Application No.: A.18-04-

Exhibit No.:

Ana Garza-Beutz Witness:

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 13, 2018



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PREPARED DIRECT TESTIMONY OF

ANA GARZA-BEUTZ

ON BEHALF OF

SAN DIEGO GAS & ELECTRIC COMPANY

I. PURPOSE AND OVERVIEW

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My testimony presents San Diego Gas & Electric Company's ("SDG&E") 2017¹ 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 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 costs/revenues as well as SDG&E's WAC 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. These costs and revenues are further adjusted to recorded numbers for the purposes of reconciliation as further explained in the testimony of SDG&E witnesses Ms. Chihwaro and Ms. McKay.³

changes when actualized and verified.

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 not reported in my April 2018 testimony. The 2017 estimated volumes and costs 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 update of this testimony, I will include estimated actuals of costs and revenues for January through September of 2018 and forecasts for October – December 2018, all of which are subject to

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.

³ SDG&E witness Ms. Montanez provides a forecast of the 2019 GHG costs.

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" 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. 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

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 95801 of ARB's Final Regulation Order for definitions.

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 February, May, August, and November auctions.

C. GHG Actual Emissions Volumes

The 2017 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 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 "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 estimated numbers for 2017 are those calculated in SDG&E's 2017 ERRA Forecast Application and will be updated in my Updated 2019 ERRA Forecast testimony in November 2018.

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. 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 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. Section IV.C summarizes the GHG costs based on the carbon prices in Section III and emissions in Sections IV.A and IV.B.

 $^{^{\}rm 8}$ Indirect GHG costs are estimated based on the assumptions described herein.

III. CARBON PRICE METHODOLOGY

A. Price for Direct GHG Emissions

SDG&E uses 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. The WAC⁹ prices are listed in the table below:

2017 WAC (\$/MT)

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.¹⁰ Indirect costs are estimated since it is assumed that the GHG cost was passed on by all sources of power from market purchases.

2017 CAISO G	HG Prices
Jan - Dec 2017	\$14.57

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

⁹ 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.

¹⁰ Annual CAISO prices are a straight average of public daily GHG prices published on CAISO's OASIS website.

(collectively, "Miramar"). 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 party verification by an ARB-certified verifier. The 2017 UOG data will become final in September 2018. The 2017 estimated UOG actuals are as follows:

2017 Estimated	Est. Actual
California UOG Plants	(in MT)
Palomar Energy Center	
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 estimated actuals for these plants were calculated by multiplying the MMBtu burned with the emission factor of 0.05307 MT/MMBtu associated with natural gas as the input fuel. These estimates are subject to change, not only because the emissions estimates are based on fuel calculations instead of emission meter read calculations, but also because the

¹¹ 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 – CO₂, CH₄, and NO₂. Table C-1 of 40 CFR Section 98 provides an emissions rate for CO₂ 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 CO₂e emission rate is 0.00002 MT/MMBtu. The default NO2 emission rate is given as 0.000001 MT/MMBtu, and its Global Warming Potential is 310, resulting in a CO₂e emission rate of 0.00003 MT/MMBtu. Combining the 3 elements results in an overall emission rate of 0.05307 MT/MMBtu.

tolling agreement contracts state that SDG&E will only cover the emissions generated resulting from SDG&E dispatches of efficiently run plants. The 2017 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	
Orange Grove Energy Center	
Goal Line	
Escondido Energy Center	
Pio Pico	
Total	

An entity that delivers out-of-state electricity to a delivery point inside California is also responsible for the GHG emissions associated with generation of that electricity. For known imports, called "specified sources," the estimated GHG emissions related to the portion of outputs of plants that delivered to California are covered in the cap-and-trade program and as such the importer of that electricity has a compliance obligation. SDG&E has a contract with Yuma Cogeneration Associates ("YCA") in Arizona and owns the Desert Star Energy Center ("Desert Star") combined cycle plant in Nevada. 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. As with SDG&E's other estimated obligations,

¹² Specified Emission Factors are updated annually by ARB. They can be found at: http://www.ccdsupport.com/confluence/display/calhelp/Reporting+Form+Instructions.

specified imports are also subject to change, and those changes will be reflected in future testimony. The 2017 estimated actuals 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		0.401	1.00	
YCA		0.509	1.02	
Total				

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In addition to specified sources, importing of "unspecified sources" also generates a compliance obligation. SDG&E procured both contracted imports and market imports from unspecified sources in 2017. The cap-and-trade compliance obligation for these unspecified imports is calculated by multiplying the number of MWh imported, adjusted upward by two percent to account for transmission losses between the point of generation and the California border, by the ARB default rate, as stated in its regulation (currently 0.428 MT per MWh).¹³ 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.¹⁴ 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 2015 and 2016 undelivered contractually purchased renewable energy applicable to the RPS Adjustment Provision in its 2016 and 2017 GHG reports to ARB. However, the data for the 2015 and 2016 RPS

¹³ ARB's Cap-and-Trade Regulation, Section 95852(b)(1)(B).

¹⁴ See Section 95852(b)(1) of ARB's Final Regulation Order for the calculation of the RPS Adjustment.

Adjustment was not available, thus SDG&E claimed zero RPS Adjustment for Compliance Years 2016 and 2017. If, as expected, the 2015 and/or 2016 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 expects to receive the 2017 RPS Adjustment data and utilize that benefit in the 2018 EPE Report. The estimated 2017 RPS Adjustment claims are shown below. Both the estimated 2017 unspecified imports and the RPS Adjustments claimed for 2017 are subject to change and those changes will be reflected in future testimony. The 2017 estimated actuals 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		0.428	1.02	
RPS Adjustment		0.428	1.00	
Total				

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

2017 Estimated Direct Compliance Obligations	Est. Actual (in MT)
California UOG Plants	
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

¹⁵ 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 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.

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 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 MWh and emissions of SDG&E's indirect purchases are as follows:

2017 Estiamted Indirect Volumes in M	IWh and MT
Total INDIRECTS (MWh)	
Unspecified Emissions Factor (MT/MWh)	0.428
Total INDIRECTS (MT)	

C. GHG Costs

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

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

Combining indirect volumes and the CAISO GHG allowance price indices, ¹⁶ the 2017 estimated GHG indirect costs are as follows:

¹⁶ Per D.14-10-033, indirect costs are calculated using a proxy price equal to the average of the published CAISO prices.

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

Thus, the estimation of the 2017 actual/forecast blended cost is \$50.64 million (rounded).

V. ACTUAL AND ESTIMATED GHG REVENUES

SDG&E received 6,460,042 MT of vintage 2017 allowances to sell at 2017 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 allowance across the four quarterly auctions. The tables below show the volumes sold at each 2017 auction and the associated revenues.

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

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, 2018)

			Quantity					Total Qty		Monthly WAC Recordings
Month	Transactio n Date	Transaction Type	Pur/(Sales) (MT)	Purchase (\$/MT) (\$	Total Cost (\$)	Total Sales (\$)	Inventory Balance (\$)	in Inventory	WAC* (\$)	
an-15	1/1/2015	CP1 WAC Transfer								Month
		ARB Auction - Vintage 2015		\$10.00						End of Month WAC
	2/19/2013	ARB Auction - Vintage 2016		\$10.71						Monthly Emissions (MT)
	5/16/2013	ARB Auction - Vintage 2016		\$10.71						Balancing Account Entry for Month
	8/16/2013	ARB Auction - Vintage 2016		\$11.10						<u></u>
		ARB Auction - Vintage 2016		\$11.10						
	2/19/2014	ARB Auction - Vintage 2017		\$11.38						
	5/16/2014	ARB Auction - Vintage 2017		\$11.34						
	8/18/2014	ARB Auction - Vintage 2017		\$11.34						
	11/24/2014	ARB Auction - Vintage 2017		\$11.86						75
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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 Emily C. Shults, Vice President of Energy Supply. I have reviewed Ana Garza-Beutz's Prepared Direct Testimony ("Testimony") in support of SDG&E's April 13, 2018 "Application ... for Approval of its 2019 Electric Procurement Revenue Requirement Forecasts and GHG Related-Forecasts" ("Application"). 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 Attachments A and B, 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 13th day of April, 2018, at San Diego.

Ryan A. Miller Manager – Energy Supply & Dispatch

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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	Legal Citations	Narrative Justification
Protected		
Information		
1. SDG&E WAC prices and WAC calculations (The 2017 WAC price appears in the Testimony; the 2013-2017 WAC calculations are utilized in tab "D-2" of Attachment G and the 2015-2017 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 Capand-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/Reco rded 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.

	Public Utilities Code	
	Section 454.5(g)	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
	General Order ("GO") 66-D	SDG&E to penalties by the California Air Resources Board.
	15 GGD 0.05014() (1	bboth to penalties by the cumorina in resources board.
(TL 2017	17 CCR § 95914(c) (the	In addition, Attachments A, C & D of D.15-01-024 and
(The 2017 Historical UOG	"ARB Confidentiality	Appendices A & B of D.15-10-032 require Auction-related
Emissions appear	Regulations")	information, forecasts of emissions intensity, forecasts of
in the Testimony		greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost ("WAC") and other
and the 2013-	Annual GHG Emissions and	GHG information to be kept confidential.
2017 Recorded	Associated Costs in	GTO information to be kept confidential.
UOG Emissions	Template D-2 of D.14-10-	Additionally, the Protected Information also includes trade
in Attachment G of this	033 and revised in D.15-01-	secret information because SDG&E's bidding/consignment
Application.)	024	strategies contain "commercial value," which gives SDG&E "an
Tr	Template D-2 designates	opportunity to obtain a business advantage over competitors who do not know or use it."
	forecasted and recorded	who do not know of use it.
	UOG emissions as	Disclosure of this information would place SDG&E at an unfair
	confidential	business disadvantage relative to other Cap-and-Trade market
	Gov't Code §§6254(k),	participants and result in higher
	6254.7 (d), Evidence	Cap-and-Trade compliance costs for SDG&E and its end-use ratepayers.
	Code 1060, Civil	Tatepuyers.
	Code §3426 et seq.	
3.	D.08-04-023	The Protected Information is entitled to confidential treatment under applicable law, including, but not limited to, the legal
Historical/Reco rded California	D.14-10-033, D.16-08-024,	authority cited herein. The information does not expressly fall
Tolling	D.17-05-035, D.17-09-023,	within any category of the IOU Matrix applicable to electric
Agreement	Public Utilities Code	procurement information, but is market-sensitive information.
Emissions	Section 454.5(g)	Among other things 17 CCD Section 05014(a)(1) of the Con
		Among other things, 17 CCR Section 95914(c)(1) of the Capand-Trade regulations prohibits disclosure of any auction-
	General Order ("GO") 66-D	related information. Violation of Section 95914 may subject
		SDG&E to penalties by the California Air Resources Board.
	17 CCR § 95914(c) (the	To alliday Agralayana A C 8 D CD 15 01 004
	"ARB Confidentiality	In addition, Attachments A, C & D of D.15-01-024 and Appendices A & B of D.15-10-032 require Auction-related
	Regulations")	information, forecasts of emissions intensity, forecasts of
(The 2017		greenhouse gas (GHG) costs, GHG transactions, compliance
Historical Tolling	Annual GHG Emissions and	instrument prices, weight average cost ("WAC") and other
Agreement	Associated Costs in	GHG information to be kept confidential.
Emissions appear	Template D-2 of D.14-10- 033 and revised in D.15-01-	Additionally, the Protected Information also includes trade
in the Testimony and the 2013-	033 and revised in D.13-01-	secret information because SDG&E's bidding/consignment
2017 Recorded		strategies contain "commercial value," which gives SDG&E "an
California	Template D-2 designates	opportunity to obtain a business advantage over competitors
Tolling	forecasted and recorded	who do not know or use it."
Agreement	Tolling Agreements emissions as confidential	Disclosure of this information would place SDG&E at an unfair
Emissions appear in Attachment G	Chiissions as Comidential	business disadvantage relative to other Cap-and-Trade market
of this	Gov't Code §§6254(k),	participants and result in higher
Application.)	6254.7 (d), Evidence	Cap-and-Trade compliance costs for SDG&E and its end-use
	Code 1060, Civil	ratepayers.

	Codo \$2426 at and	
4 II:-4- 1/D	Code §3426 et seq. D.08-04-023	The Protected Information is entitled to confidential treatment
4. Historical/Rec	D.08-04-023	under applicable law, including, but not limited to, the legal
orded	D 14 10 022 D 16 00 024	authority cited herein. The information does not expressly fall
Specified	D.14-10-033, D.16-08-024,	within any category of the IOU Matrix applicable to electric
Imported	D.17-05-035, D.17-09-023,	procurement information, but is market-sensitive information.
MWh and	Public Utilities Code	
calculated	Section 454.5(g)	Among other things, 17 CCR Section 95914(c)(1) of the Cap-
Emissions	General Order ("GO") 66-D	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.
	17 CCR § 95914(c) (the	
	"ARB Confidentiality Regulations")	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
	Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-	instrument prices, weight average cost ("WAC") and other GHG information to be kept confidential.
	033 and revised in D.15-01- 024	Additionally, the Protected Information also includes trade secret information because SDG&E's bidding/consignment strategies contain "commercial value," which gives SDG&E "an
(The 2017 Historical Specified Imported MWh and calculated Emissions appear in	Template D-2 designates forecasted and recorded Energy Imports (Specified)	opportunity to obtain a business advantage over competitors who do not know or use it."
the Testimony and the 2013-2017 Recorded Specified Imported Emissions appear in Attachment G of this Application.)	emissions as confidential. Knowledge of the MWh makes discovery of the emissions possible, thus the MWh are also confidential.	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.
	Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.	
5. Historical/Rec	D.08-04-023	The Protected Information is entitled to confidential treatment
orded Unspecified Imported MWh and calculated Emissions	D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g)	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 Capand-Trade regulations prohibits disclosure of any auction-
Linustons	General Order ("GO") 66-D	related information. Violation of Section 95914 may subject SDG&E to penalties by the California Air Resources Board.
	17 CCR § 95914(c) (the "ARB Confidentiality Regulations")	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
	Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-	instrument prices, weight average cost ("WAC") and other GHG information to be kept confidential.

	(TL . 2017	022 1 1 1 5 15 01	A 1 1 2 2 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	(The 2017	033 and revised in D.15-01-	Additionally, the Protected Information also includes trade
	Historical	024	secret information because SDG&E's bidding/consignment
	Unspecified	Template D-2 designates	strategies contain "commercial value," which gives SDG&E "an
	Imported MWh	forecasted and recorded	opportunity to obtain a business advantage over competitors
	and calculated		who do not know or use it."
	Emissions appear	Energy Imports (Unspecified)	Disabassas of this information would also CDC &F at an unfair
	in the Testimony	emissions as confidential.	Disclosure of this information would place SDG&E at an unfair
	and the 2013- 2017 Recorded	Knowledge of the MWh	business disadvantage relative to other Cap-and-Trade market
	Unspecified	makes discovery of the	participants and result in higher Cap-and-Trade compliance costs for SDG&E and its end-use
	Imported	emissions possible, thus the	ratepayers.
	Emissions appear	MWh are also confidential.	Tutopayors.
	in Attachment G		
	of this	Gov't Code §§6254(k),	
	Application.)	6254.7 (d), Evidence	
	11ppileulloll)	Code 1060, Civil	
		Code §3426 et seq.	
6.	Historical RPS	D.08-04-023	The Protected Information is entitled to confidential treatment
	Adjustment		under applicable law, including, but not limited to, the legal
1	eligible MWh	D.14-10-033, D.16-08-024,	authority cited herein. The information does not expressly fall
	and calculated	D.17-05-035, D.17-09-023,	within any category of the IOU Matrix applicable to electric
	Emissions -	Public Utilities Code	procurement information, but is market-sensitive information.
	Linustons	Section 454.5(g)	
		Section 454.5(g)	Among other things, 17 CCR Section 95914(c)(1) of the Cap-
		C1 O-1 ("CO") ((D	and-Trade regulations prohibits disclosure of any auction-
		General Order ("GO") 66-D	related information. Violation of Section 95914 may subject
		15 665 8 05014/) //1	SDG&E to penalties by the California Air Resources Board.
		17 CCR § 95914(c) (the	V 1991
		"ARB Confidentiality	In addition, Attachments A, C & D of D.15-01-024 and
		Regulations")	Appendices A & B of D.15-10-032 require Auction-related
			information, forecasts of emissions intensity, forecasts of
		Annual GHG Emissions and	greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost ("WAC") and other
		Associated Costs in	GHG information to be kept confidential.
	(The Historical	Template D-2 of D.14-10-	orio information to be kept confidential.
	RPS Adjustment	033 and revised in D.15-01-	Additionally, the Protected Information also includes trade
	eligible MWh and		secret information because SDG&E's bidding/consignment
	calculated	024	strategies contain "commercial value," which gives SDG&E "an
	Emissions for	Template D-2 designates	opportunity to obtain a business advantage over competitors
	2017 appear in	forecasted and recorded	who do not know or use it."
	the Testimony and the 2013-	Energy Imports (Unspecified)	
	2017 Recorded	emissions, which includes	Disclosure of this information would place SDG&E at an unfair
	RPS Adjustment	any applicable RPS	business disadvantage relative to other Cap-and-Trade market
	Emissions appear	Adjustments as confidential.	participants and result in higher
	in Attachment G	Knowledge of the MWh	Cap-and-Trade compliance costs for SDG&E and its end-use
	of this	makes discovery of the	ratepayers.
	Application.)	emissions possible, thus the	
		MWh are also confidential.	
		ivi vv ii are aiso confidential.	
		Gov't Codo 886254(k)	
		Gov't Code §§6254(k),	
		6254.7 (d), Evidence	
		Code 1060, Civil	
		Code §3426 et seq.	

7.	Total Direct	D.08-04-023	The Protected Information is entitled to confidential treatment
/'		D.00-04-023	under applicable law, including, but not limited to, the legal
	Compliance	D 14 10 022 D 16 09 024	authority cited herein. The information does not expressly fall
	Obligation	D.14-10-033, D.16-08-024,	within any category of the IOU Matrix applicable to electric
		D.17-05-035, D.17-09-023,	procurement information, but is market-sensitive information.
		Public Utilities Code	,
		Section 454.5(g)	Among other things, 17 CCR Section 95914(c)(1) of the Cap-
		G 10.1 ("CO") ((D	and-Trade regulations prohibits disclosure of any auction-
		General Order ("GO") 66-D	related information. Violation of Section 95914 may subject
		1= GGD 0 0=014() (1	SDG&E to penalties by the California Air Resources Board.
	(TI 2015 T . 1	17 CCR § 95914(c) (the	1 1111 An 1 A G 0 D 6D 15 01 004
	(The 2017 Total	"ARB Confidentiality	In addition, Attachments A, C & D of D.15-01-024 and
	Direct	Regulations")	Appendices A & B of D.15-10-032 require Auction-related information, forecasts of emissions intensity, forecasts of
	Compliance Obligation		greenhouse gas (GHG) costs, GHG transactions, compliance
	appears in the	Annual GHG Emissions and	instrument prices, weight average cost ("WAC") and other
	Testimony and	Associated Costs in	GHG information to be kept confidential.
	the 2013-2017	Template D-2 of D.14-10-	orro mormation to be kept confidencial.
	Recorded Total	033 and revised in D.15-01-	Additionally, the Protected Information also includes trade
	Direct	024	secret information because SDG&E's bidding/consignment
	Compliance		strategies contain "commercial value," which gives SDG&E "an
	Obligation appear	Template D-2 designates	opportunity to obtain a business advantage over competitors
	in Attachment G	forecasted and recorded	who do not know or use it."
	of this	Direct GHG Emissions	Did calling a late appear
	Application.)	Subtotal as confidential.	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
		Gov't Code §§6254(k),	Cap-and-Trade compliance costs for SDG&E and its end-use
		6254.7 (d), Evidence	ratepayers.
		Code 1060, Civil	
		Code §3426 et seq.	
8.	Indirect	D.08-04-023	The Protected Information is entitled to confidential treatment
	Purchases in	_ ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	under applicable law, including, but not limited to, the legal authority cited herein. The information does not expressly fall
	MWh and	D.14-10-033, D.16-08-024,	within any category of the IOU Matrix applicable to electric
	calculated	D.17-05-035, D.17-09-023,	procurement information, but is market-sensitive information.
	Emissions	Public Utilities Code	
		Section 454.5(g)	Among other things, 17 CCR Section 95914(c)(1) of the Cap-
		Carrat Onlar ("CO") (C.D.	and-Trade regulations prohibits disclosure of any auction-
		General Order ("GO") 66-D	related information. Violation of Section 95914 may subject
		17 CCD 8 05014/ \\/1	SDG&E to penalties by the California Air Resources Board.
	(The 2017	17 CCR § 95914(c) (the	In addition, Attachments, A. C. & D. of D. 15, 01, 004, and
	(The 2017 forecasted	"ARB Confidentiality	In addition, Attachments A, C & D of D.15-01-024 and Appendices A & B of D.15-10-032 require Auction-related
	Indirect	Regulations")	information, forecasts of emissions intensity, forecasts of
	Purchases in		greenhouse gas (GHG) costs, GHG transactions, compliance
	MWh and	Annual GHG Emissions and	instrument prices, weight average cost ("WAC") and other
	calculated	Associated Costs in	GHG information to be kept confidential.
	Emissions appear	Template D-2 of D.14-10-	
	in the Testimony	033 and revised in D.15-01-	Additionally, the Protected Information also includes trade
	and the 2013-	024	secret information because SDG&E's bidding/consignment
	2017 Recorded	Tomplete D 2 designates	strategies contain "commercial value," which gives SDG&E "an
	calculated	Template D-2 designates forecasted and recorded	opportunity to obtain a business advantage over competitors
	Indirect Emissions appear	Torecasted and recorded	who do not know or use it."
	in Attachment G		
	и ашинини О	<u> </u>	

	C.1.	I II CHO E	Did called a did appear
	of this Application.)	Indirect GHG Emissions as confidential. Knowledge of the MWh makes discovery of the emissions possible, thus, the MWh are also confidential.	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.
		Gov't Code §§6254(k),	
		6254.7 (d), Evidence	
		Code 1060, Civil Code §3426 et seq.	
9.	Direct GHG Costs	D.08-04-023	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
		D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code	within any category of the IOU Matrix applicable to electric procurement information, but is market-sensitive information.
		Section 454.5(g)	Among other things, 17 CCR Section 95914(c)(1) of the Cap-
		General Order ("GO") 66-D	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.
	(The 2017 Direct GHG Costs appear in the	17 CCR § 95914(c) (the "ARB Confidentiality Regulations")	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
	Testimony and the 2013-2017 Recorded Direct GHG Costs	Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10-	greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost ("WAC") and other GHG information to be kept confidential.
	appear in Attachment G of this Application.)	033 and revised in D.15-01- 024	Additionally, the Protected Information also includes trade secret information because SDG&E's bidding/consignment strategies contain "commercial value," which gives SDG&E "an
	••	Template D-2 designates forecasted and recorded Direct GHG Costs as	opportunity to obtain a business advantage over competitors who do not know or use it."
		confidential.	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
		Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil	Cap-and-Trade compliance costs for SDG&E and its end-use ratepayers.
10	Estimated	Code §3426 et seq. D.08-04-023	The Protected Information is entitled to confidential treatment
10.	Indirect GHG	D.00-04-023	under applicable law, including, but not limited to, the legal
	Costs	D.14-10-033, D.16-08-024,	authority cited herein. The information does not expressly fall within any category of the IOU Matrix applicable to electric
		D.17-05-035, D.17-09-023, Public Utilities Code	procurement information, but is market-sensitive information.
		Section 454.5(g)	Among other things, 17 CCR Section 95914(c)(1) of the Cap-
		General Order ("GO") 66-D	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

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(The 2017 estimated Indirect GHG Costs	17 CCR § 95914(c) (the "ARB Confidentiality Regulations")	information, forecasts of emissions intensity, forecasts of greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost ("WAC") and other
appear in the	Regulations)	GHG information to be kept confidential.
Testimony and the 2013-2017 Recorded estimated Indirect GHG Costs appear in Attachment G of	Annual GHG Emissions and Associated Costs in Template D-2 of D.14-10- 033 and revised in D.15-01- 024	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."
this Application.)	Template D-2 designates forecasted and recorded Indirect GHG Costs as confidential.	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.
	Gov't Code §§6254(k), 6254.7 (d), Evidence Code 1060, Civil Code §3426 et seq.	
11. GHG Quarterly	D.08-04-023	The Protected Information is entitled to confidential treatment
Auction Revenue	D.14-10-033, D.16-08-024, D.17-05-035, D.17-09-023, Public Utilities Code Section 454.5(g)	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-
	General Order ("GO") 66-D	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.
	17 CCR § 95914(c) (the "ARB Confidentiality Regulations")	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
(The 2017 GHG	1a. of Attachment A of D.14-10-033 and revised in D.15-01-024	instrument prices, weight average cost ("WAC") and other GHG information to be kept confidential.
Quarterly Auction Revenue appear in the Testimony.)	1a. makes the following confidential: "AB 32 GHG auction participation." Although Annual Auction Revenues are public,	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."
	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	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.
	Gov't Code §§6254(k),	

	6254.7 (d), Evidence	
	Code 1060, Civil	
	Code §3426 et seq.	
12. Emissions	D.08-04-023	The Protected Information is entitled to confidential treatment
Intensities		under applicable law, including, but not limited to, the legal
	D.14-10-033, D.16-08-024,	authority cited herein. The information does not expressly fall within any category of the IOU Matrix applicable to electric
	D.17-05-035, D.17-09-023,	procurement information, but is market-sensitive information.
	Public Utilities Code	procurement information, but is market sensitive information.
	Section 454.5(g)	Among other things, 17 CCR Section 95914(c)(1) of the Cap-
		and-Trade regulations prohibits disclosure of any auction-
	General Order ("GO") 66-D	related information. Violation of Section 95914 may subject
	17 CCD \$ 05014(a) (the	SDG&E to penalties by the California Air Resources Board.
	17 CCR § 95914(c) (the "ARB Confidentiality	In addition, Attachments A, C & D of D.15-01-024 and
	Regulations")	Appendices A & B of D.15-10-032 require Auction-related
	Regulations)	information, forecasts of emissions intensity, forecasts of
(The 2017-2019	The GHG Confidential Information Matrix in	greenhouse gas (GHG) costs, GHG transactions, compliance instrument prices, weight average cost ("WAC") and other GHG information to be kept confidential.
forecasted Emissions Intensities appears in	Attachment A of D.14-10-033 and revised in D.15-01-024	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
Attachment G of	The Metrix makes the	who do not know or use it."
this Application.)	The Matrix makes the following confidential: "Forecast of GHG Emissions Intensity"	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
	Gov't Code §§6254(k),	ratepayers.
	6254.7 (d), Evidence	
	Code 1060, Civil	
	Code §3426 et seq.	