

Application No.: A.19-04-~~xxx~~010  
Exhibit No.: \_\_\_\_\_  
Witness: Ana Garza-Beutz

**UPDATED 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~~November 07, 2019**



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GLOSSARY

1 **UPDATED PREPARED DIRECT TESTIMONY OF**  
2 **ANA GARZA-BEUTZ**  
3 **ON BEHALF OF**  
4 **SAN DIEGO GAS & ELECTRIC COMPANY**  
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8 **I. PURPOSE AND OVERVIEW**

9 My updated prepared direct testimony presents San Diego Gas & Electric Company's  
10 ("SDG&E's") 2018-2019<sup>1</sup> costs for greenhouse gas ("GHG") compliance instruments used to  
11 satisfy its compliance obligations under the California Air Resources Board's ("ARB") cap-and-  
12 trade program pursuant to Assembly Bill ("AB") 32. My testimony also includes SDG&E's  
13 2018-2019 revenues related to the sale of its allowance allocation.<sup>2</sup> Appendix A of this  
14 testimony includes SDG&E's Weighted Average Cost calculation ("WAC") as required in  
15 Decision ("D.") 14-10-033, subsequently corrected in D.14-10-055, ~~and D.15-01-024 and~~  
16 ~~pending further modification if the Proposed Decision ("PD") "Order Modifying Decision 15-~~  
17 ~~01-024, Attachment C" mailed on March 22, 2019<sup>3</sup> is approved~~D.19-04-016. The purpose of  
18 this updated prepared direct testimony is to present both SDG&E's 2018-2019 costs/revenues as

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<sup>1</sup> ~~The 2017 volumes and costs became final in September 2018 and were reported as part of SDG&E's Updated 2019 ERRRA Forecast Filing (Application ("A.") 18-04-004); thus the 2017 volumes and costs are were not reported in my April 2019 testimony nor in this updated testimony. The 2018 estimated emissions and costs became final by October 17, 2019; UOG and imports become final in August 2019 and Tolling Generators became final on October 17, 2019. ~~reported in this testimony are subject to change due to emission verification for all of 2018. Additionally, this testimony does not include 2019 emissions, costs and revenues since only January and February estimates are available at this time. In my November 2019~~ In this updated ~~of this~~ testimony, I ~~will~~ include estimated costs and revenues for January through September of 2019 and forecasts for October – December 2019, all of which are subject to changes when actualized and/or verified.~~

<sup>2</sup> ~~The 2018 emissions and costs are subject to change due to emission verification which will become final in August 2019.~~ 2018 revenues, ~~however,~~ are now final. 2019 revenues for January- October are final, however the 2019 revenue total is subject to the outcome of the November 2019 auction.

<sup>3</sup> ~~The PD adopts a modified version of the Petition for Modification ("PFM") filed by SDG&E, Pacific Gas and Electric Company ("PG&E") and Southern California Edison Company ("SCE") on August 1, 2018.~~

1 well as SDG&E’s WAC calculation, in accordance with applicable decisions. The following  
2 sections describe the cap-and-trade program and detail SDG&E’s ~~unadjusted~~ 2018 actual  
3 revenues and ~~estimated~~ costs as well as estimates for SDG&E’s 2019 revenues and costs. These  
4 costs and revenues are further adjusted to recorded numbers for the purposes of reconciliation as  
5 further explained in the testimony of SDG&E witnesses Ms. Chihwaro and Ms. Montanez.<sup>4</sup>

## 6 **II. BACKGROUND**

### 7 **A. AB 32 Background**

8 The Global Warming Solutions Act of 2006, also referred to as ~~Assembly Bill (“AB”)~~ 32,<sup>5</sup>  
9 establishes a goal of reducing California’s GHG emissions to the 1990 level by 2020. The statute  
10 grants ARB broad authority to regulate GHG emissions to reach this target. ARB’s Scoping Plan  
11 includes a recommendation that California adopt a portfolio of emissions reduction measures,  
12 including a California GHG cap-and-trade program.<sup>6</sup>

13 In October 2011, ARB released its Final Regulation Order, which was approved by its  
14 Board and by the Office of Administrative Law (“OAL”) in December 2011.<sup>7</sup> The ARB  
15 regulations create a GHG emissions allowance cap-and-trade system, with compliance obligations  
16 in the electricity sector applicable to “first deliverers of electricity”<sup>8</sup> that emit more than 25,000  
17 Metric Tons (“MT”) of GHG. The regulation requires that first deliverers of electricity, including

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<sup>4</sup> SDG&E witness Mr. ~~DeTuri-Covic~~ provides a forecast of the 2020 GHG costs.

<sup>5</sup> AB 32, Stats. ~~2005-2006~~, Ch. 488 (~~Cal. 2006~~).

<sup>6</sup> ~~State of California Air Resources Board, California Cap-and-Trade Program, ARB Resolution 11-32~~  
(October 20, 2011) at 3-4. ~~A~~ available at: <https://www.arb.ca.gov/regact/2010/capandtrade10/res11-32.pdf>.

<sup>7</sup> The ARB Final Regulation Order from December 2011 is codified at 17 ~~California Code of Regulations~~  
~~section (“§”)~~ 95800 *et seq.* and is also available at:  
<http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm>.

<sup>8</sup> “First deliverers of electricity” is defined in ~~§ Section~~ 95811(b) of ARB’s Final Regulation Order as  
electricity generators inside California and electricity importers.

1 investor-owned utilities (“IOUs”) such as SDG&E, obtain all the compliance instruments required  
2 to meet their compliance obligations by November 1 of the year following the end of a compliance  
3 period. Compliance instruments consist of allowances and offsets. An allowance is a limited,  
4 tradable authorization to emit up to one MT of carbon dioxide equivalent (“CO2e”) and an offset is  
5 a project that reduces GHG in sectors outside of those covered in the cap-and-trade program.<sup>9</sup>  
6 Section 95892(b) of ARB’s Final Regulation Order establishes that IOUs are required to sell all  
7 their free allowances and acquire an amount equal to their direct compliance obligations. There  
8 are also annual requirements to surrender at least 30% of expected annual obligations each year by  
9 November 1 of the following year.

10 **B. GHG Actual Revenue**

11 The revenues discussed in my testimony result from the sale of allowances allocated to  
12 SDG&E by ARB for the benefit of its ratepayers. ARB requires that the allowances that are  
13 allocated annually to the IOUs be made available for sale at the ARB auctions. Allowances given  
14 to the IOUs must all be consigned by the last auction of that year. Except for the November 2012  
15 auction, where ARB specified the amount that each IOU needed to auction, all other amounts  
16 consigned at auctions are up to the discretion of each IOU, provided the entire annual volume is  
17 consigned by the end of each year. Revenues are calculated by multiplying the volume sold by the  
18 auction settlement price. The revenues presented in this testimony consist of allowances sold in  
19 the 2018 auctions and the 2019 February, May and, August, auctions with an estimate for the 2019  
20 and November auctions.

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<sup>9</sup> Refer to § Section 95801 of ARB’s Final Regulation Order for definitions.

1           **C.     GHG Estimated Emission Volumes**

2           The 2018-~~2019~~ direct emissions will be the ~~estimated~~actual/calculated GHG emissions for:

3 (1) SDG&E’s California utility-owned generation (“UOG”), (2) California generators with whom  
4 SDG&E has contracts where SDG&E is responsible for GHG costs, (3) estimated emissions  
5 associated with SDG&E imports of both specified electricity and unspecified electricity, and (4)  
6 Renewable Portfolio Standard adjustment (“RPS Adjustment”). The RPS Adjustment, which  
7 reduces a compliance entity’s direct compliance obligation, is calculated by multiplying the out-of-  
8 state renewable megawatt-hours (“MWh”) eligible for RPS adjustment by the ARB assigned  
9 unspecified emission factor. The ~~2018~~2019 direct volumes may change because they are subject  
10 to: (1) emission estimates and emission reporting verification, (2) changing emission factors, and  
11 (3) contractual requirements for reviewing tolling agreement emissions for potential reductions. If  
12 there are such changes, they will be reflected in future testimony.

13           The 2018-~~2019~~ indirect emissions are estimated emissions based on net purchases from the  
14 California electricity market controlled by the California Independent System Operator  
15 Corporation (“CAISO”) measured in MWh and multiplied by the ARB assigned unspecified  
16 emission factor. Indirect emissions are not overseen by ARB. Indirect emissions are comprised of  
17 estimated GHG emissions for which SDG&E was exposed because of purchasing power from third  
18 parties. The 2018 calculated indirect emissions are included within this updated testimony. The  
19 ~~2018-2019~~ indirect emissions within this testimony are those calculated in SDG&E’s ~~2018-2019~~  
20 ERRA Forecast Application and will be updated in my Updated 2020 ERRA Forecast testimony in  
21 November ~~2019~~2020.

1           **D.     GHG Cost Categories**

2           The costs outlined in my testimony are broken down into two categories of GHG costs:  
3 direct costs and indirect costs. SDG&E defines direct costs of a given compliance year as the net  
4 cost of procuring compliance instruments that can be used to satisfy SDG&E’s compliance year  
5 obligation. SDG&E defines indirect costs of a given compliance year as the GHG compliance  
6 costs embedded in the price of electricity delivered in that year, which are passed on from sellers.

7           Section III below addresses the carbon price for 2018-~~2019~~. Section IV.A addresses direct  
8 GHG emissions associated with SDG&E’s UOG plants, procurement of electricity from tolling  
9 agreements, electricity imports attributed to SDG&E, and credits from SDG&E’s eligible RPS  
10 Adjustment. Section IV.B addresses the approximate 2018-~~2019~~ indirect GHG emissions for  
11 which SDG&E paid as GHG costs embedded in electricity prices charged by third parties to  
12 SDG&E under contract for various supplies.<sup>10</sup> Section IV.C summarizes the GHG costs based on  
13 the carbon prices in Section III and emissions in Sections IV.A and IV.B.

14           **III.    CARBON PRICE METHODOLOGY**

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

16           SDG&E has used and continues to use the ~~Weighted Average Cost (“WAC”)~~ of  
17 Compliance Instruments by compliance period recorded monthly, as described in ~~Decision (D-)~~  
18 ~~19-04-016 which modified~~ Attachment C of ~~Decision (D-)D-~~14-10-033 (subsequently corrected by  
19 D.14-10-055 and D.15-01-024) to calculate its direct emissions pricing. ~~However, as noted above,~~  
20 ~~to present a consistent interpretation and showing regarding the Attachment C WAC calculation,~~  
21 ~~SDG&E, SCE, and PG&E jointly submitted on August 1, 2018 a PFM that, if adopted, clarifies~~  
22 ~~and renders uniform the interpretation and calculation of the WAC calculation. On March 22,~~

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<sup>10</sup>    Indirect GHG costs are estimated based on the assumptions described herein.

1 ~~2019, the Commission issued a PD that would implement the PFM with slight modifications.~~  
2 ~~While the PFM/PD is currently pending, SDG&E has decided to apply the methodology set forth~~  
3 ~~in Attachment C of the PFM/PD to ensure a consistent treatment of the WAC calculation with the~~  
4 ~~other IOUs.~~

5 The 2018 WAC price shown below is based on the 2018 total of the monthly balancing  
6 account entries as found in Attachment A of this testimony and the final 2018 emission volumes as  
7 described in section IV.A. The 2019 monthly January 2018— December-September 2018-2019  
8 WAC prices is based on the monthly balancing account entries plus \$155,105 for a 12,096 MT off-  
9 cycle volumetric true-up of 2018 emissions and calculations found in Attachment A of this  
10 testimony and the January - September 2019 emission estimates as described in section IV.A.

11 These WAC calculations in prices were Attachment A calculated utilizing the approach detailed in  
12 D.19-04-016 Attachment C of the PFM/PD, as described above. The use of this approach  
13 represents a shift from the approach SDG&E used to calculate its WACs for 2013-2016.  
14 Implementation of the PFM/PD approach necessitated a one-time adjustment or true-up. The one-  
15 time true-up to adjust SDG&E's WAC compliance instrument inventory and WAC inventory  
16 balance cost from the 2013-2016 WAC approach reflects the methodology clarified by Attachment  
17 C of the PFM/PD. This true-up ensured that SDG&E's approach is compliant with both the  
18 current and the proposed Attachment C. This one-time adjustment was implemented in the  
19 November update (in 2018) of my testimony for the 2019 ERRA Forecast and it enabled SDG&E  
20 to reflect this accounting adjustment so that it can be captured in SDG&E's upcoming ERRA  
21 Compliance proceeding for Record Year 2018. Attachment A below includes the calculations  
22 recorded in SDG&E's balancing accounts through September 30, 2019 and an additional  
23 calculation to account for the final 2018 emissions true-up which occurred after the recording of



1 costs in the balancing accounts. Note that this additional line item will be captured, along with  
2 other volumetric true-ups, in the November balancing account recording process.

3 The WAC prices ~~are~~ listed in the tables below:

4 

Jan-Dec 2018 WAC (\$/MT)	[REDACTED]
--------------------------	------------

5 

Jan-Dec 2018 WAC (\$/MT)	[REDACTED]
--------------------------	------------

6 

Jan-Sep 2019 WAC (\$/MT)	[REDACTED]
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7 For October-December 2019 SDG&E will use the forecast price from Jennifer Montanez's  
8 Testimony in SDG&E's 2019 ERRA Forecast Application of \$16.53.

9 **B. Price for Indirect Emissions**

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

14 

2018 CAISO GHG Prices	
Jan - Dec 2018	\$15.31

15 

2019 CAISO GHG Prices	
Jan - Sep 2019	\$17.29

16 **IV. GHG COMPLIANCE COSTS**

17 **A. Direct Greenhouse Gas Emissions**

18 Under ARB's cap-and-trade program, the "first deliverer of electricity" within California  
19 must surrender one allowance or offset credit for each MT of GHG emissions. Accordingly,

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<sup>11</sup> Annual CAISO prices are a straight average of public daily GHG prices published on CAISO's OASIS website.

1 SDG&E had direct compliance obligations for GHGs emitted from burning natural gas at its UOG  
 2 plants, namely, the Palomar Energy Center (“Palomar”) and Miramar Energy Facility I and II  
 3 (collectively, “Miramar”).<sup>12</sup> [MS1] SDG&E’s UOG GHG emission volumes are derived from  
 4 information extracted from each covered plant’s Continuous Emissions Monitoring Systems  
 5 (“CEMS”) and that plant’s annual fuel usage. The data is reported to ARB (under the mandatory  
 6 GHG reporting rule) and undergoes a rigorous quality assurance/quality control (“QA/QC”)   
 7 process with supporting documentation from the CEMS systems. The data is then subject to third  
 8 party verification by an ARB-certified verifier. The 2018 UOG emissions ~~will become~~became  
 9 final in August 2019. The 2018 final and January – September 2019 estimated UOG emissions are  
 10 as follows:

Jan-Dec 2018 California UOG Plants	Emissions Estimate
Palomar Energy Center	
Miramar Energy Facilities	
<u>Total</u>	

Jan-Dec 2018 California UOG Plants	Verified Emissions (in MD)
Palomar Energy Center	
Miramar Energy Facilities	
<u>Total</u>	

<sup>12</sup> ARB’s Mandatory Reporting Regulation require use of emission factors from federal regulations — title 40, Code of Federal Regulation (“CFR”) ~~Section-Part 98 promulgated by U.S. EPA and published in the Federal Register on October 30, 2009, July 12, 2010, September 22, 2010, October 28, 2010, November 30, 2010, December 17, 2010, and April 25, 2011.~~ 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 Subpart C of the 40 CFR ~~Section-Part 98~~ provides an emissions rate for CO<sub>2</sub> of 0.05302 MT/MMBtu. Table C-2 of Subpart C of the 40 CFR ~~Section-Part 98~~ 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.

Jan-Sep 2019 California UOG Plants	Emissions Estimate
Palomar Energy Center	
Miramar Energy Facilities	
Total	

1

2 In addition, SDG&E has agreements with some California generators which stipulate that

3 if SDG&E is dispatching the plant, then SDG&E will provide compliance instruments to the

4 generator for its GHG compliance obligations. The generators covered by these agreements

5 include, the Otay Mesa Energy Center (“OMEC”), the Orange Grove Energy Center (“Orange

6 Grove”), ~~Goal Line~~, the Escondido Energy Center (“EEC”), the Pio Pico Energy Center (“Pio

7 Pico”) and the Carlsbad Energy Center (“Carlsbad”), which became operational in 2018.<sup>13</sup> The

8 estimated emissions for these plants can be calculated by multiplying the MMBtu burned with

9 the emission factor of 0.05307 MT/MMBtu associated with natural gas as the input fuel. These

10 estimates are subject to change, not only because the emissions estimates are based on fuel

11 calculations instead of emission meter read calculations, but also because the tolling agreement

12 contracts state that SDG&E will only cover the emissions generated resulting from SDG&E

13 dispatches of efficiently run plants. The 2018 SDG&E obligations to tolling agreement partners,

14 which became final on October 17, 2019, and the January-September 2019 estimated SDG&E

15 obligations to tolling agreement partners are shown below. ~~SDG&E will be analyzing the 2018~~

16 ~~tolling data and could potentially adjust the 2018 estimated emissions for non-SDG&E~~

17 ~~dispatches, inefficiencies or based on verification. If there are such changes, they will be~~

18 ~~reflected in future testimony.~~

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<sup>13</sup> Goal Line became eligible to exit the Cap-and-Trade program retroactive to January 1, 2018.

Jan-Dec 2018 California Tolling Generators	Emissions Estimate (in MT)
Otay Mesa Energy Center	
Orange Grove Energy Center	
Goal Line	
Escondido Energy Center	
Pio Pico	
Carlsbad Energy Center	
<b>Total</b>	

1

2

Jan-Dec 2018 California Tolling Generators	Emissions Estimate (in MT)
Otay Mesa Energy Center	
Orange Grove Energy Center	
Goal Line	
Escondido Energy Center	
Pio Pico	
Carlsbad Energy Center	
<b>Total</b>	

3

Jan-Sep 2019 California Tolling Generators	Emissions Estimate
Otay Mesa Energy Center	
Orange Grove Energy Center	
Goal Line	
Escondido Energy Center	
Pio Pico	
Carlsbad Energy Center	
<b>Total</b>	

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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 are 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. In 2018, SDG&E also purchased specified Asset

1 Controlling Supplier (ACS) power from Bonneville Power Associates (BPA). CARB publishes  
 2 specified emission factors for power purchased from an ACS on an annual basis. SDG&E utilized  
 3 the BPA public emission factor to calculate its direct obligation for its 2018 BPA imports. These  
 4 out-of-state generators are specified sources. The compliance obligation for the power imported  
 5 from each of these sources is calculated by the product of the imported power times the  
 6 transmission loss correction factor as listed in section 95111 of ARB's mandatory reporting  
 7 regulation, and the specified emissions factor assigned to those facilities by ARB.<sup>14</sup> As with  
 8 SDG&E's other estimated obligations, specified imports are also subject to change, and those  
 9 changes will be reflected in future testimony. The 2018 emissions for SDG&E's specified imports,  
 10 which became final in August 2019, and the January – September 2019 estimated emissions for  
 11 SDG&E's specified imports are as follows:

Jan-Dec 2018 Specified Imports	Specified Import Estimates (in MWh)	Emission Factor Estimates	Transmission Loss Factor	Emissions Estimate (in MT)
Desert Star		0.416	1.00	
YCA		0.701	1.02	
<b>Total</b>				

Jan-Dec 2018 Specified Imports	Verified Specified	Emission Factors	Transmission Loss Factor	Verified Emissions (in MT)
Desert Star		0.423	1.00	
YCA		0.645	1.02	
BPA - Asset Controlling Supplier		0.012	1.02	
<b>Total</b>				

<sup>14</sup> Specified Emission Factors are updated annually by ARB. See Confluence, Reporting Form Instructions, available at ~~They can be found at:~~  
<http://www.cdsupport.com/confluence/display/calhelp/Reporting+Form+Instructions>.

1 In addition to specified sources, importing of “unspecified sources” also generates a  
2 compliance obligation. SDG&E procured both contracted imports and market imports from  
3 unspecified sources in 2018 and 2019. The cap-and-trade compliance obligation for these  
4 unspecified imports is calculated by multiplying the number of MWh imported, adjusted upward  
5 by two percent to account for transmission losses between the point of generation and the  
6 California border, by the ARB default rate, as stated in its regulation (currently 0.428  
7 MT/MWh).<sup>15</sup> [MS2] Finally, ARB recognizes that the building of new renewable generation outside  
8 California reduces GHG. As such, the cap-and-trade regulations allow for an RPS Adjustment.  
9 The RPS Adjustment reduces an entity’s GHG compliance burden and is calculated by assigning  
10 the default emission rate (currently 0.428 MT/MWh) to the GHG-free renewable energy, as  
11 measured at the point of generation. The adjustment does not account for the transmission losses  
12 from the point of generation to California,<sup>16</sup> and the cap-and-trade regulations also allow that they  
13 be taken in following years. SDG&E successfully claimed the undelivered portion of its potential  
14 2014 RPS Adjustment in 2015. SDG&E was planning to claim undelivered portions of the 2015-  
15 2017-2018 contractually purchased renewable energy applicable to the RPS Adjustment provision  
16 in recent GHG reports to ARB. However, the data for the 2015-2017-2018 RPS Adjustment was

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<sup>15</sup> ARB’s Mandatory Reporting Regulation (~~MRR~~), Section 95111(b)(1). See Section 95852(c) in ARB, *Article 5: California Cap on Greenhouse Gas Emissions and Market-based Compliance Mechanisms*, at 116, available at: [https://www.arb.ca.gov/cc/capandtrade/capandtrade/ct\\_reg\\_2018\\_unofficialv2.pdf](https://www.arb.ca.gov/cc/capandtrade/capandtrade/ct_reg_2018_unofficialv2.pdf) [https://ww3.arb.ca.gov/cc/reporting/ghg-rep/regulation/mrr-2018-unofficial-2019-4-3.pdf?\\_ga=2.248590913.797450650.1572910305-557391757.1471971036.;](https://ww3.arb.ca.gov/cc/reporting/ghg-rep/regulation/mrr-2018-unofficial-2019-4-3.pdf?_ga=2.248590913.797450650.1572910305-557391757.1471971036.)

<sup>16</sup> See Section 95852(b)(1) of ARB’s Final Regulation Order for the calculation of the RPS Adjustment. ARB, *Article 5: California Cap on Greenhouse Gas Emissions and Market-based Compliance Mechanisms*, at 115, Section 95852(b)(1), available at [https://ww3.arb.ca.gov/cc/capandtrade/capandtrade/ct\\_reg\\_unofficial.pdf](https://ww3.arb.ca.gov/cc/capandtrade/capandtrade/ct_reg_unofficial.pdf) [https://www.arb.ca.gov/cc/capandtrade/capandtrade/ct\\_reg\\_2018\\_unofficialv2.pdf](https://www.arb.ca.gov/cc/capandtrade/capandtrade/ct_reg_2018_unofficialv2.pdf).



1 ~~2017-2018~~ contractually purchased renewable energy applicable to the RPS Adjustment provision  
 2 in recent GHG reports to ARB. However, the data for the 2015-~~2017-2018~~ RPS Adjustment was  
 3 unavailable, thus SDG&E necessarily claimed zero RPS Adjustment for the RPS generated in  
 4 years 2015-201~~7~~<sup>8</sup>.<sup>17</sup> If, as expected, the ~~2015, 2016 and/or 2017~~ RPS Adjustment data for any  
 5 prior year(s) becomes available in the future, SDG&E will incorporate that benefit in an upcoming  
 6 annual ARB Electric Power Entity (“EPE”) report. SDG&E is continuing to request  
 7 delivered/undelivered volumes and expects to receive ~~the 2015-2017-2018~~ RPS Adjustment data in  
 8 ~~2019-2020~~ in time to utilize that benefit in the upcoming ~~2018-2019~~ EPE Report. The estimated  
 9 2018 RPS Adjustment claims are shown below. Both the estimated ~~2018-2019~~ unspecified imports  
 10 and the RPS Adjustments claimed for ~~2018-2019~~ are subject to change and those changes will be  
 11 reflected in future testimony. The 2018 emissions for SDG&E’s unspecified imports and RPS  
 12 adjustment claims, which became final in August 2019, and the January – September 2019  
 13 estimated emissions for SDG&E’s unspecified imports and RPS adjustment claims are as follows:

Jan-Dec 2018 Unspecified Imports & 2017 RPS Adjustment	Unspecified Import Estimates (in MWh)	Unspecified Emission Factor	Transmission Loss Factor	Emissions Estimate (in MT)
Unspecified Imports		0.428	1.02	
RPS Adjustment		0.428	1.00	
<b>Total</b>				

Jan-Dec 2018 Unspecified Imports & 2017 RPS Adjustment	Verified Unspecified Import	Unspecified Emission Factor	Transmission Loss Factor	Verified Emissions (in MT)
Unspecified Imports		0.428	1.02	
RPS Adjustment		0.428	1.00	
<b>Total</b>				

<sup>17</sup> SDG&E’s ability to utilize the non-imported portion of its Glacier and RimRock contracts for the RPS Adjustment is dependent on receipt of Glacier and Rim Rock import volumes from Morgan Stanley. SDG&E has, thus far, not received this information for the 2015-2018 generation years. SDG&E continues to have discussions with Morgan Stanley and Open Access Technology International, Inc. (“OATT”) about obtaining this data and expects to receive it in the future at which point SDG&E can apply the prior RPS Adjustment volumes to the next compliance year’s report.

Jan-Sep 2019 Unspecified Imports & 2018 RPS Adjustment	Unspecified Import Estimates	Unspecified Emission Factor	Transmission Loss Factor	Emissions Estimate (in MT)
Unspecified Imports		0.428	1.02	
RPS Adjustment		0.428	1.00	
<b>Total</b>				

1

2

Based on the above, SDG&E's 2018 actual and January – September 2019 estimated direct

3

compliance obligations are:

Jan-Dec 2018 Direct Compliance Obligations	Emissions Estimate (in MT)
California UOG Plants	
California Tolling	
Specified Imports	
Unspecified Imports	
RPS Adjustment	
<b>Total</b>	

4

Jan-Dec 2018 Direct Compliance Obligations	Emission Estimates (in MT)
California UOG Plants	
California Tolling Generators	
Specified Imports	
Unspecified Imports	
RPS Adjustment	
<b>Total</b>	

5

Jan-Sep 2019 Direct Compliance Obligations	Emissions Estimate (in MT)
California UOG Plants	
California Tolling Generators	
Specified Imports	
Unspecified Imports	
RPS Adjustment	
<b>Total</b>	

6

7



1 **B. Indirect Greenhouse Gas Emissions**

2 SDG&E, along with all other purchasers of wholesale electricity, is subject to indirect  
3 GHG compliance costs that generators incur and pass on to their buyers. This additional cost of  
4 GHG compliance is embedded in the market price of electricity procured in the wholesale market  
5 from third parties, thereby increasing SDG&E’s cost to purchase wholesale electricity, as well as  
6 from suppliers under contracts that include market-based prices. The cost of GHG affects both  
7 market purchases and contracts based on the price of energy (such as combined heat and power  
8 [“CHP”] facilities); because the price of energy changes in tandem with the change in the GHG  
9 allowance prices, sellers of electricity demand higher revenues to offset the costs related to their  
10 cap-and-trade obligations. The 2018-2019 indirect GHG volumes are estimated, for both net  
11 market purchases and CHP contracts, as the MWh of electricity production multiplied by the ARB  
12 default rate for unspecified electricity of 0.428 MT/MWh. The estimated 2018 and forecasted  
13 2018-2019 MWh and emissions of SDG&E’s indirect purchases are as follows:

14

2018 Forecasted Indirect Volumes in MWh and MT	
Total INDIRECTS (MWh)	[REDACTED]
Unspecified Emissions Factor (MT/MWh)	0.428
<b>Total INDIRECTS (MT)</b>	[REDACTED]

15

2018 Forecasted Indirect Volumes in MWh and MT	
Total INDIRECTS (MWh)	[REDACTED]
Unspecified Emissions Factor (MT/MWh)	0.428
<b>Total INDIRECTS (MT)</b>	[REDACTED]

16

2019 Forecasted Indirect Volumes in MWh and MT	
Total INDIRECTS (MWh)	[REDACTED]
Unspecified Emissions Factor (MT/MWh)	0.428
<b>Total INDIRECTS (MT)</b>	[REDACTED]

17

**C. GHG Costs**

Using the prices from Section III above, ~~I estimate~~ the 2018 direct GHG costs and 2019 ~~estimated direct costs are to be~~ as follows:

2018 GHG Direct Cost Estimates	Emissions Estimate (in MT)	WAC / ICE Price (in \$/MT)	Estimated Direct Cost
Jan-Dec 2018 (emissions estimate)			
<b>Total</b>			

2018 GHG Direct Cost	Emissions (in MT)	WAC / ICE Price (in \$/MT)	Direct Cost
Jan-Dec 2018			
<b>Total</b>			

2019 GHG Direct Cost Estimates	Emissions Estimate (in MT)	WAC / ICE Price (in \$/MT)	Estimated Direct Cost
Jan - Sep 2019 (estimated actuals)			
Oct - Dec 2019 (forecasted)			
<b>Total</b>			

Combining indirect volumes and the CAISO GHG allowance price indices,<sup>18</sup> the 2018-2019 estimated GHG indirect costs are as follows:

2018 Forecasted Indirect Volumes & Cost	
Total INDIRECTS (MT)	
CAISO GHG Price (Jan-Dec '18) (\$/MT)	\$15.31
<b>Total Indirect Cost</b>	

2018 Forecasted Indirect Volumes & Cost	
Total INDIRECTS (MT)	
CAISO GHG Price (Jan-Dec '18) (\$/MT)	\$15.31
<b>Total Indirect Cost</b>	

<sup>18</sup> Per D.14-10-033 at 25, indirect costs are calculated using a proxy price equal to the average of the published CAISO prices.

2019 Forecasted Indirect Volumes & Cost	
Total INDIRECTS (MT)	
CAISO GHG Price (Jan-Dec 2019) (\$/MT)	\$17.29
<u>Total Indirect Cost</u>	

Thus, the 2018 and 2019 Direct and Indirect ~~estimate/forecast~~ blended costs are-is ~~\$36.83~~ \$64.11 million and \$37.54 million (rounded) respectively.

#### V. ACTUAL AND ESTIMATED GHG REVENUES

SDG&E received 6,288,321 MT of vintage 2018 allowances to sell at 2018 auctions and 6,186,937 MT of vintage 2019 allowances to sell at 2019 auctions. SDG&E's annual allocated allowances are required to be consigned at that year's quarterly auctions; however, SDG&E has full discretion on how to distribute its allowances across the four quarterly auctions. The tables below show the volumes sold at each 2018 auction and at the first three 2019 auctions, with an estimate for the last 2019 auction along with associated revenues.

2018 GHG Revenues			
Auction	Settlement Price (\$/MT)	Sold Volume (MT)	Revenue
Feb-18	\$14.61		
May-18	\$14.65		
Aug-18	\$15.05		
Nov-18	\$15.31		
<b>Total</b>	<b>\$14.91</b>	<b>6,288,321</b>	<b>\$93,727,554.51</b>

2019 GHG Revenues Jan - Sep 2019			
Auction	Settlement Price (\$/MT)	Sold Volume (MT)	Revenue
Feb-19	\$15.73		
May-19	\$17.45		
Aug-19	\$17.16		
Nov-19	\$0.00		
<b>Subtotal</b>	<b>\$16.78</b>		

2019 Estimated GHG Revenues Oct - Dec 2019			
Auction	ICE Price (\$/MT)	Consign Volume (MT)	Revenue
2019			
Balance	\$16.35		
<b>Subtotal</b>	<b>\$16.35</b>		

2019 Estimated GHG Revenues			
<b>Total</b>		<b>6,186,937</b>	<b>\$103,152,050</b>

1

2 This concludes my updated prepared direct testimony.

3

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 [California Public Utilities](#) Commission.

# APPENDIX A

## SDG&E's Monthly WAC Calculation

(Calculation date of January 3, 2019)

Month	Transaction/Activity Details							Inventory Quantity and \$		WAC Pricing (\$/MT)	Direct GHG Costs		True-Ups	Monthly BA Entry
Month	Transaction Date	Transaction Type	Quantity Pur/(Sales) (MT)	Purchase \$ (\$/MT)	Sales \$ (\$/MT)	Total Cost (\$)	Total Sales (\$)	Inventory Balance (\$)	Total Qty in Inventory (MT)	WAC (\$/MT)	Direct Monthly Emissions (MT)	WAC x Direct Emissions Qty (\$)	True-Up Value +/- (\$)	Monthly Balancing Account Entries (\$)
Jan-18	1/1/2018	CP2 WAC Transfer												
Jan-18														
Jan-18														
Jan-18														
Jan-18														
Jan-18														
Jan-18														
Jan-18														
Jan-18														
Jan-18														
Jan-18														
Jan-18														
Jan-18														
Jan-18														
Jan-18														
Jan-18	1/31/2018	Monthly Recording to ERRA												
Feb-18	2/1/2018	Surrender Event												
Feb-18														
Feb-18														
Feb-18														
Feb-18														
Feb-18	2/28/2018	Monthly Recording to ERRA												
Mar-18	3/1/2018	Surrender Event												
Mar-18														
Mar-18														
Mar-18														
Mar-18														
Mar-18	3/31/2018	Monthly Recording to ERRA												

Apr-18	4/1/2018	Surrender Event			
Apr-18					
Apr-18					
Apr-18					
Apr-18					
Apr-18	4/30/2018	Monthly Recording to ERRA			
May-18	5/1/2018	Surrender Event			
May-18					
May-18					
May-18					
May-18					
May-18					
May-18	5/31/2018	Monthly Recording to ERRA			
Jun-18	6/1/2018	Surrender Event			
Jun-18					
Jun-18					
Jun-18					
Jun-18					
Jun-18					
Jun-18	6/30/2018	Monthly Recording to ERRA			
Jul-18	7/1/2018	Surrender Event			
Jul-18					
Jul-18					
Jul-18					
Jul-18					
Jul-18					
Jul-18	7/31/2018	Monthly Recording to ERRA			
Aug-18	8/1/2018	Surrender Event			
Aug-18					
Aug-18					
Aug-18	8/				
Aug-18					
Aug-18					
Aug-18	8/31/2018	Monthly Recording to ERRA			

Sep-18	9/1/2018	Surrender Event			
Sep-18					
Sep-18					
Sep-18					
Sep-18					
Sep-18					
Sep-18	9/30/2018	Monthly Recording to ERRA			
Oct-18	10/1/2018	Surrender Event			
Oct-18					
Oct-18					
Oct-18					
Oct-18					
Oct-18					
Oct-18					
Oct-18	10/31/2018	Monthly Recording to ERRA	225,6		
Nov-18	11/2/2018	Surrender Event			
Nov-18					
Nov-18					
Nov-18					
Nov-18					
Nov-18					
Nov-18	11/30/2018	Monthly Recording to ERRA			
Dec-18	12/1/2018	Surrender Event			
Dec-18					
Dec-18					
Dec-18					
Dec-18					
Dec-18					
Dec-18	12/31/2018	Monthly Recording to ERRA	264,		



Jan-19	1/1/2019	Surrender Event				
Jan-19						
Jan-19						
Jan-19						
Jan-19						
Jan-19						
Jan-19	1/31/2019	Monthly Recording to ERRA	232,074	\$2,930,492	(\$1,830,545)	\$1,099,947
Feb-19	2/1/2019	Surrender Event				
Feb-19						
Feb-19						
Feb-19						
Feb-19						
Feb-19						
Feb-19						
Feb-19	2/28/2019	Monthly Recording to ERRA				
Mar-19	3/1/2019	Surrender Event				
Mar-19						
Mar-19						
Mar-19						
Mar-19						
Mar-19						
Mar-19						
Mar-19	3/31/2019	Monthly Recording to ERRA				
Apr-19	4/1/2019	Surrender Event				
Apr-19						
Apr-19						
Apr-19						
Apr-19						
Apr-19						
Apr-19						
Apr-19	4/30/2019	Monthly Recording to ERRA				
May-19	5/1/2019	Surrender Event				
May-19						
May-19						
May-19						
May-19						
May-19						
May-19						
May-19	5/31/2019	Monthly Recording to ERRA				

Jun-19	6/1/2019	Surrender Event								
Jun-19										
Jun-19										
Jun-19										
Jun-19										
Jun-19										
Jun-19	6/30/2019	Monthly Recording to Balancing Accounts								
Jul-19	7/1/2019	Surrender Event								
Jul-19										
Jul-19										
Jul-19										
Jul-19										
Jul-19										
Jul-19	7/31/2019	Monthly Recording to Balancing Accounts								
Aug-19	8/1/2019	Surrender Event								
Aug-19										
Aug-19										
Aug-19										
Aug-19										
Aug-19										
Aug-19										
Aug-19										
Aug-19	8/31/2019	Monthly Recording to Balancing Accounts								
Sep-19	9/1/2019	Surrender Event								
Sep-19										
Sep-19										
Sep-19										
Sep-19										
Sep-19										
Sep-19										
Sep-19	9/30/2019	Monthly Recording to Balancing Accounts								
Oct-19	October	Off Cycle 2018 emissions true-up for OMEC & OGE; Will be captured in November B				\$0.00		\$0.00		

# GLOSSARY

<b>Acronym</b>	<b>Definition</b>
AB	Assembly Bill
ARB	California Air Resources Board
CAISO	California Independent System Operator
CAM	Cost Allocation Mechanism
CARB	California Air Resources Board
CEMS	Continuous Emissions Monitoring System
CO <sub>2</sub> e	Carbon Dioxide Equivalent
CUYAMACA	Cuyamaca Peak Energy Plant
CYCG	Czamecki-Yester Consulting Group LLC
DESERT STAR	Desert Star Energy Center
EEC	Escondido Energy Center
EECC	Electric Energy Commodity Cost
ENVOY	ENVOY is dashboard-styled web interface for managing natural gas supplies
EPE	Electric Power Entity; The EPE Report contains all import/RPS Adjustment Data submitted to ARB
ERRA	Energy Resource Recovery Account
GHG	Greenhouse Gas
IOU	Investor Owned Utility
MIRAMAR	Miramar Energy Facility I & Miramar Energy Facility II
MIRAMAR I	Miramar Energy Facility I
MIRAMAR II	Miramar Energy Facility II
MT	Metric Ton
MWh	Megawatt hour
OAL	Office of Administrative Law
OMAR	Operational Meter Analysis and Reporting (CAISO Online Metering System)
OMEC	Otay Mesa Energy Center
ORANGE GROVE	Orange Grove Energy Center
PALOMAR	Palomar Energy Center
PPA	Power Purchase Agreement
QA/QC	Quality Assurance/Quality Control
QFs	Qualifying Facilities
RPS	Renewable Portfolio Standard
SDG&E	San Diego Gas & Electric Company
UOG	Utility Owned Generation
WAC	Weighted Average Cost
YCA	Yuma Cogeneration Associates

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

**DECLARATION OF ELSA VALAY-PAZ  
REGARDING CONFIDENTIALITY OF CERTAIN DATA/DOCUMENTS  
PURSUANT TO D.16-08-24, *et al.***

I, Elsa Valay-Paz, do declare as follows:

1. I am the Director of Origination, Energy Supply & Dispatch in the Electric and Fuel Procurement department for San Diego Gas & Electric Company (“SDG&E”). I have been delegated authority to sign this declaration by Miguel Romero, Vice President of Energy Supply. I have reviewed Ana Garza-Beutz’s Prepared Direct Testimony (“Testimony”) and Appendix G, the GHG Revenue and Reconciliation Application Form, in support of SDG&E’s “November Update to Application”, related to its Application for approval of its 2020 Electric Procurement Revenue Requirement Forecasts and GHG Related-Forecasts (“Application”), filed November 7, 2019. I am personally familiar with the facts in this Declaration and, if called upon to testify, I could and would testify to the following based upon my personal knowledge and/or information and belief.

2. I hereby provide this Declaration in accordance with Decisions (“D.”) D.16-08-024, D.17-05-035 and D.17-09-023 to demonstrate that the confidential information (“Protected Information”) provided in Ms. Garza-Beutz’s Testimony and Appendix G are within the scope of data protected as confidential under applicable law.

3. In accordance with the legal citations and narrative justification described in Attachment A, the Protected Information should be protected from public disclosure.

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 7<sup>th</sup> day of November, 2019, at San Diego.



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Elsa Valay-Paz  
Director of Origination, Energy Supply & Dispatch

# ATTACHMENT A

## SDG&E Request for Confidentiality on the following information contained in Ana Garza-Beutz’s Testimony and Appendix G in support of SDG&E’s Application

Location of Protected Information	Legal Citations	Narrative Justification
<p><b>1. SDG&amp;E WAC prices and WAC calculations</b></p> <p><i>(The 2018 and Jan – Sep 2019 WAC price appears in Ana Garza-Beutz’s Testimony. The Jan 2013 - Sep 2019 WAC calculations are utilized in tab “D-2” of Attachment G. The 2018 and Jan – Sep 2019 Monthly WAC prices and calculations appear in Attachment A of Ana Garza-Beutz’s Testimony.)</i></p>	<p>D.08-04-023</p> <p>D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g)</p> <p>General Order (“GO”) 66-D</p> <p>17 CCR § 95914(c) (the “ARB Confidentiality Regulations”)</p> <p>The GHG Confidential Information Matrix in Attachment A of D.14-10-033 and revised in D.15-01-024</p> <p>The Matrix makes the following confidential: “Weighted Average Cost (WAC) of compliance instruments, and the calculation of WAC”</p> <p>Gov’t Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.</p>	<p>The Protected Information is entitled to confidential treatment under applicable law, including, but not limited to, the legal authority cited herein. The information does not expressly fall within any category of the IOU Matrix applicable to electric procurement information, but is market-sensitive information.</p> <p>Among other things, 17 CCR Section 95914(c)(1) of the Cap-and-Trade regulations prohibits disclosure of any auction-related information. Violation of Section 95914 may subject SDG&amp;E to penalties by the California Air Resources Board.</p> <p>In addition, Attachments A, C &amp; D of D.15-01-024 and Appendices A &amp; B of D.15-10-032 require Auction-related information, forecasts of emissions intensity, forecasts of greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost (“WAC”) and other GHG information to be kept confidential.</p> <p>Additionally, the Protected Information also includes trade secret information because SDG&amp;E’s bidding/consignment strategies contain “commercial value,” which gives SDG&amp;E “an opportunity to obtain a business advantage over competitors who do not know or use it.”</p> <p>Disclosure of this information would place SDG&amp;E at an unfair business disadvantage relative to other Cap-and-Trade market participants and result in higher Cap-and-Trade compliance costs for SDG&amp;E and its end-use ratepayers.</p>
<p><b>2. Historical/Recorded UOG Emissions</b></p>	<p>D.08-04-023</p> <p>D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g)</p>	<p>The Protected Information is entitled to confidential treatment under applicable law, including, but not limited to, the legal authority cited herein. The information does not expressly fall within any category of the IOU Matrix applicable to electric procurement information, but is market-sensitive information.</p>

<p><i>(The 2018 and Jan – Sep 2019 Historical UOG Emissions appear in Ana Garza-Beutz’s Testimony. The 2013-2018 and Jan - Sep 2019 Recorded UOG Emissions appear in Attachment G of this Application.)</i></p>	<p>General Order (“GO”) 66-D</p> <p>17 CCR § 95914(c) (the “ARB Confidentiality Regulations”)</p> <p>Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-033 and revised in D.15-01-024</p> <p>Template D-2 designates forecasted and recorded UOG emissions as confidential</p> <p>Gov’t Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.</p>	<p>Among other things, 17 CCR Section 95914(c)(1) of the Cap-and-Trade regulations prohibits disclosure of any auction-related information. Violation of Section 95914 may subject SDG&amp;E to penalties by the California Air Resources Board.</p> <p>In addition, Attachments A, C &amp; D of D.15-01-024 and Appendices A &amp; B of D.15-10-032 require Auction-related information, forecasts of emissions intensity, forecasts of greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost (“WAC”) and other GHG information to be kept confidential.</p> <p>Additionally, the Protected Information also includes trade secret information because SDG&amp;E’s bidding/consignment strategies contain “commercial value,” which gives SDG&amp;E “an opportunity to obtain a business advantage over competitors who do not know or use it.”</p> <p>Disclosure of this information would place SDG&amp;E at an unfair business disadvantage relative to other Cap-and-Trade market participants and result in higher Cap-and-Trade compliance costs for SDG&amp;E and its end-use ratepayers.</p>
<p>3.</p> <p><b><i>Historical/Recorded California Tolling Agreement Emissions</i></b></p> <p><i>(The 2018 and Jan – Sep 2019 Tolling Agreement Emissions appear in Ana Garza-Beutz’s Testimony. The 2013-2018 and Jan - Sep 2019 Tolling Agreement Emissions appear in Attachment G of this Application.)</i></p>	<p>D.08-04-023</p> <p>D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g)</p> <p>General Order (“GO”) 66-D</p> <p>17 CCR § 95914(c) (the “ARB Confidentiality Regulations”)</p> <p>Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-033 and revised in D.15-01-024</p> <p>Template D-2 designates forecasted and recorded Tolling Agreements emissions as confidential</p> <p>Gov’t Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.</p>	<p>The Protected Information is entitled to confidential treatment under applicable law, including, but not limited to, the legal authority cited herein. The information does not expressly fall within any category of the IOU Matrix applicable to electric procurement information, but is market-sensitive information.</p> <p>Among other things, 17 CCR Section 95914(c)(1) of the Cap-and-Trade regulations prohibits disclosure of any auction-related information. Violation of Section 95914 may subject SDG&amp;E to penalties by the California Air Resources Board.</p> <p>In addition, Attachments A, C &amp; D of D.15-01-024 and Appendices A &amp; B of D.15-10-032 require Auction-related information, forecasts of emissions intensity, forecasts of greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost (“WAC”) and other GHG information to be kept confidential.</p> <p>Additionally, the Protected Information also includes trade secret information because SDG&amp;E’s bidding/consignment strategies contain “commercial value,” which gives SDG&amp;E “an opportunity to obtain a business advantage over competitors who do not know or use it.”</p> <p>Disclosure of this information would place SDG&amp;E at an unfair business disadvantage relative to other Cap-and-Trade market participants and result in higher Cap-and-Trade compliance costs for SDG&amp;E and its end-use ratepayers.</p>

<p><b>4. Historical/Recorded Specified Imported MWh and calculated Emissions</b></p> <p><i>(The 2018 and Jan – Sep 2019 Specified Imported MWh and calculated Emissions appear in Ana Garza-Beutz’s Testimony. The 2013-2018 and Jan - Sep 2019 Recorded Specified Imported Emissions appear in Attachment G of this Application.)</i></p>	<p>D.08-04-023</p> <p>D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g)</p> <p>General Order (“GO”) 66-D</p> <p>17 CCR § 95914(c) (the “ARB Confidentiality Regulations”)</p> <p>Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-033 and revised in D.15-01-024</p> <p>Template D-2 designates forecasted and recorded Energy Imports (Specified) emissions as confidential. Knowledge of the MWh makes discovery of the emissions possible, thus the MWh are also confidential.</p> <p>Gov’t Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.</p>	<p>The Protected Information is entitled to confidential treatment under applicable law, including, but not limited to, the legal authority cited herein. The information does not expressly fall within any category of the IOU Matrix applicable to electric procurement information, but is market-sensitive information.</p> <p>Among other things, 17 CCR Section 95914(c)(1) of the Cap-and-Trade regulations prohibits disclosure of any auction-related information. Violation of Section 95914 may subject SDG&amp;E to penalties by the California Air Resources Board.</p> <p>In addition, Attachments A, C &amp; D of D.15-01-024 and Appendices A &amp; B of D.15-10-032 require Auction-related information, forecasts of emissions intensity, forecasts of greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost (“WAC”) and other GHG information to be kept confidential.</p> <p>Additionally, the Protected Information also includes trade secret information because SDG&amp;E’s bidding/consignment strategies contain “commercial value,” which gives SDG&amp;E “an opportunity to obtain a business advantage over competitors who do not know or use it.”</p> <p>Disclosure of this information would place SDG&amp;E at an unfair business disadvantage relative to other Cap-and-Trade market participants and result in higher Cap-and-Trade compliance costs for SDG&amp;E and its end-use ratepayers.</p>
<p><b>5. Historical/Recorded Unspecified Imported MWh and calculated Emissions</b></p> <p><i>(The 2018 and Jan – Sep 2019</i></p>	<p>D.08-04-023</p> <p>D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g)</p> <p>General Order (“GO”) 66-D</p> <p>17 CCR § 95914(c) (the “ARB Confidentiality Regulations”)</p> <p>Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-</p>	<p>The Protected Information is entitled to confidential treatment under applicable law, including, but not limited to, the legal authority cited herein. The information does not expressly fall within any category of the IOU Matrix applicable to electric procurement information, but is market-sensitive information.</p> <p>Among other things, 17 CCR Section 95914(c)(1) of the Cap-and-Trade regulations prohibits disclosure of any auction-related information. Violation of Section 95914 may subject SDG&amp;E to penalties by the California Air Resources Board.</p> <p>In addition, Attachments A, C &amp; D of D.15-01-024 and Appendices A &amp; B of D.15-10-032 require Auction-related information, forecasts of emissions intensity, forecasts of greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost (“WAC”) and other GHG information to be kept confidential.</p> <p>Additionally, the Protected Information also includes trade secret information because SDG&amp;E’s bidding/consignment</p>



<p><i>Unspecified Imported MWh and calculated Emissions appear in Ana Garza-Beutz's Testimony. The 2013-2018 and Jan - Sep 2019 Unspecified Imported Emissions appear in Attachment G of this Application.)</i></p>	<p>033 and revised in D.15-01-024</p> <p>Template D-2 designates forecasted and recorded Energy Imports (Unspecified) emissions as confidential. Knowledge of the MWh makes discovery of the emissions possible, thus the MWh are also confidential.</p> <p>Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.</p>	<p>strategies contain “commercial value,” which gives SDG&amp;E “an opportunity to obtain a business advantage over competitors who do not know or use it.”</p> <p>Disclosure of this information would place SDG&amp;E at an unfair business disadvantage relative to other Cap-and-Trade market participants and result in higher Cap-and-Trade compliance costs for SDG&amp;E and its end-use ratepayers.</p>
<p><b>6. Historical RPS Adjustment eligible MWh and calculated Emissions</b></p> <p><i>(The RPS Adjustment eligible MWh and calculated Emissions for 2018 and Jan – Sep 2019 appear in Ana Garza-Beutz's Testimony. The 2013-2018 and Jan - Sep 2019 RPS Adjustment Emissions appear in Attachment G of this Application.)</i></p>	<p>D.08-04-023</p> <p>D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g)</p> <p>General Order (“GO”) 66-D</p> <p>17 CCR § 95914(c) (the “ARB Confidentiality Regulations”)</p> <p>Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-033 and revised in D.15-01-024</p> <p>Template D-2 designates forecasted and recorded Energy Imports (Unspecified) emissions, which includes any applicable RPS Adjustments as confidential. Knowledge of the MWh makes discovery of the emissions possible, thus the MWh are also confidential.</p> <p>Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.</p>	<p>The Protected Information is entitled to confidential treatment under applicable law, including, but not limited to, the legal authority cited herein. The information does not expressly fall within any category of the IOU Matrix applicable to electric procurement information, but is market-sensitive information.</p> <p>Among other things, 17 CCR Section 95914(c)(1) of the Cap-and-Trade regulations prohibits disclosure of any auction-related information. Violation of Section 95914 may subject SDG&amp;E to penalties by the California Air Resources Board.</p> <p>In addition, Attachments A, C &amp; D of D.15-01-024 and Appendices A &amp; B of D.15-10-032 require Auction-related information, forecasts of emissions intensity, forecasts of greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost (“WAC”) and other GHG information to be kept confidential.</p> <p>Additionally, the Protected Information also includes trade secret information because SDG&amp;E’s bidding/consignment strategies contain “commercial value,” which gives SDG&amp;E “an opportunity to obtain a business advantage over competitors who do not know or use it.”</p> <p>Disclosure of this information would place SDG&amp;E at an unfair business disadvantage relative to other Cap-and-Trade market participants and result in higher Cap-and-Trade compliance costs for SDG&amp;E and its end-use ratepayers.</p>

<p><b>7. Total Direct Compliance Obligation</b></p> <p><i>(The 2018 and Jan – Sep 2019 Total Direct Compliance Obligation appears in Ana Garza-Beutz’s Testimony. The 2013-2018 and Jan - Sep 2019 Total Direct Compliance Obligation appear in Attachment G of this Application.)</i></p>	<p>D.08-04-023</p> <p>D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g)</p> <p>General Order (“GO”) 66-D</p> <p>17 CCR § 95914(c) (the “ARB Confidentiality Regulations”)</p> <p>Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-033 and revised in D.15-01-024</p> <p>Template D-2 designates forecasted and recorded Direct GHG Emissions Subtotal as confidential.</p> <p>Gov’t Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.</p>	<p>The Protected Information is entitled to confidential treatment under applicable law, including, but not limited to, the legal authority cited herein. The information does not expressly fall within any category of the IOU Matrix applicable to electric procurement information, but is market-sensitive information.</p> <p>Among other things, 17 CCR Section 95914(c)(1) of the Cap-and-Trade regulations prohibits disclosure of any auction-related information. Violation of Section 95914 may subject SDG&amp;E to penalties by the California Air Resources Board.</p> <p>In addition, Attachments A, C &amp; D of D.15-01-024 and Appendices A &amp; B of D.15-10-032 require Auction-related information, forecasts of emissions intensity, forecasts of greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost (“WAC”) and other GHG information to be kept confidential.</p> <p>Additionally, the Protected Information also includes trade secret information because SDG&amp;E’s bidding/consignment strategies contain “commercial value,” which gives SDG&amp;E “an opportunity to obtain a business advantage over competitors who do not know or use it.”</p> <p>Disclosure of this information would place SDG&amp;E at an unfair business disadvantage relative to other Cap-and-Trade market participants and result in higher Cap-and-Trade compliance costs for SDG&amp;E and its end-use ratepayers.</p>
<p><b>8. Indirect Purchases in MWh and calculated Emissions</b></p> <p><i>(The 2018 and 2019 forecasted Indirect Purchase MWhs and calculated Emissions appear in Ana Garza-Beutz’s Testimony. The 2013-2018 final and 2019 forecasted Indirect Emission calculations</i></p>	<p>D.08-04-023</p> <p>D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g)</p> <p>General Order (“GO”) 66-D</p> <p>17 CCR § 95914(c) (the “ARB Confidentiality Regulations”)</p> <p>Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-033 and revised in D.15-01-024</p> <p>Template D-2 designates forecasted and recorded</p>	<p>The Protected Information is entitled to confidential treatment under applicable law, including, but not limited to, the legal authority cited herein. The information does not expressly fall within any category of the IOU Matrix applicable to electric procurement information, but is market-sensitive information.</p> <p>Among other things, 17 CCR Section 95914(c)(1) of the Cap-and-Trade regulations prohibits disclosure of any auction-related information. Violation of Section 95914 may subject SDG&amp;E to penalties by the California Air Resources Board.</p> <p>In addition, Attachments A, C &amp; D of D.15-01-024 and Appendices A &amp; B of D.15-10-032 require Auction-related information, forecasts of emissions intensity, forecasts of greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost (“WAC”) and other GHG information to be kept confidential.</p> <p>Additionally, the Protected Information also includes trade secret information because SDG&amp;E’s bidding/consignment strategies contain “commercial value,” which gives SDG&amp;E “an opportunity to obtain a business advantage over competitors who do not know or use it.”</p>

<p><i>appear in Attachment G of this Application.)</i></p>	<p>Indirect GHG Emissions as confidential. Knowledge of the MWh makes discovery of the emissions possible, thus, the MWh are also confidential.</p> <p>Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.</p>	<p>Disclosure of this information would place SDG&amp;E at an unfair business disadvantage relative to other Cap-and-Trade market participants and result in higher Cap-and-Trade compliance costs for SDG&amp;E and its end-use ratepayers.</p>
<p><b>9. Direct GHG Costs</b></p> <p><i>(The 2018 and estimated 2019 Direct GHG Costs appear in Ana Garza-Beutz's Testimony. The 2013 – 2018 final and 2019 estimated Direct GHG Costs appear in Attachment G of this Application.)</i></p>	<p>D.08-04-023</p> <p>D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g)</p> <p>General Order (“GO”) 66-D</p> <p>17 CCR § 95914(c) (the “ARB Confidentiality Regulations”)</p> <p>Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-033 and revised in D.15-01-024</p> <p>Template D-2 designates forecasted and recorded Direct GHG Costs as confidential.</p> <p>Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.</p>	<p>The Protected Information is entitled to confidential treatment under applicable law, including, but not limited to, the legal authority cited herein. The information does not expressly fall within any category of the IOU Matrix applicable to electric procurement information, but is market-sensitive information.</p> <p>Among other things, 17 CCR Section 95914(c)(1) of the Cap-and-Trade regulations prohibits disclosure of any auction-related information. Violation of Section 95914 may subject SDG&amp;E to penalties by the California Air Resources Board.</p> <p>In addition, Attachments A, C &amp; D of D.15-01-024 and Appendices A &amp; B of D.15-10-032 require Auction-related information, forecasts of emissions intensity, forecasts of greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost (“WAC”) and other GHG information to be kept confidential.</p> <p>Additionally, the Protected Information also includes trade secret information because SDG&amp;E’s bidding/consignment strategies contain “commercial value,” which gives SDG&amp;E “an opportunity to obtain a business advantage over competitors who do not know or use it.”</p> <p>Disclosure of this information would place SDG&amp;E at an unfair business disadvantage relative to other Cap-and-Trade market participants and result in higher Cap-and-Trade compliance costs for SDG&amp;E and its end-use ratepayers.</p>
<p><b>10. Estimated Indirect GHG Costs</b></p>	<p>D.08-04-023</p> <p>D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g)</p> <p>General Order (“GO”) 66-D</p>	<p>The Protected Information is entitled to confidential treatment under applicable law, including, but not limited to, the legal authority cited herein. The information does not expressly fall within any category of the IOU Matrix applicable to electric procurement information, but is market-sensitive information.</p> <p>Among other things, 17 CCR Section 95914(c)(1) of the Cap-and-Trade regulations prohibits disclosure of any auction-related information. Violation of Section 95914 may subject SDG&amp;E to penalties by the California Air Resources Board.</p> <p>In addition, Attachments A, C &amp; D of D.15-01-024 and Appendices A &amp; B of D.15-10-032 require Auction-related</p>

<p><i>(The 2018 and 2019 estimated Indirect GHG Costs appear in Ana Garza-Beutz’s Testimony. The 2013 - 2019 estimated Indirect GHG Costs appear in Attachment G of this Application.)</i></p>	<p>17 CCR § 95914(c) (the “ARB Confidentiality Regulations”)</p> <p>Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-033 and revised in D.15-01-024</p> <p>Template D-2 designates forecasted and recorded Indirect GHG Costs as confidential.</p> <p>Gov’t Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.</p>	<p>information, forecasts of emissions intensity, forecasts of greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost (“WAC”) and other GHG information to be kept confidential.</p> <p>Additionally, the Protected Information also includes trade secret information because SDG&amp;E’s bidding/consignment strategies contain “commercial value,” which gives SDG&amp;E “an opportunity to obtain a business advantage over competitors who do not know or use it.”</p> <p>Disclosure of this information would place SDG&amp;E at an unfair business disadvantage relative to other Cap-and-Trade market participants and result in higher Cap-and-Trade compliance costs for SDG&amp;E and its end-use ratepayers.</p>
<p><b>11. GHG Quarterly Auction Revenue</b></p> <p><i>(The 2018 and Jan – Sep 2019 actual GHG Quarterly Auction Revenues and the forecasted 2019 balance of Quarterly Auction Revenues appear in Ana Garza-Beutz’s Testimony. The 2013 - 2018 actual GHG Quarterly Auction Revenues and estimated 2019 GHG Quarterly Auction Revenues</i></p>	<p>D.08-04-023</p> <p>D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g)</p> <p>General Order (“GO”) 66-D</p> <p>17 CCR § 95914(c) (the “ARB Confidentiality Regulations”)</p> <p>1a. of Attachment A of D.14-10-033 and revised in D.15-01-024</p> <p>1a. makes the following confidential: “AB 32 GHG auction participation.” Although Annual Auction Revenues are public, Quarterly Auction Revenues must be confidential since public auction settlement prices and Quarterly Auction Revenues would reveal SDG&amp;E’s quarterly auction participation as a consigner</p> <p>Gov’t Code §§6254(k),</p>	<p>The Protected Information is entitled to confidential treatment under applicable law, including, but not limited to, the legal authority cited herein. The information does not expressly fall within any category of the IOU Matrix applicable to electric procurement information, but is market-sensitive information.</p> <p>Among other things, 17 CCR Section 95914(c)(1) of the Cap-and-Trade regulations prohibits disclosure of any auction-related information. Violation of Section 95914 may subject SDG&amp;E to penalties by the California Air Resources Board.</p> <p>In addition, Attachments A, C &amp; D of D.15-01-024 and Appendices A &amp; B of D.15-10-032 require Auction-related information, forecasts of emissions intensity, forecasts of greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost (“WAC”) and other GHG information to be kept confidential.</p> <p>Additionally, the Protected Information also includes trade secret information because SDG&amp;E’s bidding/consignment strategies contain “commercial value,” which gives SDG&amp;E “an opportunity to obtain a business advantage over competitors who do not know or use it.”</p> <p>Disclosure of this information would place SDG&amp;E at an unfair business disadvantage relative to other Cap-and-Trade market participants and result in higher Cap-and-Trade compliance costs for SDG&amp;E and its end-use ratepayers.</p>

<p><i>appear in Attachment G of this Application.)</i></p>	<p>6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.</p>	
<p><b>12. Emissions Intensities</b></p> <p><i>(The 2013-2018 final and 2019-2020 forecasted Emissions Intensities appears in Attachment G of this Application.)</i></p>	<p>D.08-04-023</p> <p>D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g)</p> <p>General Order (“GO”) 66-D</p> <p>17 CCR § 95914(c) (the “ARB Confidentiality Regulations”)</p> <p>The GHG Confidential Information Matrix in Attachment A of D.14-10-033 and revised in D.15-01-024</p> <p>The Matrix makes the following confidential: “Forecast of GHG Emissions Intensity”</p> <p>Gov’t Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.</p>	<p>The Protected Information is entitled to confidential treatment under applicable law, including, but not limited to, the legal authority cited herein. The information does not expressly fall within any category of the IOU Matrix applicable to electric procurement information, but is market-sensitive information.</p> <p>Among other things, 17 CCR Section 95914(c)(1) of the Cap-and-Trade regulations prohibits disclosure of any auction-related information. Violation of Section 95914 may subject SDG&amp;E to penalties by the California Air Resources Board.</p> <p>In addition, Attachments A, C &amp; D of D.15-01-024 and Appendices A &amp; B of D.15-10-032 require Auction-related information, forecasts of emissions intensity, forecasts of greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost (“WAC”) and other GHG information to be kept confidential.</p> <p>Additionally, the Protected Information also includes trade secret information because SDG&amp;E’s bidding/consignment strategies contain “commercial value,” which gives SDG&amp;E “an opportunity to obtain a business advantage over competitors who do not know or use it.”</p> <p>Disclosure of this information would place SDG&amp;E at an unfair business disadvantage relative to other Cap-and-Trade market participants and result in higher Cap-and-Trade compliance costs for SDG&amp;E and its end-use ratepayers.</p>