Application No.: A.18-04-004
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

November 7~~April 13~~, 2018

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ANA GARZA-BEUTZ

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I. PURPOSE AND OVERVIEW

My testimony presents San Diego Gas & Electric Company's ("SDG&E") 2017-2018[1] costs for greenhouse gas ("GHG") compliance instruments used to satisfy its compliance obligations under the California Air Resources Board's ("ARB") cap-and-trade program pursuant to Assembly Bill ("AB") 32. My testimony also includes the 2017-2018 revenues.[2] Appendix A of this testimony includes SDG&E's Weighted Average Cost calculation ("WAC") as required in D.14-10-033, subsequently corrected in D.14-10-055 and D.15-01-024. The purpose of this testimony is to present both SDG&E's 2017-2018 costs/revenues as well as SDG&E's WAC-, in accordance with applicable decisions~~for review and approval~~. The following sections describe the cap-and-trade program and detail SDG&E's ~~unadjusted~~ 2017 actual revenues and estimated costs as well as estimates for SDG&E's 2018 revenues and costs. ~~These costs and revenues are further adjusted to recorded numbers for the purposes of~~

[1] The 2016 volumes and costs became final in September 2017 and were reported as part of SDG&E's Updated 2018 ERRA Forecast Filing (A.17-04-016); thus the 2016 volumes and costs ~~are~~ were not reported in my April 2018 testimony nor in this updated testimony. The 2017 ~~estimated~~ volumes and costs became final in August 2018. ~~reported in this testimony are subject to change due to emission verification for all of 2017. Additionally, this testimony does not include 2018 volumes, costs and revenues since only January and February estimated actuals are available at this time. In my November 2018~~This updated ~~of this~~ testimony~~, I will~~ includes estimated ~~actuals of~~ costs and revenues for January through ~~September~~ October of 2018 and forecasts for ~~October~~ November – December 2018, all of which are subject to changes when actualized and verified.

[2] ~~The 2017 volumes and costs are subject to change due to emission verification which will become final in September 2018.~~ 2017 revenues~~, however,~~ are now final. 2018 revenues for January- October are final, however the 2018 revenue total is subject to the outcome of the November 2018 auction.

~~reconciliation as further explained in the testimony of SDG&E witnesses Ms. Chilwaro and Ms. McKay~~.[3]

II. BACKGROUND

A. AB 32 Background

The Global Warming Solutions Act of 2006, also referred to as AB 32, establishes a goal of reducing California's GHG emissions to the 1990 level by 2020. The statute grants ARB broad authority to regulate GHG emissions to reach this target. ARB's Scoping Plan includes a recommendation that California adopt a portfolio of emissions reduction measures, including a California GHG cap-and-trade program.[4]

In October 2011, ARB released its Final Regulation Order, which was approved by its Board and by the Office of Administrative Law ("OAL") in December 2011.[5] The ARB regulations create a GHG emissions allowance cap-and-trade system, with compliance obligations in the electricity sector applicable to "first deliverers of electricity"[6] that emit more than 25,000 Metric Tons ("MT") of GHG. The regulation requires that first deliverers of electricity, including investor-owned utilities ("IOUs") such as SDG&E, obtain all the compliance instruments required to meet their compliance obligations by November 1 of the year following the end of a compliance period. Compliance instruments consist of allowances and offsets. An allowance is a limited, tradable authorization to emit up to one MT of carbon dioxide equivalent ("CO2e") and an offset is a project that reduces GHG in sectors outside of those covered in the cap-and-trade program.[7]

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[3] SDG&E witness Ms. Montanez provides a forecast of the 2019 GHG costs.
[4] ARB Resolution 11-32 (October 20, 2011) at 3-4. Available at: https://www.arb.ca.gov/regact/2010/capandtrade10/res11-32.pdf.
[5] The ARB Final Regulation Order from December 2011 is codified at 17 CCR § 95800 *et seq*. and is also available at: http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm.
[6] "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.
[7] Refer to Section 95801of ARB's Final Regulation Order for definitions.

Section 95892(b) of ARB's Final Regulation Order establishes that IOUs are required to sell all their free allowances and acquire an amount equal to their direct compliance obligations. There are also annual requirements to surrender at least 30% of expected annual obligations each year by November 1 of the following year.

B. GHG Actual Revenue

The revenues discussed in my testimony result from the sale of allowances allocated to SDG&E by ARB for the benefit of its ratepayers. ARB requires that the allowances that are allocated annually to the IOUs be made available for sale at the ARB auctions. Allowances given to the IOUs must all be consigned by the last auction of that year. Except for the November 2012 auction, where ARB specified the amount that each IOU needed to auction, all other amounts consigned at auctions are up to the discretion of each IOU, provided the entire annual volume is consigned by the end of each year. Revenues are calculated by multiplying the volume sold by the auction settlement price. The revenues presented in this testimony consist of allowances sold in the 2017 auctions and the 2018 February, May and~~,~~ August~~, and~~ auctions with an estimate for the 2018 November auction~~s~~.

C. GHG Actual Emissions Volumes

The 2017-2018 direct emissions will be the actual/calculated GHG emissions for: (1) SDG&E's California utility-owned generation ("UOG"), (2) California generators with whom SDG&E has contracts where SDG&E is responsible for GHG costs, (3) estimated emissions associated with SDG&E imports of both specified electricity and unspecified electricity, and (4) Renewable Portfolio Standard ("RPS") adjustment. The RPS adjustment is calculated by multiplying the out-of-state renewable megawatt-hours ("MWh") eligible for RPS adjustment by the ARB assigned unspecified emission factor. The ~~2017~~ 2018 direct volumes may change

because they are subject to: (1) emission estimates and emission reporting verification, (2) changing emission factors, and (3) contractual requirements for reviewing tolling agreement emissions for potential reductions. If there are such changes, they will be reflected in future testimony.

The 2017-2018 ~~"actual"~~ indirect emissions are estimated emissions based on net purchases from the California electricity market controlled by the California Independent System Operator Corporation ("CAISO") measured in MWh and multiplied by the ARB assigned unspecified emission factor. Indirect emissions are not overseen by ARB. Indirect emissions are comprised of an estimated volume of GHG for which SDG&E was exposed because of purchasing power from third parties. The 2017 calculated indirect emissions are included within this updated testimony. The ~~estimated numbers for 2017~~ 2018 indirect emissions are those calculated in SDG&E's ~~2017~~ 2018 ERRA Forecast Application and will be updated in my Updated ~~2019~~ 2020 ERRA Forecast testimony in November ~~2018~~2019.

D. GHG Actual Cost Categories

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

Section III below addresses the carbon price for 2017-2018. Section IV.A addresses direct GHG emissions associated with SDG&E's UOG plants, procurement of electricity from tolling agreements, electricity imports attributed to SDG&E, and credits from SDG&E's eligible RPS

Adjustment. Section IV.B addresses the approximate 2017-2018 indirect GHG emissions for which SDG&E paid as GHG costs embedded in electricity prices charged by third parties to SDG&E under contract for various supplies.[8] Section IV.C summarizes the GHG costs based on the carbon prices in Section III and emissions in Sections IV.A and IV.B.

III. CARBON PRICE METHODOLOGY

A. Price for Direct GHG Emissions

SDG&E has used and continues to use~~s~~ the Weighted Average Cost ("WAC") of Compliance Instruments by compliance period recorded monthly, as described in Attachment C of Decision (D.) 14-10-033, subsequently corrected by D.14-10-055 and D.15-01-024, to calculate its direct emissions pricing. However, to present a consistent interpretation and showing regarding the Attachment C WAC calculation, SDG&E, Southern California Edison Company, and Pacific Gas & Electric Company jointly submitted on August 1, 2018 a Petition for Modification (PFM) that, if adopted, clarifies and renders uniform the interpretation and calculation of the WAC calculation. While that PFM is currently pending, SDG&E has decided to apply the methodology set forth in Attachment C of the PFM to ensure a consistent treatment of the WAC calculation with the other IOUs. SDG&E notes that the California Public Advocate (formerly Office of Ratepayer Advocates) supports the PFM, albeit with other limited changes that are not relevant to this discussion.[9]

The two WAC prices shown below are based on the monthly January 2017 – October 2018 WAC prices and calculations found in Attachment A of this testimony. These WAC prices were calculated utilizing the approach detailed in Attachment C of the PFM, as described above. The

[8] Indirect GHG costs are estimated based on the assumptions described herein.
[9] Response of the Public Advocates Office to the petition for modification of the joint utilities of Decision 15-01-024, Attachment C (August 31, 2018) at page 10.

use of this approach represents a shift from the approach SDG&E used to calculate its WACs for 2013-2016. Implementation of the PFM approach necessitates a one-time adjustment or true-up. The one-time true-up to adjust SDG&E's WAC compliance instrument inventory and WAC inventory balance cost from the 2013-2016 WAC approach reflects the methodology clarified by Attachment C of the PFM. This true-up ensures that SDG&E's approach is compliant with both the current and the proposed Attachment C. Implementing this one-time adjustment at this juncture enables SDG&E to reflect this accounting adjustment so that it can be captured in SDG&E's next ERRA Compliance proceeding for Record Year 2018. Going forward, once the one-time adjustment is implemented, SDG&E's WAC calculation and its associated showing will track the requirements of Attachment C of the PFM.

The WAC[10] prices are listed in the table below:

2017 WAC ($/MT)	[redacted]
2017 WAC ($/MT)	[redacted]
Jan-Oct '18 WAC ($/MT)	[redacted]

For November-December 2018 SDG&E will use the forecast price from Jennifer Montanez's Testimony in SDG&E's 2018 ERRA Forecast Application of $15.63.

B. Price for Indirect Emissions

The embedded GHG costs for indirect emissions are estimated by using the average CAISO GHG Allowance Price Indices, as listed in the table below.[11] Indirect costs are estimated

~~[10] Monthly WAC prices are provided in Appendix A of this testimony. The WAC calculations for 2017 are based upon SDG&E's most recent estimate for the respective monthly emissions and on previous years' WAC.~~

[11] Annual CAISO prices are a straight average of public daily GHG prices published on CAISO's OASIS website.

since it is assumed that the GHG cost was passed on by all sources of power from market purchases.

2017 CAISO GHG Prices	
Jan - Dec 2017	**$14.57**

2018 CAISO GHG Prices	
Jan - Oct 2018	$15.27
Nov - Dec 2018	N/A
Total	**$15.27**

IV. ACTUAL GHG COMPLIANCE COSTS

A. Direct Greenhouse Gas Emissions

Under ARB's cap-and-trade program, the "first deliverer of electricity" within California must surrender one allowance or offset credit for each MT of GHG emissions. Accordingly, SDG&E had direct compliance obligations for GHGs emitted from burning natural gas at its UOG plants, namely, the Palomar Energy Center ("Palomar") and Miramar Energy Facility I and II (collectively, "Miramar").[12] SDG&E's UOG GHG emission volumes are derived from information extracted from each covered plant's Continuous Emissions Monitoring Systems ("CEMS") and that plant's annual fuel usage. The data is reported to ARB (under the mandatory GHG reporting rule) and undergoes a rigorous quality assurance/quality control ("QA/QC") process with supporting documentation from the CEMS systems. The data is then subject to third

[12] 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_2, CH_4, and NO_2. Table C-1 of 40 CFR Section 98 provides an emissions rate for CO_2 of 0.05302 MT/MMBtu. Table C-2 of 40 CFR Section 98 gives a default emission factor for CH4 of 0.000001 MT/MMBtu. Using a Global Warming Potential of 21, the resulting CO_2e emission rate is 0.00002 MT/MMBtu. The default NO2 emission rate is given as 0.0000001 MT/MMBtu, and its Global Warming Potential is 310, resulting in a CO_2e emission rate of 0.00003 MT/MMBtu. Combining the 3 elements results in an overall emission rate of 0.05307 MT/MMBtu.

party verification by an ARB-certified verifier. The 2017 UOG data ~~will become~~became final in ~~September~~ August 2018. The 2017 final and 2018 estimated UOG actuals are as follows:

2017 Estimated California UOG Plants	Est. Actual (in MT)
Palomar Energy Center	[redacted]
Miramar Energy Facilities	
Total	

2017 California UOG Plants	Actual (in MT)
Palomar Energy Center	[redacted]
Miramar Energy Facilities	
Total	

Jan-Oct 2018 California UOG Plants	Est. Actual (in MT)
Palomar Energy Center	[redacted]
Miramar Energy Facilities	
Total	

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, the Otay Mesa Energy Center ("OMEC"), the Orange Grove Energy Center ("Orange Grove"), Goal Line (which became a dispatchable plant in 2015), ~~and~~ the Escondido Energy Center ("EEC"), the Pio Pico Energy Center ("Pio Pico") and the Carlsbad Energy Center ("Carlsbad"). The estimated ~~actuals~~ emissions for these plants ~~were~~ can be 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 2017 final and the 2018 estimated SDG&E obligations to tolling agreement partners are shown below. ~~SDG&E~~

~~will be analyzing the 2017 data and could potentially adjust the 2017 emissions for actuals, non-SDG&E dispatches or for inefficiencies. If there are such changes, they will be reflected in future testimony.~~

2017 Estimated California Tolling Generators	Est. Actual (in MT)
Otay Mesa Energy Center	[redacted]
Orange Grove Energy Center	
Goal Line	
Escondido Energy Center	
Pio Pico	
Total	

2017 California Tolling Generators	Actual (in MT)
Otay Mesa Energy Center	[redacted]
Orange Grove Energy Center	
Goal Line	
Escondido Energy Center	
Pio Pico	
Total	

Jan-Oct 2018 California Tolling Generators	Est. Actual (in MT)
Otay Mesa Energy Center	[redacted]
Orange Grove Energy Center	
Goal Line	
Escondido Energy Center	
Pio Pico	
Carlsbad 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 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. 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.[13] 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 2017 final and 2018 estimated ~~actuals~~ emissions for SDG&E's specified imports are as follows:

2017 Estimated Specified Imports	Est. Actual Specified (in MWh)	Emission Factor (in MT/MWh)	Transmission Loss Factor	Est. Actual (in MT)
Desert Star	[redacted]	0.401	1.00	[redacted]
YCA		0.509	1.02	
Total				

2017 Specified Imports	Actual Specified (in MWh)	Emission Factor	Transmission Loss Factor	Actual (in MT)
Desert Star	[redacted]	0.416	1.00	[redacted]
YCA		0.701	1.02	
Total				

Jan-Oct 2018 Specified Imports	Est. Actual Specified (in MWh)	Emission Factor	Transmission Loss Factor	Est. Actual (in MT)
Desert Star	[redacted]	0.416	1.00	[redacted]
YCA		0.701	1.02	
Total				

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 2017 and 2018. The cap-and-trade compliance obligation for these unspecified imports is calculated by multiplying the number of MWh imported, adjusted upward

[13] Specified Emission Factors are updated annually by ARB. They can be found at: http://www.ccdsupport.com/confluence/display/calhelp/Reporting+Form+Instructions.

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).[14] 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.[15] The Cap-and-Trade Regulation also allows for RPS Adjustment to be taken in following years. SDG&E successfully claimed the undelivered portion of its potential 2014 RPS Adjustment renewable MWhs in 2015. SDG&E was planning to claim ~~the~~undelivered portions of the 2015-2017 ~~and 2016 undelivered~~ contractually purchased renewable energy applicable to the RPS Adjustment Provision in ~~its 2016 and 2017~~recent GHG reports to ARB. However, the data for the 2015~~- and 2016~~ 2017 RPS Adjustment was un~~not~~ available, thus SDG&E necessarily claimed zero RPS Adjustment for ~~Compliance Years~~the RPS generated in years ~~2016~~ 2015-~~and~~ 2017.[16] If, as expected, the 2015, 2016 and/or ~~2016~~ 2017 RPS Adjustment data becomes available in the future, SDG&E will incorporate that benefit in an upcoming annual ARB Electric Power Entity ("EPE") report. SDG&E is continuing to request delivered/undelivered volumes and expects to receive the 2017 RPS Adjustment data in 2019 in time to~~and~~ utilize that benefit in the upcoming 2018 EPE Report. The estimated 2017 RPS

[14] ARB's Cap-and-Trade Regulation, Section 95852(b)(1)(B).
[15] *See* Section 95852(b)(1) of ARB's Final Regulation Order for the calculation of the RPS Adjustment.
[16] 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 2015-2017 ~~or 2016~~ generation years. SDG&E continues to have discussions with Morgan Stanley about this data and expects to receive it in the future at which point SDG&E can apply the prior RPS Adjustment volumes to the prompt compliance year's report.

Adjustment claims are shown below. Both the estimated ~~2017~~ 2018 unspecified imports and the RPS Adjustments claimed for ~~2017~~ 2018 are subject to change and those changes will be reflected in future testimony. The 2017 actual and 2018 estimated ~~actuals~~ emissions for SDG&E's unspecified imports and RPS adjustment claims are as follows:

2017 Compliance Reporting: 2017 Unspecified Imports & 2016 RPS Adjustment	Est. Actual Unspecified (in MWh)	Emission Factor (in MT/MWh)	Transmission Loss Factor	Est. Actual (in MT)
Unspecified Imports	[redacted]	0.428	1.02	[redacted]
RPS Adjustment		0.428	1.00	
Total				

2017 Unspecified Imports & prior period RPS Adjustment	Actual Unspecified (in MWh)	Emission Factor	Transmission Loss Factor	Actual (in MT)
Unspecified Imports	[redacted]	0.428	1.02	[redacted]
RPS Adjustment		0.428	1.00	
Total				

Jan-Oct 2018 Unspecified Imports & 2017 RPS Adjustment	Est. Actual Unspecified (in MWh)	Emission Factor	Transmission Loss Factor	Est. Actual (in MT)
Unspecified Imports	[redacted]	0.428	1.02	[redacted]
RPS Adjustment		0.428	1.00	
Total				

The last component for SDG&E's 2017 Direct Compliance Obligations is a downward adjustment of the under-reported emissions from 2013. As was reported in my November 2015 Testimony for the 2016 ERRA Forecast Application, SDG&E made a necessary re-verification of its 2013 imported emissions which lead to additional compliance obligations. The previous 2013 imported emissions plus RPS Adjustment was [redacted] and the new verified emissions were [redacted] or a difference of 215,324 MT. The re-verified emission volumes were reported in my November 2015 testimony. In October 2018, SDG&E performed a reconciliation of its compliance obligations under Cap-and-Trade and, with assistance from ARB, discovered that the under-reported emissions from 2013 were subject to section 95858 of the Cap-and-Trade

regulation which provides a formula for calculating compliance obligations for under-reporting in a previous compliance period. The result of that formula was a compliance obligation of 139,446 MT, which is 75,877 MT less than the straight difference of 215,324 MT above (1 MT discrepancy due to rounding). Thus, a compliance obligation reduction of 75,877 MT is included as part of SDG&E's Direct Compliance Obligation.

Based on the above, SDG&E's 2017 actual and 2018 estimated actual direct compliance obligation are:

2017 Estimated Direct Compliance Obligations	Est. Actual (in MT)
California UOG Plants	[redacted]
California Tolling Generators	
Specified Imports	
Unspecified Imports	
RPS Adjustment	
Total	

2017 Direct Compliance Obligations plus 2013 Obligation Reduction	Actual (in MT)
California UOG Plants	[redacted]
California Tolling Generators	
Specified Imports	
Unspecified Imports	
RPS Adjustment	
2013 Compliance Obligation Adjustment (Per section 95858 of Cap-and-Trade Regulation)	(75,877)
Total	[redacted]

Jan-Oct 2018 Direct Compliance Obligations	Jan-Oct '18 Est. Actuals (in MT)
California UOG Plants	[redacted]
California Tolling Generators	
Specified Imports	
Unspecified Imports	
RPS Adjustment	
Total	

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 allowance prices, sellers of electricity demand higher revenues to offset the costs related to their cap-and-trade obligations. The 2017-2018 indirect GHG volumes are estimated, for both net market purchases and CHP contracts, as the MWh of electricity production multiplied by the ARB default rate for unspecified electricity of 0.428 MT/MWh. The 2017 estimated and 2018 forecast MWh and emissions of SDG&E's indirect purchases are as follows:

2017 Estiamted Indirect Volumes in MWh and MT	
Total INDIRECTS (MWh)	[redacted]
Unspecified Emissions Factor (MT/MWh)	0.428
Total INDIRECTS (MT)	[redacted]

2017 Estimated Indirect Volumes in MWh and MT	
Total INDIRECTS (MWh)	[redacted]
Unspecified Emissions Factor (MT/MWh)	0.428
Total INDIRECTS (MT)	[redacted]

2018 Forecasted Indirect Volumes in MWh and MT	
Total INDIRECTS (MWh)	[redacted]
Unspecified Emissions Factor (MT/MWh)	0.428
Total INDIRECTS (MT)	[redacted]

C. GHG Costs

Using the prices from Section III above, the 2017 direct GHG costs and estimation of the ~~2017~~ 2018 direct GHG costs are as follows:

2017 Estimated GHG Direct Costs	Volume (in MT)	WAC Price (in $/MT)	Cost
Jan - Dec 2017	[redacted]		
Total			

2017 GHG Direct Costs	Volume (in MT)	WAC Price (in $/MT)	Cost
Jan - Dec 2017	[redacted]		
Total			

2018 GHG Direct Costs	Volume (in MT)	WAC / ICE Price (in $/MT)	Cost
Jan - Oct 2018 (estimated actuals)	[redacted]		
Nov - Dec 2018 (forecasted)			
Total			

Combining indirect volumes and the CAISO GHG allowance price indices,[17] the 2017-2018 estimated GHG indirect costs are as follows:

2017 Indirect Volumes & Cost	
Forecasted INDIRECTS (MT)	[redacted]
CAISO GHG Price (Jan-Dec '17) ($/MT)	$14.57
Total 2017 Indirect Cost	[redacted]

2017 Estimated Indirect Volumes & Cost	
Total INDIRECTS (MT)	[redacted]
CAISO GHG Price (Jan-Dec '17) ($/MT)	$14.57
Total Indirect Cost	[redacted]

[17] Per D.14-10-033, indirect costs are calculated using a proxy price equal to the average of the published CAISO prices.

2018 Forecasted Indirect Volumes & Cost	
Total INDIRECTS (MT)	[redacted]
CAISO GHG Price (Jan-Dec '18) ($/MT)	$15.27
Total Indirect Cost	[redacted]

Thus, the estimation of the 2017 and 2018 Direct and Indirect~~actual/forecast~~ blended costs are ~~is $50.64~~ ~~$59.54~~ $58.65 million and $41.62 million ~~(rounded)~~respectively.

V. ACTUAL AND ESTIMATED GHG REVENUES

SDG&E received 6,460,042 MT of vintage 2017 allowances to sell at 2017 auctions and 6,288,321 MT of vintage 2018 allowances to sell at 2018 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 2017 auction and at the first three 2018 auctions, with an estimate for the last 2018 auction ~~and the~~along with associated revenues.

2017 GHG Revenues			
Auction	**Settlement Price ($/MT)**	**Sold Volume (MT)**	**Revenue**
Feb-17	$13.57	[redacted]	[redacted]
May-17	$13.80		
Aug-17	$14.75		
Nov-17	$15.06		
Total	**$14.32**	**6,460,042**	**$92,539,677.19**

2018 GHG Revenues Jan - Sep '18			
Auction	Settlement Price ($/MT)	Sold Volume (MT)	Revenue
Feb-18	$14.61	[redacted]	
May-18	$14.65		
Aug-18	$15.05		
Nov-18	$0.00		
Total	**$14.77**		

2018 Estimated GHG Revenues Oct - Dec '18			
Auction	ICE Price ($/MT)	Consign Volume (MT)	Revenue
2018 Balance	$15.63	[redacted]	
Total	**$15.63**		

Using the $15.63 ICE price from Jennifer Montanez's 2018 GHG Forecast Testimony for the November 2018 auction, the estimated total 2018 revenue is $94,230,697.23.

This concludes my direct testimony.

VI. QUALIFICATIONS

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

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

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

I have previously testified before the Commission.

APPENDIX A

SDG&E’s Monthly WAC Calculation

(Calculation date of ~~January 3~~ November 1, 2018)

As of 01/03/2018

CONFIDENTIAL GHG Data

ELECTRIC Portfolio: CP2 WAC Calculation

Month	Transaction Date	Transaction Type	Quantity Pur/(Sales) (MT)	Purchase ($/MT)	Sales ($/MT)	Total Cost ($)	Total Sales ($)	Inventory Balance ($)	Total Qty in Inventory	WAC* ($)
Jan-15	1/1/2015	CP1 WAC Transfer	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jan-15	11/14/2012	ARB Auction - Vintage 2015	[redacted]	$10.00		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jan-15	2/19/2013	ARB Auction - Vintage 2016	[redacted]	$10.71		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jan-15	5/16/2013	ARB Auction - Vintage 2016	[redacted]	$10.71		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jan-15	8/16/2013	ARB Auction - Vintage 2016	[redacted]	$11.10		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jan-15	11/19/2013	ARB Auction - Vintage 2016	[redacted]	$11.10		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jan-15	2/19/2014	ARB Auction - Vintage 2017	[redacted]	$11.38		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jan-15	5/16/2014	ARB Auction - Vintage 2017	[redacted]	$11.34		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jan-15	8/18/2014	ARB Auction - Vintage 2017	[redacted]	$11.34		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jan-15	11/24/2014	ARB Auction - Vintage 2017	[redacted]	$11.86		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Feb-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Feb-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Feb-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Feb-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Feb-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Mar-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Mar-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Mar-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Mar-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Mar-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Apr-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Apr-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Apr-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Apr-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Apr-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
May-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
May-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
May-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
May-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
May-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jun-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jun-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jun-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jun-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jun-15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Monthly WAC Recordings

Month	[redacted]
End of Month WAC	[redacted]
Monthly Emissions (MT)	[redacted]
Balancing Account Entry for Month	[redacted]
Month	[redacted]
End of Month WAC	[redacted]
Monthly Emissions (MT)	[redacted]
Balancing Account Entry for Month	[redacted]
Month	[redacted]
End of Month WAC	[redacted]
Monthly Emissions (MT)	[redacted]
Balancing Account Entry for Month	[redacted]
Month	[redacted]
End of Month WAC	[redacted]
Monthly Emissions (MT)	[redacted]
Balancing Account Entry for Month	[redacted]
Month	[redacted]
End of Month WAC	[redacted]
Monthly Emissions (MT)	[redacted]
Balancing Account Entry for Month	[redacted]
Month	[redacted]
End of Month WAC	[redacted]
Monthly Emissions (MT)	[redacted]
Balancing Account Entry for Month	[redacted]

Jul-15	[redacted]	Month
Jul-15		End of Month WAC
Jul-15		Monthly Emissions (MT)
Jul-15		Balancing Account Entry for Month
Jul-15		
Aug-15		Month
Aug-15		End of Month WAC
Aug-15		Monthly Emissions (MT)
Aug-15		Balancing Account Entry for Month
Aug-15		
Sep-15		Month
Sep-15		End of Month WAC
Sep-15		Monthly Emissions (MT)
Sep-15		Balancing Account Entry for Month
Sep-15		
Oct-15		Month
Oct-15		End of Month WAC
Oct-15		Monthly Emissions (MT)
Oct-15		Balancing Account Entry for Month
Oct-15		
Nov-15		Month
Nov-15		End of Month WAC
Nov-15		Monthly Emissions (MT)
Nov-15		Balancing Account Entry for Month
Nov-15		
Dec-15		Month
Dec-15		End of Month WAC
Dec-15		Monthly Emissions (MT)
Dec-15		Balancing Account Entry for Month
Dec-15		
Jan-16		Month
Jan-16		End of Month WAC
Jan-16		Monthly Emissions (MT)
Jan-16		Balancing Account Entry for Month
Jan-16		
Feb-16		Month
Feb-16		End of Month WAC
Feb-16		Monthly Emissions (MT)
Feb-16		Balancing Account Entry for Month
Feb-16		
Mar-16		Month
Mar-16		End of Month WAC
Mar-16		Monthly Emissions (MT)
Mar-16		Balancing Account Entry for Month
Mar-16		
Apr-16		Month
Apr-16		End of Month WAC
Apr-16		Monthly Emissions (MT)
Apr-16		Balancing Account Entry for Month
Apr-16		
May-16		Month
May-16		End of Month WAC
May-16		Monthly Emissions (MT)
May-16		Balancing Account Entry for Month
May-16		

Jun-16	[redacted]	Month
Jun-16		End of Month WAC
Jun-16		Monthly Emissions (MT)
Jun-16		Balancing Account Entry for Month
Jun-16		
Jul-16		Month
Jul-16		End of Month WAC
Jul-16		Monthly Emissions (MT)
Jul-16		Balancing Account Entry for Month
Jul-16		
Aug-16		Month
Aug-16		End of Month WAC
Aug-16		Monthly Emissions (MT)
Aug-16		Balancing Account Entry for Month
Aug-16		
Sep-16		Month
Sep-16		End of Month WAC
Sep-16		Monthly Emissions (MT)
Sep-16		Balancing Account Entry for Month
Sep-16		
Oct-16		Month
Oct-16		End of Month WAC
Oct-16		Monthly Emissions (MT)
Oct-16		Balancing Account Entry for Month
Oct-16		
Nov-16		Month
Nov-16		End of Month WAC
Nov-16		Monthly Emissions (MT)
Nov-16		Balancing Account Entry for Month
Nov-16		
Dec-16		Month
Dec-16		End of Month WAC
Dec-16		Monthly Emissions (MT)
Dec-16		Balancing Account Entry for Month
Dec-16		
Jan-17		Month
Jan-17		End of Month WAC
Jan-17		Monthly Emissions (MT)
Jan-17		Balancing Account Entry for Month
Jan-17		
Feb-17		Month
Feb-17		End of Month WAC
Feb-17		Monthly Emissions (MT)
Feb-17		Balancing Account Entry for Month
Feb-17		
Mar-17		Month
Mar-17		End of Month WAC
Mar-17		Monthly Emissions (MT)
Mar-17		Balancing Account Entry for Month
Mar-17		

Apr-17	[redacted]	Month	[redacted]
Apr-17		End of Month WAC	
Apr-17		Monthly Emissions (MT)	
Apr-17		Balancing Account Entry for Month	
Apr-17			
May-17		Month	
May-17		End of Month WAC	
May-17		Monthly Emissions (MT)	
May-17		Balancing Account Entry for Month	
May-17			
Jun-17		Month	
Jun-17		End of Month WAC	
Jun-17		Monthly Emissions (MT)	
Jun-17		Balancing Account Entry for Month	
Jun-17			
Jul-17		Month	
Jul-17		End of Month WAC	
Jul-17		Monthly Emissions (MT)	
Jul-17		Balancing Account Entry for Month	
Jul-17			
Aug-17		Month	
Aug-17		End of Month WAC	
Aug-17		Monthly Emissions (MT)	
Aug-17		Balancing Account Entry for Month	
Aug-17			
Sep-17		Month	
Sep-17		End of Month WAC	
Sep-17		Monthly Emissions (MT)	
Sep-17		Balancing Account Entry for Month	
Sep-17			
Oct-17		Month	
Oct-17		End of Month WAC	
Oct-17		Monthly Emissions (MT)	
Oct-17		Balancing Account Entry for Month	
Oct-17			
Nov-17		Month	
Nov-17		End of Month WAC	
Nov-17		Monthly Emissions (MT)	
Nov-17		Balancing Account Entry for Month	
Nov-17			
Dec-17		Month	
Dec-17		End of Month WAC	
Dec-17		Monthly Emissions (MT)	
Dec-17		Balancing Account Entry for Month	
Dec-17			
Dec-17			
Dec-17			

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-17	1/1/2017	Surrender Event	[redacted]					[redacted]						
Jan-17	[redacted]													
Jan-17														
Jan-17														
Jan-17														
Jan-17														
Jan-17	1/31/2017	Monthly Recording to ERRA									[redacted]			
Feb-17	2/1/2017	Surrender Event	[redacted]											
Feb-17	[redacted]													
Feb-17														
Feb-17														
Feb-17														
Feb-17														
Feb-17	2/28/2017	Monthly Recording to ERRA									[redacted]			
Mar-17	3/1/2017	Surrender Event	[redacted]											
Mar-17	[redacted]													
Mar-17														
Mar-17														
Mar-17														
Mar-17														
Mar-17	3/31/2017	Monthly Recording to ERRA									[redacted]			
Apr-17	4/1/2017	Surrender Event	[redacted]											
Apr-17	[redacted]													
Apr-17														
Apr-17														
Apr-17														
Apr-17														
Apr-17	4/30/2017	Monthly Recording to ERRA									[redacted]			

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 +/- ($)	Monthly Balancing Account Entries ($)
May-17	5/1/2017	Surrender Event	[redacted]											
May-17														
May-17														
May-17														
May-17														
May-17														
May-17	5/31/2017	Monthly Recording to ERRA										[redacted]		
Jun-17	6/1/2017	Surrender Event												
Jun-17														
Jun-17														
Jun-17														
Jun-17														
Jun-17														
Jun-17	6/30/2017	Monthly Recording to ERRA										[redacted]		
Jul-17	7/1/2017	Surrender Event												
Jul-17														
Jul-17														
Jul-17														
Jul-17														
Jul-17	7/31/2017	Monthly Recording to ERRA										[redacted]		
Aug-17	8/1/2017	Surrender Event												
Aug-17														
Aug-17														
Aug-17														
Aug-17														
Aug-17	8/31/2017	Monthly Recording to ERRA										[redacted]		

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 +/- ($)	Monthly Balancing Account Entries ($)
Sep-17	9/1/2017	Surrender Event	[redacted]											
Sep-17	[redacted]													
Sep-17	[redacted]													
Sep-17	[redacted]													
Sep-17	[redacted]													
Sep-17	[redacted]													
Sep-17	9/30/2017	Monthly Recording to ERRA									[redacted]			
Oct-17	10/1/2017	Surrender Event	[redacted]											
Oct-17	[redacted]													
Oct-17	[redacted]													
Oct-17	[redacted]													
Oct-17	[redacted]													
Oct-17	[redacted]													
Oct-17	10/31/2017	Monthly Recording to ERRA									[redacted]			
Nov-17	11/1/2017	Surrender Event	[redacted]											
Nov-17	[redacted]													
Nov-17	[redacted]													
Nov-17	[redacted]													
Nov-17	[redacted]													
Nov-17	[redacted]													
Nov-17	11/30/2017	Monthly Recording to ERRA									[redacted]			
Dec-17	12/1/2017	Surrender Event	[redacted]											
Dec-17	[redacted]													
Dec-17	[redacted]													
Dec-17	[redacted]													
Dec-17	[redacted]													
Dec-17	[redacted]													
Dec-17	12/31/2017	Monthly Recording to ERRA									[redacted]			

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	1/31/2018	Monthly Recording to ERRA												
Feb-18	2/1/2018	Surrender Event												
Feb-18														
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														
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														
Apr-18	4/30/2018	Monthly Recording to ERRA												

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 +/- ($)	Monthly Balancing Account Entries ($)
May-18	5/1/2018	Surrender Event	[redacted]											
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														
Aug-18														
Aug-18														
Aug-18	8/31/2018	Monthly Recording to ERRA												

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 +/- ($)	Monthly Balancing Account Entries ($)
Sep-18	9/1/2018	Surrender Event	[redacted]					[redacted]						
Sep-18	[redacted]													
Sep-18														
Sep-18														
Sep-18														
Sep-18														
Sep-18	9/30/2018	Monthly Recording to ERRA									[redacted]			
Oct-18	10/1/2018	Surrender Event	[redacted]											
Oct-18	[redacted]													
Oct-18														
Oct-18														
Oct-18														
Oct-18														
Oct-18	10/31/2018	Monthly Recording to ERRA									[redacted]			

GLOSSARY

Acronym	Definition
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
CO2e	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 RYAN A. MILLER
REGARDING CONFIDENTIALITY OF CERTAIN DATA/DOCUMENTS
PURSUANT TO D.16-08-24, *et al.*

I, Ryan A. Miller, do declare as follows:

1. I am the Manager- 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 Kendall K. Helm, Vice President of Energy Supply. I have reviewed Ana Garza-Beutz's Prepared Direct Testimony ("Testimony") in support of SDG&E's "November Update to Application", related to its Application for approval of its 2019 Electric Procurement Revenue Requirement Forecasts and GHG Related-Forecasts ("Application"), filed November 7, 2018. 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 is 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 7th day of November 2018, at San Diego.

Ryan A. Miller
Manager – Energy Supply & Dispatch

ATTACHMENT A

SDG&E Request for Confidentiality on the following information contained in Ana Garza-Beutz's Testimony in support of SDG&E's Application

Location of Protected Information	Legal Citations	Narrative Justification
1. SDG&E WAC prices and WAC calculations ***(The 2017 and Jan – Oct 2018 WAC prices appear in the Testimony; the Jan 2013 - Oct 2018 WAC calculations are utilized in tab "D-2" of Attachment G and the Jan 2017 - Oct 2018 Monthly WAC prices and calculations appear in Attachment A of the Testimony)***	D.08-04-023 D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g) General Order ("GO") 66-D 17 CCR § 95914(c) (the "ARB Confidentiality Regulations") The GHG Confidential Information Matrix in Attachment A of D.14-10-033 and revised in D.15-01-024 The Matrix makes the following confidential: "Weighted Average Cost (WAC) of compliance instruments, and the calculation of WAC" Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.	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. 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&E to penalties by the California Air Resources Board. In addition, Attachments A, C & D of D.15-01-024 and Appendices A & 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. Additionally, the Protected Information also includes trade secret information because SDG&E's bidding/consignment strategies contain "commercial value," which gives SDG&E "an opportunity to obtain a business advantage over competitors who do not know or use it." Disclosure of this information would place SDG&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&E and its end-use ratepayers.
2. Historical/Recorded UOG Emissions	D.08-04-023 D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023,	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.

(The 2017 and Jan – Oct 2018 Historical UOG Emissions appear in the Testimony and the 2013-2017 and Jan-Oct 2018 Recorded UOG Emissions in Attachment G of this Application.)	Public Utilities Code Section 454.5(g) General Order ("GO") 66-D 17 CCR § 95914(c) (the "ARB Confidentiality Regulations") Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-033 and revised in D.15-01-024 Template D-2 designates forecasted and recorded UOG emissions as confidential Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.	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&E to penalties by the California Air Resources Board. In addition, Attachments A, C & D of D.15-01-024 and Appendices A & 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. Additionally, the Protected Information also includes trade secret information because SDG&E's bidding/consignment strategies contain "commercial value," which gives SDG&E "an opportunity to obtain a business advantage over competitors who do not know or use it." Disclosure of this information would place SDG&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&E and its end-use ratepayers.
3. Historical/Recorded California Tolling Agreement Emissions ***(The 2017 and Jan – Oct 2018 Historical Tolling Agreement Emissions appear in the Testimony and the 2013-2017, Jan-Oct 2018 Recorded California Tolling Agreement Emissions appear in Attachment G of this Application.)***	D.08-04-023 D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g) General Order ("GO") 66-D 17 CCR § 95914(c) (the "ARB Confidentiality Regulations") Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-033 and revised in D.15-01-024 Template D-2 designates forecasted and recorded Tolling Agreements emissions as confidential Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil	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. 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&E to penalties by the California Air Resources Board. In addition, Attachments A, C & D of D.15-01-024 and Appendices A & 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. Additionally, the Protected Information also includes trade secret information because SDG&E's bidding/consignment strategies contain "commercial value," which gives SDG&E "an opportunity to obtain a business advantage over competitors who do not know or use it." Disclosure of this information would place SDG&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&E and its end-use ratepayers.

	Code §3426 et seq.	
4. Historical/Recorded Specified Imported MWh and calculated Emissions ***(The 2017 and Jan-Oct 2018 Historical Specified Imported MWh and calculated Emissions appear in the Testimony and the 2013-2017, Jan-Oct 2018 Recorded Specified Imported Emissions appear in Attachment G of this Application.)***	D.08-04-023 D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g) General Order ("GO") 66-D 17 CCR § 95914(c) (the "ARB Confidentiality Regulations") Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-033 and revised in D.15-01-024 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. Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.	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. 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&E to penalties by the California Air Resources Board. In addition, Attachments A, C & D of D.15-01-024 and Appendices A & 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. Additionally, the Protected Information also includes trade secret information because SDG&E's bidding/consignment strategies contain "commercial value," which gives SDG&E "an opportunity to obtain a business advantage over competitors who do not know or use it." Disclosure of this information would place SDG&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&E and its end-use ratepayers.
5. Historical/Recorded Unspecified Imported MWh and calculated Emissions	D.08-04-023 D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g) General Order ("GO") 66-D 17 CCR § 95914(c) (the "ARB Confidentiality Regulations") Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-	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. 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&E to penalties by the California Air Resources Board. In addition, Attachments A, C & D of D.15-01-024 and Appendices A & 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.

(The 2017 and Jan-Oct 2018 Historical Unspecified Imported MWh and calculated Emissions appear in the Testimony and the 2013-2017 and Jan-Oct 2018 Recorded Unspecified Imported Emissions appear in Attachment G of this Application.)	033 and revised in D.15-01-024 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. Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.	Additionally, the Protected Information also includes trade secret information because SDG&E's bidding/consignment strategies contain "commercial value," which gives SDG&E "an opportunity to obtain a business advantage over competitors who do not know or use it." Disclosure of this information would place SDG&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&E and its end-use ratepayers.
6. Historical RPS Adjustment eligible MWh and calculated Emissions ***(The Historical RPS Adjustment eligible MWh and calculated Emissions for 2017 and Jan-Oct 2018 appear in the Testimony and the 2013-2017 and Jan-Oct 2018 Recorded RPS Adjustment Emissions appear in Attachment G of this Application.)***	D.08-04-023 D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g) General Order ("GO") 66-D 17 CCR § 95914(c) (the "ARB Confidentiality Regulations") Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-033 and revised in D.15-01-024 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. Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.	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. 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&E to penalties by the California Air Resources Board. In addition, Attachments A, C & D of D.15-01-024 and Appendices A & 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. Additionally, the Protected Information also includes trade secret information because SDG&E's bidding/consignment strategies contain "commercial value," which gives SDG&E "an opportunity to obtain a business advantage over competitors who do not know or use it." Disclosure of this information would place SDG&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&E and its end-use ratepayers.

7. Total Direct Compliance Obligation ***(The 2017 and Jan-Oct 2018 Total Direct Compliance Obligation appears in the Testimony and the 2013-2017 and Jan-Oct 2018 Recorded Total Direct Compliance Obligation appear in Attachment G of this Application.)***	D.08-04-023 D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g) General Order ("GO") 66-D 17 CCR § 95914(c) (the "ARB Confidentiality Regulations") Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-033 and revised in D.15-01-024 Template D-2 designates forecasted and recorded Direct GHG Emissions Subtotal as confidential. Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.	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. 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&E to penalties by the California Air Resources Board. In addition, Attachments A, C & D of D.15-01-024 and Appendices A & 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. Additionally, the Protected Information also includes trade secret information because SDG&E's bidding/consignment strategies contain "commercial value," which gives SDG&E "an opportunity to obtain a business advantage over competitors who do not know or use it." Disclosure of this information would place SDG&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&E and its end-use ratepayers.
8. Indirect Purchases in MWh and calculated Emissions ***(The 2017 and Jan-Oct 2018 forecasted Indirect Purchases in MWh and calculated Emissions appear in the Testimony and the 2013-2017 and Jan-Oct 2018 Recorded calculated Indirect Emissions appear in Attachment G of this Application.)***	D.08-04-023 D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g) General Order ("GO") 66-D 17 CCR § 95914(c) (the "ARB Confidentiality Regulations") Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-033 and revised in D.15-01-024 Template D-2 designates forecasted and recorded	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. 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&E to penalties by the California Air Resources Board. In addition, Attachments A, C & D of D.15-01-024 and Appendices A & 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. Additionally, the Protected Information also includes trade secret information because SDG&E's bidding/consignment strategies contain "commercial value," which gives SDG&E "an opportunity to obtain a business advantage over competitors who do not know or use it."

	Indirect GHG Emissions as confidential. Knowledge of the MWh makes discovery of the emissions possible, thus, the MWh are also confidential. Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.	Disclosure of this information would place SDG&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&E and its end-use ratepayers.
9. Direct GHG Costs ***(The 2017 and Jan-Oct 2018 Direct GHG Costs appear in the Testimony and the 2013-2017 and Jan-Oct 2018 Recorded Direct GHG Costs appear in Attachment G of this Application.)***	D.08-04-023 D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g) General Order ("GO") 66-D 17 CCR § 95914(c) (the "ARB Confidentiality Regulations") Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-033 and revised in D.15-01-024 Template D-2 designates forecasted and recorded Direct GHG Costs as confidential. Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.	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. 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&E to penalties by the California Air Resources Board. In addition, Attachments A, C & D of D.15-01-024 and Appendices A & 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. Additionally, the Protected Information also includes trade secret information because SDG&E's bidding/consignment strategies contain "commercial value," which gives SDG&E "an opportunity to obtain a business advantage over competitors who do not know or use it." Disclosure of this information would place SDG&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&E and its end-use ratepayers.
10. Estimated Indirect GHG Costs	D.08-04-023 D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g) General Order ("GO") 66-D	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. 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&E to penalties by the California Air Resources Board. In addition, Attachments A, C & D of D.15-01-024 and Appendices A & B of D.15-10-032 require Auction-related

(The 2017 and 2018 estimated Indirect GHG Costs appear in the Testimony and the 2013-2018 Recorded estimated Indirect GHG Costs appear in Attachment G of this Application.)	17 CCR § 95914(c) (the "ARB Confidentiality Regulations") Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-033 and revised in D.15-01-024 Template D-2 designates forecasted and recorded Indirect GHG Costs as confidential. Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.	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. Additionally, the Protected Information also includes trade secret information because SDG&E's bidding/consignment strategies contain "commercial value," which gives SDG&E "an opportunity to obtain a business advantage over competitors who do not know or use it." Disclosure of this information would place SDG&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&E and its end-use ratepayers.
11. GHG Quarterly Auction Revenue ***(The 2017 and Jan-Oct 2018 GHG Quarterly Auction Revenue appear in the Testimony.)***	D.08-04-023 D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g) General Order ("GO") 66-D 17 CCR § 95914(c) (the "ARB Confidentiality Regulations") 1a. of Attachment A of D.14-10-033 and revised in D.15-01-024 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&E's quarterly auction participation as a consigner Gov't Code §§6254(k),	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. 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&E to penalties by the California Air Resources Board. In addition, Attachments A, C & D of D.15-01-024 and Appendices A & 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. Additionally, the Protected Information also includes trade secret information because SDG&E's bidding/consignment strategies contain "commercial value," which gives SDG&E "an opportunity to obtain a business advantage over competitors who do not know or use it." Disclosure of this information would place SDG&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&E and its end-use ratepayers.

	6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.	
12. Emissions Intensities ***(The 2018-2019 forecasted Emissions Intensities appears in Attachment G of this Application.)***	D.08-04-023 D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g) General Order ("GO") 66-D 17 CCR § 95914(c) (the "ARB Confidentiality Regulations") The GHG Confidential Information Matrix in Attachment A of D.14-10-033 and revised in D.15-01-024 The Matrix makes the following confidential: "Forecast of GHG Emissions Intensity" Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.	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. 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&E to penalties by the California Air Resources Board. In addition, Attachments A, C & D of D.15-01-024 and Appendices A & 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. Additionally, the Protected Information also includes trade secret information because SDG&E's bidding/consignment strategies contain "commercial value," which gives SDG&E "an opportunity to obtain a business advantage over competitors who do not know or use it." Disclosure of this information would place SDG&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&E and its end-use ratepayers.