				

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In addition to specified sources, importing of “unspecified sources” also generates a compliance obligation. SDG&E procured both contracted imports and market imports from unspecified sources in 2015. The cap-and-trade compliance obligation for these unspecified imports is calculated by multiplying the number of MWh imported, adjusted upward by two percent to account for transmission losses between the point of generation and the California border, by the ARB default rate, as stated in its regulation (currently 0.428 MT per MWh).<sup>12</sup> Finally, ARB recognizes that the building of new renewable generation outside California reduces GHG. As such, the cap-and-trade regulations allow for an RPS adjustment. The RPS adjustment reduces an entity’s GHG compliance burden and is calculated by assigning the default emission rate, 0.428 MT/MWh, to the GHG-free renewable energy, as measured at the point of generation. The adjustment does not account for the transmission losses from the point of generation to California.<sup>13</sup> The Cap-and-Trade Regulation also allows for RPS Adjustment to be taken in following years. In my November 6, 2015 Updated Testimony in SDG&E’s 2016 ERRR Forecast (A.15-04-014), where I discussed 2014 verified emissions, I reported that SDG&E did not claim RPS Adjustments for 2014. As a result, a portion of SDG&E’s 2014 contractually purchased renewable energy applicable to the RPS Adjustment Provision is eligible to claim in later year(s). SDG&E intends to claim some of those renewable MWhs in 2015. Both the estimated 2015 unspecified imports and the RPS Adjustments claimed for 2015 are subject to change and those

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<sup>11</sup> Specified Emission Factors are updated annually by ARB. They can be found at: <http://www.ccdsupport.com/confluence/display/calhelp/Reporting+Form+Instructions>  
<sup>12</sup> ARB’s Cap-and-Trade Regulation, Section 95852(b)(1)(B).  
<sup>13</sup> See Section 95852(b)(1) of ARB’s Final Regulation Order for the calculation of the RPS Adjustment.

changes will be reflected in future testimony. The 2015 estimated actuals for SDG&E's unspecified imports and RPS adjustment claims are as follows:

For 2015 Compliance Reporting: 2015 Unspecified Imports & 2014 RPS Adjustment	Est. Actual Unspecified (in MWh)	Emission Factor	Transmission Loss Factor	Est. Actual (in MT)
Unspecified Imports		0.428	1.02	
RPS Adjustment		0.428	1.00	
<b>Total</b>				

Based on the above, SDG&E's 2015 estimated actual direct compliance obligations are:

Estimated 2015 Direct Compliance Obligations	Est. Actual (in MT)
California UOG Plants	
California Tolling Generators	
Specified Imports	
Unspecified Imports	
RPS Adjustment	
<b>Total</b>	

**B. Indirect Greenhouse Gas Emissions**

SDG&E, along with all other purchasers of wholesale electricity, is subject to indirect GHG compliance costs that generators incur and pass on to their buyers. This additional cost of GHG compliance is embedded in the market price of electricity procured in the wholesale market from third parties, thereby increasing SDG&E's cost to purchase wholesale electricity, as well as from suppliers under contracts that include market-based prices. The cost of GHG affects both market purchases and contracts based on the price of energy (such as combined heat and power ("CHP") facilities); because the price of energy changes in tandem with the change in the GHG

1 allowance prices, sellers of electricity demand higher revenues to offset the costs related to their  
 2 cap-and-trade obligations. The 2015 indirect GHG volumes are estimated, for both net market  
 3 purchases and CHP contracts, as the MWh of electricity production multiplied by the ARB default  
 4 rate for unspecified electricity of 0.428 MT/MWh. The 2015 estimated MWh and emission actuals  
 5 of SDG&E's indirect purchases are as follows:

2015 Indirect Volumes in MWh and MT	
Total INDIRECTS (in MWh)	[REDACTED]
Unspecified Emissions Factor	0.428
Total INDIRECTS (in MT)	[REDACTED]

9 **C. GHG Costs**

10 Using the prices from Section III above, I estimate the 2015 direct GHG costs as follows:

2015 GHG Direct Costs	Volume (in MT)	WAC Price (in \$/MT)	Cost
Jan-Dec 2015	[REDACTED]	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]	[REDACTED]

14 Combining indirect volumes and the CAISO GHG allowance price indices,<sup>14</sup> I estimate the  
 15 2015 estimated GHG indirect costs as follows:

2015 Indirect Volumes & Cost	
Total INDIRECTS (in MT)	[REDACTED]
CAISO GHG Price (Jan-Dec '15) (in \$/MT)	\$12.79
Total Indirect Cost	[REDACTED]

<sup>14</sup> Per D. 14-10-033, indirect costs are calculated using a proxy price equal to the average of the published CAISO prices.

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I estimate that the 2015 actual/forecast blended cost is \$60.96million (rounded).

**V. ACTUAL AND ESTIMATED GHG REVENUES**

SDG&E received 6,426,430 MT of vintage 2015 allowances to sell at 2015 auctions.

SDG&E’s allocated vintage 2015 allowances were required to be consigned at the 2015 auctions; however, SDG&E had full discretion on how to distribute the volume across the four auctions.

The tables below show the volumes sold at each 2015 auction and the associated revenues.

2015 GHG Revenues			
Auction	Settlement Price (\$/MT)	Consigned Volume (MT)	Revenue
Feb-15	\$12.21	[REDACTED]	[REDACTED]
May-15	\$12.29		
Aug-15	\$12.52		
Nov-15	\$12.73		
<b>Total</b>	<b>\$12.44</b>	<b>6,426,430</b>	<b>\$79,929,224</b>

This concludes my testimony.

1 **VI. QUALIFICATIONS**

2 My name is Ana Garza-Beutz. My business address is 8315 Century Park Court, San  
3 Diego, CA 92123. I am employed by SDG&E as a Principal Energy Administrator in the  
4 Electric & Fuel Procurement Department. My responsibilities include managing SDG&E's  
5 GHG portfolio, which includes development of GHG procurement and hedging strategies.

6 I joined SDG&E in November 2003, and have held various positions with increasing  
7 levels of responsibility within the Electric & Fuels Procurement Department. Prior to joining  
8 SDG&E, I worked as a Risk Analyst with Sempra Energy.

9 I received a Bachelor of Science degree in Mathematics from the California Polytechnic  
10 State University San Luis Obispo and a Master of Arts in Mathematics from the University of  
11 California Santa Barbara.

12 I have previously testified before the Commission.

**APPENDIX A**  
SDG&E's Monthly WAC Calculation  
(Calculation date of March 4, 2016)



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

**DECLARATION OF ANA GARZA-BEUTZ  
REGARDING CONFIDENTIALITY OF CERTAIN DATA**

**A.16-04-\_\_\_\_\_**

Application of San Diego Gas & Electric Company (U 902-E)  
for Approval of Its 2017 Electric Procurement Revenue Requirement Forecasts and GHG-  
Related Forecasts.

I, Ana Garza-Beutz, declare as follows:

1. I am a Principal Energy Administrator for San Diego Gas & Electric Company (“SDG&E”). I included my Prepared Direct Testimony (“Testimony”) in support of SDG&E’s April 15, 2016 Application for Approval of its 2017 Electric Procurement Revenue Requirement Forecasts and GHG-Related Forecasts (“Application”). I am 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, except for those matters expressly stated to be based on information provided to me, and as to those matters, I believe them to be true.

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 data described in the table below is market sensitive information designated as confidential under the Matrix of Allowed Confidential Treatment of Investor Owned Utility Data, adopted as Appendix 1 to D.06-06-066 (the Matrix), and is entitled to confidential treatment under Public Utilities Code section 454.5(g), D.06-06-066 and D.08-04-023:

**Table 1**  
**Information Protected from Disclosure Under the Matrix**

<b>Confidential Information</b>	<b>Matrix Cat.</b>	<b>Matrix Category Description</b>	<b>Limitations on Confidentiality</b>
Page ABG-7, line 1; Page ABG-10, line 8  (2015 Historical UOG Emissions)	IX.B	Strategic Procurement Information – Electric: Recorded data on specific resources (rather than percentages on broad categories of supply sources)	Appendix 1 IOU Matrix does not specify effective period of confidentiality.
Attachment G of this Application  (2013, 2014 and 2015 Historical UOG Emissions)	IX.B	Strategic Procurement Information – Electric: Recorded data on specific resources (rather than percentages on broad categories of supply sources)	Appendix 1 IOU Matrix does not specify effective period of confidentiality.
Page ABG-8, line 1; Page ABG-10, line 8  (2015 Historical Tolling Agreement Emissions)	IX.B	Strategic Procurement Information – Electric: Recorded data on specific resources (rather than percentages on broad categories of supply sources)	Appendix 1 IOU Matrix does not specify effective period of confidentiality.
Attachment G of this Application  (2013, 2014 and 2015 Historical Tolling Agreement Emissions)	IX.B	Strategic Procurement Information – Electric: Recorded data on specific resources (rather than percentages on broad categories of supply sources)	Appendix 1 IOU Matrix does not specify effective period of confidentiality.
Page ABG-8, line 17; Page ABG-10, line 8  (2015 Historical Specified Imported MWh and calculated Emissions)	IX.B	Strategic Procurement Information – Electric: Recorded data on specific resources (rather than percentages on broad categories of supply sources)	Appendix 1 IOU Matrix does not specify effective period of confidentiality.
Attachment G of this Application  (2013, 2014 and 2015 Historical Specified Imported MWh and calculated Emissions)	IX.B	Strategic Procurement Information – Electric: Recorded data on specific resources (rather than percentages on broad categories of supply sources)	Appendix 1 IOU Matrix does not specify effective period of confidentiality.
Page ABG-10, lines 4 and 8	IX.B	Strategic Procurement Information	Appendix 1 IOU

<b>Confidential Information</b>	<b>Matrix Cat.</b>	<b>Matrix Category Description</b>	<b>Limitations on Confidentiality</b>
(2015 Historical Unspecified Imported MWh and calculated Emissions; Historical RPS Adjustment eligible MWh and calculated Emissions for the 2015 Compliance Year)		– Electric: Recorded data in MWh on specific categories (rather than percentages on broad categories of supply sources)	Matrix does not specify effective period of confidentiality.
Attachment G of this Application  (2013, 2014 and 2015 Historical Unspecified Imported MWh and calculated Emissions; Historical RPS Adjustment eligible MWh and calculated Emissions for the 2013-2015 Compliance Years)	IX.B	Strategic Procurement Information – Electric: Recorded data in MWh on specific categories (rather than percentages on broad categories of supply sources)	Appendix 1 IOU Matrix does not specify effective period of confidentiality.
Page ABG-11, line 7  (2015 Indirect Purchases in MWh and calculated Emissions)	IX.B	Strategic Procurement Information – Electric: Recorded data in MWh on specific categories (rather than percentages on broad categories of supply sources)	Appendix 1 IOU Matrix does not specify effective period of confidentiality.
Attachment G of this Application  (2013, 2014 and 2015 Indirect Purchases in MWh and calculated Emissions)	IX.B	Strategic Procurement Information – Electric: Recorded data in MWh on specific categories (rather than percentages on broad categories of supply sources)	Appendix 1 IOU Matrix does not specify effective period of confidentiality.
Page ABG-11, line 12  (2015 Direct GHG Volumes and Costs)	I.A.4	Natural Gas Information: Forecasts (gas): Long-term fuel (gas) buying and hedging plans	Three Years
Attachment G of this Application  (2013, 2014 and 2015 Direct GHG Volumes and Costs)	I.A.4	Natural Gas Information: Forecasts (gas): Long-term fuel (gas) buying and hedging plans	Three Years
Page ABG-11, line 17  (2015 Indirect GHG Volumes and Costs)	IX.B	Strategic Procurement Information – Electric: Recorded data in MWh on specific categories (rather than percentages on broad categories of supply sources)	Appendix 1 IOU Matrix does not specify effective period of confidentiality.
Attachment G of this Application  (2013, 2014 and 2015 Indirect GHG Volumes and Costs)	IX.B	Strategic Procurement Information – Electric: Recorded data in MWh on specific categories (rather than percentages on broad categories of supply sources)	Appendix 1 IOU Matrix does not specify effective period of confidentiality.
Page ABG-12, line 9  (2015 GHG Quarterly Auction	I.A.4	Natural Gas Information: Forecasts (gas): Long-term fuel (gas) buying and hedging plans	Three Years

<b>Confidential Information</b>	<b>Matrix Cat.</b>	<b>Matrix Category Description</b>	<b>Limitations on Confidentiality</b>
Revenue)			
Attachment G of this Application  (2013, 2014 and 2015 GHG Quarterly Auction Revenue)	I.A.4	Natural Gas Information: Forecasts (gas): Long-term fuel (gas) buying and hedging plans	Three Years

4. Some of the data described in the table below does not expressly fall within any category of the Matrix, is market sensitive information analogous to Procurement Costs, Category XI in the Matrix, and is entitled to confidential treatment under D.06-06-066, D.08-04-023, Public Utilities Code section 454.5(g), General Order 66-C, 17CCR § 95914(c) (the “ARB Confidentiality Regulations”) and D.14-10-033. Among other things, the ARB Confidentiality Regulation requires bidding strategies to be confidential. Since SDG&E’s historical auction awards and historical consignment strategies reveal SDG&E’s prior bidding/consignment strategies, prior auction results are required to be kept confidential. In addition, D.14-10-033 requires forecasts of emissions intensity, forecasts of GHG costs, compliance instrument prices and weight average cost (“WAC”) to be kept confidential:

**Table 2**  
**Information Protected from Disclosure Under Other Relevant Statutes, Decisions, Regulations or Other Provisions of Law**

<b>Confidential Information</b>	<b>Legal Basis for Confidential Protection</b>	<b>Facts Showing consequence of Release</b>
Page ABG-5, line 7  (2015 SDG&E WAC)	D.14-10-033 in Attachment A “Confidentiality Protocols”, D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), GO 66-C, and 17 CCR § 95914(c)	Providing these prices to market participants could allow them to figure out SDG&E’s procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California’s Assembly Bill (“AB”) 32 cap-and-trade markets. Further, release of the information would compromise SDG&E’s contractual bargaining power such that customer costs could rise.
Attachment A of my Testimony	D.14-10-033 in Attachment A “Confidentiality Protocols”, D.06-06-066, D.08-04-023,	Providing these prices to market participants could allow them to figure out SDG&E’s procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California’s Assembly Bill (“AB”) 32 cap-and-trade

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(2013, 2014 and 2015 SDG&E WACs)	P.U. Code § 454.5(g), GO 66-C, and 17 CCR § 95914(c)	markets. Further, release of the information would compromise SDG&E's contractual bargaining power such that customer costs could rise.
Page ABG-7, line 1; Page ABG-10, line 8  (2015 Historical UOG Emissions)	D.14-10-033 in description of Template D-2, D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), GO 66-C, and 17 CCR § 95914(c)	Providing this information to market participants could allow them to figure out SDG&E's procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California's Assembly Bill ("AB") 32 cap-and-trade markets. Further, release of the information would compromise SDG&E's contractual bargaining power such that customer costs could rise.
Attachment G of this Application  (2013, 2014 and 2015 Historical UOG Emissions)	D.14-10-033 in description of Template D-2, D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), GO 66-C, and 17 CCR § 95914(c)	Providing this information to market participants could allow them to figure out SDG&E's procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California's Assembly Bill ("AB") 32 cap-and-trade markets. Further, release of the information would compromise SDG&E's contractual bargaining power such that customer costs could rise.
Page ABG-8, line 1; Page ABG-10, line 8  (2015 Historical Tolling Agreement Emissions)	D.14-10-033 in description of Template D-2, D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), GO 66-C, and 17 CCR § 95914(c)	Providing this information to market participants could allow them to figure out SDG&E's procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California's Assembly Bill ("AB") 32 cap-and-trade markets. Further, release of the information would compromise SDG&E's contractual bargaining power such that customer costs could rise.
Attachment G of this Application  (2013, 2014 and 2015 Historical Tolling Agreement Emissions)	D.14-10-033 in description of Template D-2, D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), GO 66-C, and 17 CCR § 95914(c)	Providing this information to market participants could allow them to figure out SDG&E's procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California's Assembly Bill ("AB") 32 cap-and-trade markets. Further, release of the information would compromise SDG&E's contractual bargaining power such that customer costs could rise.
Page ABG-8, line 17; Page ABG-10, line 8	D.14-10-033 in description of Template D-2, D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), GO 66-C, and 17	Providing this information to market participants could allow them to figure out SDG&E's procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California's Assembly Bill ("AB") 32 cap-and-trade markets. Further, release of the information



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(2015 Historical Specified Imported MWh and calculated Emissions)	CCR § 95914(c)	would compromise SDG&E’s contractual bargaining power such that customer costs could rise.
Attachment G of this Application  (2013, 2014 and 2015 Historical Specified Imported MWh and calculated Emissions)	D.14-10-033 in description of Template D-2, D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), GO 66-C, and 17 CCR § 95914(c)	Providing this information to market participants could allow them to figure out SDG&E’s procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California’s Assembly Bill (“AB”) 32 cap-and-trade markets. Further, release of the information would compromise SDG&E’s contractual bargaining power such that customer costs could rise.
Page ABG-10, lines 4 and 8  (2015 Historical Unspecified Imported MWh and calculated Emissions; Historical RPS Adjustment eligible MWh and calculated Emissions for the 2015 Compliance Year)	D.14-10-033 in description of Template D-2, D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), GO 66-C, and 17 CCR § 95914(c)	Providing this information to market participants could allow them to figure out SDG&E’s procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California’s Assembly Bill (“AB”) 32 cap-and-trade markets. Further, release of the information would compromise SDG&E’s contractual bargaining power such that customer costs could rise.
Attachment G of this Application  (2013, 2014 and 2015 Historical Unspecified Imported MWh and calculated Emissions; Historical RPS Adjustment eligible MWh and calculated Emissions for the 2013-2015 Compliance Years)	D.14-10-033 in description of Template D-2, D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), GO 66-C, and 17 CCR § 95914(c)	Providing this information to market participants could allow them to figure out SDG&E’s procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California’s Assembly Bill (“AB”) 32 cap-and-trade markets. Further, release of the information would compromise SDG&E’s contractual bargaining power such that customer costs could rise.
Page ABG-11, line 7  (2015 Indirect Purchases in MWh and calculated Emissions)	D.14-10-033 in description of Template D-2, D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), and GO 66-C, 17 CCR § 95914(c)	Providing these prices to market participants could allow them to figure out SDG&E’s procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California’s Assembly Bill (“AB”) 32 cap-and-trade markets. Further, release of the information would compromise SDG&E’s contractual bargaining power such that customer costs could rise.
Attachment G of this Application  (2013, 2014 and 2015 Indirect	D.14-10-033 in description of Template D-2, D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), and GO 66-C, 17 CCR § 95914(c)	Providing these prices to market participants could allow them to figure out SDG&E’s procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California’s Assembly Bill (“AB”) 32 cap-and-trade markets. Further, release of the information

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Purchases in MWh and calculated Emissions)		would compromise SDG&E’s contractual bargaining power such that customer costs could rise.
Page ABG-11, line 12  (2015 Direct GHG Volumes and Costs)	D.14-10-033 in description of Template D-2, D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), GO 66-C, and 17 CCR § 95914(c)	Providing this information to market participants could allow them to figure out SDG&E’s procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California’s Assembly Bill (“AB”) 32 cap-and-trade markets. Further, release of the information would compromise SDG&E’s contractual bargaining power such that customer costs could rise.
Attachment G of this Application  (2013, 2014 and 2015 Direct GHG Volumes and Costs)	D.14-10-033 in description of Template D-2, D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), GO 66-C, and 17 CCR § 95914(c)	Providing this information to market participants could allow them to figure out SDG&E’s procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California’s Assembly Bill (“AB”) 32 cap-and-trade markets. Further, release of the information would compromise SDG&E’s contractual bargaining power such that customer costs could rise.
Page ABG-11, line 17  (2015 Indirect GHG Volumes and Costs)	D.14-10-033 in description of Template D-2, D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), GO 66-C, and 17 CCR § 95914(c)	Providing this information to market participants could allow them to figure out SDG&E’s procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California’s Assembly Bill (“AB”) 32 cap-and-trade markets. Further, release of the information would compromise SDG&E’s contractual bargaining power such that customer costs could rise.
Attachment G of this Application  (2013, 2014 and 2015 Indirect GHG Volumes and Costs)	D.14-10-033 in description of Template D-2, D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), GO 66-C, and 17 CCR § 95914(c)	Providing this information to market participants could allow them to figure out SDG&E’s procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California’s Assembly Bill (“AB”) 32 cap-and-trade markets. Further, release of the information would compromise SDG&E’s contractual bargaining power such that customer costs could rise.
Page ABG-12, line 9	D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), GO 66-C, 17 CCR § 95914(c), and D.14-10-033	Providing this information to market participants could allow them to figure out SDG&E’s procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California’s Assembly Bill (“AB”) 32 cap-and-trade markets. Further, release of the information would compromise SDG&E’s contractual

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(2015 GHG Quarterly Auction Revenue)		bargaining power such that customer costs could rise.
Attachment G of this Application  (2013, 2014 and 2015 GHG Quarterly Auction Revenue)	D.06-06-066, D.08-04-023, P.U. Code § 454.5(g), GO 66-C, 17 CCR § 95914(c), and D.14-10-033	Providing this information to market participants could allow them to figure out SDG&E's procurement strategy. And thus could adversely impact the competitiveness of procurement activities in California's Assembly Bill ("AB") 32 cap-and-trade markets. Further, release of the information would compromise SDG&E's contractual bargaining power such that customer costs could rise.

5. I am not aware of any instances where the confidential information described in my testimony was disclosed to the public.

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

7. 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 15th day of April, 2016, at San Diego, California.




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Ana Garza-Beutz  
Principal Energy Administrator  
San Diego Gas & Electric Company