Proceeding No.: A.17-04-
Exhibit No.:
Witness: Cynthia Fang

PREPARED DIRECT TESTIMONY OF

CYNTHIA FANG

ON BEHALF OF

SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

April 14, 2017

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I. OVERVIEW AND PURPOSE

The purpose of this testimony is to present San Diego Gas & Electric Company's ("SDG&E") rate recovery proposals for the Application for Approval of its 2018 forecasts of (1) the Energy Resource Recovery Account ("ERRA") revenue requirement, which includes greenhouse gas ("GHG") costs; (2) the Competition Transition Charge ("CTC") revenue requirement; (3) the Local Generation ("LG") revenue requirement; and (4) the San Onofre Nuclear Generation Station ("SONGS") Unit 1 Offsite Spent Fuel Storage Cost revenue requirement and the sum of 2015 Local Generating Balancing Account ("LGBA") activity recorded to the LGBA presented in the testimony of SDG&E witness Sheri Miller.

In addition, this testimony presents SDG&E's 2018 proposed rates for: (1) GHG Allowance return to customers, specifically the Small Business Volumetric Return Rate and the Residential California Climate Credit ("CCC"); (2) vintaged Power Charge Indifference Adjustment ("PCIA") rates; and (3) rate components for the Green Tariff Shared Renewables ("GTSR") Program, which includes rates for the Green Tariff ("GT") program and the Enhanced Community Renewables ("ECR") program.

This testimony is organized according to the following:

1. **Section II – 2018 Rate Impacts to Reflect Recovery of Updated Revenue Requirements for ERRA, CTC, LG, and SONGS;**
2. **Section III – 2018 Rates for the Return of GHG Allowance Revenues;**

3. **Section IV – 2018 PCIA Rates;**

4. **Section V – 2018 Rates for SDG&E's GTSR Program;**

5. **Section VI – Summary and Relief Requested; and**

6. **Section VII – Qualifications.**

II. 2018 RATE IMPACTS TO REFLECT RECOVERY OF UPDATED REVENUE REQUIREMENTS FOR ERRA, CTC, LG, AND SONGS

SDG&E requests the recovery in rates of the following 2018 revenue requirements[1] presented in the direct testimony of SDG&E witness Sheri Miller:

1. 2018 ERRA Revenue Requirement of $1,281.976 million ($1,297.545 million including FF&U) for recovery of energy procurement costs, which include GHG costs, associated with serving SDG&E's bundled service customers;[2]
2. 2018 CTC Revenue Requirement of $16.133 million ($16.329 million including FF&U) for recovery of above-market costs associated with CTC-eligible resources from all customers;[3]
3. 2018 LG Revenue Requirement of $167.882 million ($169.921 million including FF&U) for the recovery of net costs associated with resources approved by the California Public Utilities Commission ("Commission") for Cost Allocation Mechanism ("CAM") treatment for recovery from all benefiting customers, including

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[1] The revenue requirement figures in this testimony exclude franchise fees and uncollectible expenses ("FF&U") unless otherwise noted.

[2] SDG&E does not propose any changes to the allocation of commodity to customer classes as part of this proceeding. The allocation of commodity costs to customer classes is currently pending in SDG&E's 2016 General Rate Case ("GRC") Phase 2 (Application ("A.")15-04-012).

[3] SDG&E does not propose any changes to the allocation of CTC to customer classes as part of this proceeding. The allocation of CTC to customer classes is currently pending in SDG&E's 2016 GRC Phase 2 (A.15-04-012).

all bundled service, Direct Access ("DA") and Community Choice Aggregation ("CCA") customers,[4] and includes recovery of balances recorded to LGBA of $0.491 million[5] ($0.497 million including FF&U); and

4. 2018 SONGS Unit 1 Offsite Fuel Storage Revenue Requirement of $1.073 million ($1.086 million including FF&U) for the recovery of costs associated with the spent fuel storage costs.[6]

Table 1 below compares the currently effective revenue requirements to the 2018 proposed revenue requirements discussed above and the GHG Allowance revenues eligible for return to customers through electric rates discussed in more detail below in Section III.

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[4] In Decision ("D.") 13-03-029, the Commission authorized SDG&E to implement the LGC rate component, which is designed to recover new generation costs for local reliability that are deemed to be subject to the CAM policy adopted in D.06-07-029 and D.11-05-005, as a per kilowatt hour non-bypassable charge from all benefiting customers including all bundled service, DA and CCA customers.

[5] Consistent with D.06-07-029, LGC is as a per kilowatt hour charge developed by allocating the net costs among all customer classes based on the 12-month coincident peak ("12 CP") demand methodology, including bundled, DA and CCA customers, and then dividing the resulting customer class revenue by current authorized sales by customer class. SDG&E does not propose any changes to the allocation of LGC to customer classes as part of this proceeding. The allocation of LGC to customer classes is currently pending in SDG&E's 2016 GRC Phase 2 (A.15-04-012).

[6] D. 15-12-032 authorized SDG&E to recover the costs of SONGS Unit 1 Offsite Spent Fuel Storage through its ERRA proceeding.

Table 1 - ERRA, CTC, LG, SONGS, and GHG Revenue Requirements Included in Rates ($000)

Line	Description	Current Authorized Revenue Requirement[7]		Proposed Revenue Requirement		Change from Current[8]	Change (%)
		w/o FF&U	w/ FF&U	w/o FF&U	w/ FF&U	w/ FF&U	w/ FF&U
1	ERRA[9]	$1,340,912	$1,357,197	$1,281,976	$1,297,545	($59,652)	-4.4%
2	CTC	$23,397	$23,681	$16,133	$16,329	($7,352)	-31.0%
3	LG	$42,989	$43,511	$167,391	$169,424	$125,913	289.4%
4	SONGS	$1,026	$1,038	$1,073	$1,086	$48	4.6%
5	LGBA Balance	$5,384	$5,449	$491	$497	($4,952)	-90.9%
6	**Subtotal**	$1,413,708	$1,430,877	$1,467,065	$1,484,882	$54,005	3.8%
	GHG Allowance Revenues Eligible for Return to Customers[10]						
7	Small Business Volumetric Return		($2,702)		($3,905)	($1,203)	44.5%
8	Residential CCC		($77,866)		($82,750)	($4,885)	6.3%
9	Subtotal		($80,568)		($86,655)	($6,087)	7.6%
10	**Total[11]**		$1,350,309		$1,398,227	$47,918	3.5%

Table 2 below presents the class average rate impacts associated with the revenue requirements presented in Table 1 above. SDG&E is requesting rate recovery of those revenue requirements beginning January 1, 2018. The net $47.918 million (including FF&U) increase from the currently effective revenue requirements would increase the system average rate by 0.171 cents per kilowatt hour ("kWh"), or 0.77%. Without the Residential Semi-Annual CCC, the system average rate would increase by 0.195 cents per kWh, or 0.87%.

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7 Authorized by D.16-12-053 and effective 3-1-17 per AL 3034-E/E-A.
8 Differences may not equal due to rounding.
9 Includes GHG costs.
10 The Emission-Intensive and Trade-Exposed ("EITE") revenue return is not included in rates.
11 Sums may not equal due to rounding.

Table 2 – Illustrative Rate Impacts from 2018 ERRA, CTC, LG, SONGS, and GHG Revenue Requirements

Customer Classes	Current Effective Rates[12] (¢/kWh)	Proposed Rates (¢/kWh)	Change (¢/kWh)	Change (%)
Residential	24.990	25.175	0.185	0.74%
Small Commercial	23.928	24.132	0.204	0.85%
Medium and Large Commercial and Industrial	19.850	20.009	0.159	0.80%
Agriculture	17.735	17.727	(0.008)	-0.05%
Streetlighting	19.917	20.114	0.197	0.99%
System	22.122	22.293	0.171	0.77%

III. RATES FOR RETURN OF THE GHG ALLOWANCE REVENUES

In compliance with D.12-12-033, the GHG allowance revenues eligible for return to customers is based on the GHG Allowance Revenues forecast of $88.414 million ($89.488 million including FF&U) presented in the testimony of SDG&E witness Jennifer Montanez, adjusted for the following:

1. Reconciliation of 2016 year-end recorded/forecasted with 2016 year-end actuals recorded in GHG Revenue Balancing Account ("GHGRBA") presented in the testimony of SDG&E witness Sheri Miller of $0.560 million (including FF&U);
2. GHG expenses related to customer outreach and education and administrative costs presented in the testimony of SDG&E witness Rick Janke of $0.188 million ($0.190 million including FF&U) that will be recorded in the GHG Customer Outreach and Education Memorandum Account ("GHGCOEMA") and the GHG Administrative Costs Memorandum Account ("GHGACMA"); and

[12] Effective 3-1-17 per AL 3034-E/E-A.

3. Clean Energy and Energy Efficiency program costs including Multifamily Affordable Housing Solar Roofs Program of $1.326 million ($1.342 million including FF&U) presented in the testimony of SDG&E witness Jennifer Montanez.

Table 3 below provides the current authorized and proposed GHG Allowance revenues to determine the GHG Allowance revenues eligible for return to customers.

Table 3 – GHG Allowance Revenues[13] Eligible for Return to Customers

	Current Authorized[14] ($000)	**Proposed ($000)**	**Change ($000)**	**Change (%)**
GHG Allowance Revenues	($85,466)	($88,414)	($2,948)	3.4%
Interest	$97	$26	($71)	-73.3%
GHG Expenses[15]	($2)	$188	$190	-9,188.7%
Clean Energy/Energy Efficiency Program Costs	$1,282	$1,326	$44	3.4%
FF&U	($1,014)	($1,055)	($41)	4.1%
Prior Year GHGRBA Revenue Return True-Up[16]	$3,775	$560	($3,216)	-85.2%
GHG Allowance Revenues Eligible for Return to Customers	($81,328)	($87,370)	($6,042)	7.4%

OP 1 of D.12-12-033 directed the Investor Owned Utilities ("IOUs") to distribute GHG allowances revenues eligible for return to customers in the following manner:[17]

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[13] All values exclude FF&U unless otherwise noted.
[14] Authorized by D.16-12-053 and effective 3-1-17 per AL 3034-E/E-A.
[15] GHG Expenses include utility outreach and administrative costs, including IT billing and program management costs, as well as statewide outreach costs.
[16] D.14-10-033 Finding of Fact ("FOF") 15 allows utilities to use a balancing account to maintain a record of allowance revenues.
[17] Consistent with D.15-07-001 Ordering Paragraph ("OP") 18, the Residential Volumetric Return is no longer applicable.

1. **Emissions-Intensive and Trade-Exposed ("EITE")** entities will receive an annual, fixed-amount on-bill credit based on Commission calculations, discussed below;

2. **Small Business Volumetric Return** is intended to offset the rate impacts of the Cap-and-Trade program in the electricity rates of small businesses, defined as entities with monthly demand not exceeding 20 kilowatts ("kW") in more than three months in a twelve-month period,[18] through a volumetrically calculated rate adjustment and is described in more detail below; and

3. **Residential CCC** for the distribution of all remaining GHG Allowance revenues to residential customers on an equal per residential account basis delivered as a semi-annual, on-bill credit and is described in more detail below.

1. EITE

D.15-01-024 states "[o]nce EITE customers have begun receiving an EITE return, the forecast return is based on the recorded prior-year revenue returned to EITE customers."[19] In 2016, EITE customers began to receive EITE returns in the amount of $0.715 million. 2017 EITE returns have not yet been provided to EITE customers. As such, the adjustment to GHG Allowance Revenues eligible for return to customers in 2018 reflects an assumed return to EITE customers of $0.715 million.[20]

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[18] D. 12-12-033 OP 1 (B).
[19] D.15-01-024, Attachment D, page 5.
[20] This reflects the 2016 EITE returns without FF&U. This will be updated in the November update to reflect 2017 returns to date.

2. Small Business Volumetric Return

OP 1 of D.12-12-033 defines small businesses are defined as non-residential customers on a general service or agricultural tariff with monthly demand not exceeding 20 kW for more than three months in a twelve-month period. This includes customers from SDG&E's Small Commercial, Medium and Large Commercial and Industrial, and Agricultural customer classes. Pursuant to OP 1 of D.12-12-033 small businesses are entitled to receive allowance revenue returns that will offset the rate impacts of GHG costs subject to an assistance factor that determines the amount of transition assistance small business customers will receive from GHG Allowance revenues. D.13-12-002 modified the assistance factors applied to small businesses to provide a smoother transition path for the decline in level of assistance level and avoid discrete and large changes, which can be problematic for small business customers from year to year[21] and is presented in Table 4 below, with the 2018 effective factor of 70%.

Table 4 – Small Business Assistance Factors

Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Assistance Factor (%)	100	100	100	90	80	70	60	50

To comply with OP 1 of D.12-12-033, which directs the utilities to offset the rate impacts of the cap-and-trade program in the electricity rates of small businesses, the credit is volumetrically-calculated based on the amount of GHG-related costs that are allocated to the defined bundled small business customers adjusted for the assistance factor, differentiated by customer class. Pursuant to OP 7 of the same decision, the same credit that is applied to bundled

[21] D.13-12-002, pp. 1-2 and COL 2.

small business customers, differentiated by customer class, will apply to DA and CCA small business customers to ensure they are treated equally. In addition, the Small Business Volumetric return is presented as a bill credit applied to the delivery component of the small business customers' bill and appears as separate line-item referred to as the Small Business California Climate Credit. Table 5 below presents the Small Business Volumetric Return rates by customer class and the associated GHG Allowances revenues that will be returned.

Table 5 – Small Business Volumetric Return

Customer Class	**Rate Impact of GHG Costs (¢/kWh) (A)**	**Small Business Volumetric Return (¢/kWh) (B)**	**Assistance (%) (C= -B/A)[22]**
Small Commercial	0.00331	(0.00231)	70%
M/L C&I	0.00300	(0.00210)	70%
Agriculture	0.00346	(0.00242)	70%
Small Business Allowance Revenues for Return ($000[23])	$5,452	($3,905)	

3. Residential CCC

The remaining GHG Allowance revenues eligible for return to customers will be allocated to all residential customers on an equal cents-per-household basis, which will be credited to customers semi-annually as a bill credit, also known as the Residential Semi-Annual CCC.[24] Table 6 below presents the remaining GHG Allowance revenues available for return through the Residential CCC of $82.750 million, which results in a semi-annual Residential CCC of $31.23.

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[22] May not equal due to rounding.
[23] Includes FF&U.
[24] D.15-07-001, Conclusions of Law ("COL") 29 stated that beginning January 1, 2016, the GHG offset for upper tier residential customers should be eliminated and that the revenue return allocated to residential customers will consist solely of the semi-annual CCC.

Table 6 – GHG Allowance Revenues[25] Eligible for Return through Residential CCC

	Current Authorized ($000)[26]	Proposed ($000)	Change[27] ($000)	Change (%)
GHG Allowance Revenues Eligible for Return	$81,328	$87,370	$6,042	7.4%
EITE Customer Return Revenues	($760)	($715)	$46	-6.0%
Small Business Volumetric Return Revenues	($2,702)	($3,905)	($1,203)	44.5%
Residential CCC Revenues	$77,866	$82,750	$4,885	6.3%
Residential Semi-Annual CCC ($/ semi-annual)	($29.62)	($31.23)	($1.61)	5.4%

IV. 2018 PCIA RATES

In D.06-07-030, modified by D.07-01-030, the Commission established authority for the PCIA component of the Cost Responsibility Surcharge ("CRS") to preserve bundled customer indifference by ensuring departing load customers pay their share of the cost responsibility associated with the above-market costs based on an administrative benchmark, also known as the "indifference amount", of the utilities' total procurement resource portfolio.[28]

In D.08-09-012, the Commission continued to refine the indifference amount methodology to better protect bundled customer indifference by introducing the requirement to "vintage" departing load customers, based on their departure date, when determining the customers' cost responsibility for the "total portfolio" of resources.[29] Assigning customers to a vintage ensured

[25] Includes FF&U.
[26] Authorized by D.16-12-053 and effective 3-1-17 per AL 3034-E/E-A.
[27] Difference may not equal due to rounding.
[28] In D.07-01-025, the Commission adopted the PCIA methodology for CCA customers. Although there are currently no CCA parties in SDG&E's service territory, SDG&E is required to provide PCIA rates for potential CCA customers.
[29] D.08-09-012 OP 10.

that departing load customers pay their share of above-market costs associated with the specific vintage portfolio of resources that were acquired to serve them prior to their departure from bundled load service in order to better protect bundled customer indifference. After departure from bundled service, the departing load customers are not required to pay for above-market costs associated with utility procurement commitments after that load departs.

In D.11-12-018, the Commission adopted further refinement to the indifference amount methodology recognizing that regulatory and industry changes had impacted energy procurement practices. Changes to the Market Price Benchmark ("MPB") methodology, used to determine the "above-market" value of electricity, now included the addition of a renewables portfolio standards adder ("RPS adder") to better reflect the market value of renewable resources and a revised resource adequacy capacity adder ("CAP adder"), which resulted in vintage MPBs.[30] The vintage portfolio of resources calculation was revised to better reflect time-of-use load variations and also removed load-related costs incurred by the California Independent System Operator ("CAISO") that are then charged to the utilities.

On April 5, 2017, Southern California Edison Company, Pacific Gas and Electric Company, SDG&E (collectively, the Joint Utilities); and the Sonoma Clean Power Authority, Peninsula Clean Energy, Silicon Valley Clean Energy, and Marin Clean Energy (collectively, the joint Community Choice Aggregators or CCAs), jointly submitted a Petition for Modification of D. 06-07-030 to implement the proposed common workpapers requirement resulting from PCIA Working Group efforts directed by the Commission in D.16-09-044. Included in these common workpapers is the elimination of the vintage MPB, among other things. SDG&E has reflected

[30] D.11-12-018 OP 2.

these workpaper changes as part of this filing. This testimony takes into account these various decisions and directives of the Commission.

1. Indifference Methodology

Under Commission rules,[31] departing load customers are responsible for their fair share of above-market costs, or an indifference amount, incurred by the utility on behalf of those customers when electric generation costs exceed the current market price, or market price benchmark. To maintain bundled customer indifference to the departure of SDG&E's customers to non-utility service, SDG&E calculates the indifference amount to determine the cost responsibility for DA, CCA and other departing load, specifically:

Indifference Amount = CTC + PCIA

The above-market costs for both the CTC and PCIA are determined using a MPB, a calculated proxy for the market value of electricity. This methodology is consistent with Commission directives, specifically D.11-12-018 and Resolution E-4475. CTC revenue requirements are addressed in the testimony of SDG&E witness Jennifer Montanez with rate impacts discussed above.

In this Application, SDG&E is proposing to update the currently effective vintage PCIA rates and to include the new vintage 2018 PCIA rates to account for customers' departing load in the second half of 2017. With respect to this 2018 ERRA proceeding, SDG&E's portfolio of resources, used to calculate the vintage 2018 indifference amounts and the resulting 2018 PCIA rates, will include applicable costs from SDG&E's:

- Forecasted 2018 ERRA, CTC, and LG revenue requirements;

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[31] California Public Utilities Code ("PUC") Section 365.2.

- Authorized 2018 Department of Water Resources ("DWR") Power Charge costs allocated to SDG&E; and
- SDG&E's authorized 2018 Non-Fuel Generation Balancing Account ("NGBA") revenue requirement.

However, the 2018 DWR and 2018 NGBA revenue requirements as well as the vintage 2018 MPBs are not available at the time of this filing.[32] Therefore, the 2017 DWR and 2017 NGBA revenue requirements, as well as the current MPBs,[33] were used in the preliminary calculation of the vintage 2018 PCIA rates in this testimony and will be updated in SDG&E's November Update filing of this proceeding.

2. Treatment of SONGS-related Costs

The PCIA is intended preserve bundled customer indifference and therefore intended to ensure that DA customers bear their share of above market "total portfolio" costs. As such, PCIA is determined on a "total portfolio" basis, taking into account both DWR and utility-procured generation resources. In D.08-09-012, which addressed the non-bypassable charges for new generation and related issues, the Commission stated "[f]urther, we determine that pre-restructuring resources [footnote 9] should continue to be included in the portfolio of resources used in determining any ongoing CTC and D.04-12-048 charges, once cost recovery of the DWR contracts ends."[34] Footnote 9 of this decision defines "pre-structuring resources" as "…current IOU resources that existed prior to March 31, 1998 and are not subject to ongoing CTC treatment. These resources consist principally of the IOUs' retained generation (i.e., hydro, coal and nuclear plants)." The "pre-restructuring resources" costs included in SDG&E's PCIA

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[32] SDG&E expects to update this testimony in November once that information is available.
[33] Per SDG&E AL 2981-E.
[34] D.08-09-012, p. 4.

calculations consist of two categories of SONGS-related expenses – regulatory asset and nuclear fuel. For this reason, SONGS-related costs need to be recovered in the PCIA to achieve bundled customer indifference.

PCIA rates are calculated on a prospective basis and do not incorporate any balancing account adjustment. Because there is not a mechanism in place to account for adjustments, the Commission approved the *DA Customer Ratemaking Consensus Protocol for SONGS Outages and Retirement* ("Consensus Protocol") in D.14-05-022 to govern the ratemaking treatment of SONGS-related adjustments for DA customers. The Consensus Protocol is intended to ensure that the impacts of the SONGS outages and closure are borne by both bundled and DA customers equitably and symmetrically (upward or downward).

The vintage 2018 PCIA rates which include SONGS-related costs are presented in Attachment A of this testimony.

V. GREEN TARIFF SHARED RENEWABLES PROGRAM

In D.15-01-051, the Commission began the implementation of Senate Bill ("SB") 43, which set a formal requirement for the three California IOUs to implement the Green Tariff Shared Renewables Program ("GTSR"). SB 43 was signed into law by Governor Brown on September 28, 2013. The GTSR Program is intended to 1) expand access to "all eligible renewable energy resources to all ratepayers who are currently unable to access the benefits of onsite generation," and 2) "create a mechanism whereby institutional customers…Commercial customers…and groups of individuals...can meet their needs with the electrical generation from eligible renewable energy resources."[35]

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[35] California Public Utilities Code ("PUC") Section 2831 (b) and (f).

Findings of Fact ("FOF") 136 of D.15-01-051, states that "Each IOU's revenue requirements and associated forecasts of fuel and purchase power…are currently reviewed and approved in the annual ERRA forecast proceeding…" and COL 59 states that "Coordinating review of true-up of GTSR and credits with the ERRA process will provide greater certainty that entries to the GTSR accounts are stated correctly and are consistent with Commission decisions." Accordingly, the commodity-related costs and credits as well as the resulting rates applied to GTSR customers are presented in this 2018 ERRA Forecast application. Pursuant to D.15-01-051, "[t]he [Renewable Power Rate ("RPR")][36] and other components of GTSR rates should be updated annually"[37] and "[c]hanges to the rates can be accomplished through Advice Letters."[38] As such, SDG&E will be filing a subsequent Tier 2 Advice Letter following the November update to reflect the updated 2018 GTSR Program rate components, to be effective with SDG&E's 2018 Consolidated Filing to Implement January 1, 2018 Electric Rates, assuming Commission approval of this filing in time for inclusion in the Consolidated Filing.

The GTSR program includes two rate options: (1) a Green Tariff ("GT") rate and (2) an Enhanced Community Renewables ("ECR") rate. The GT program provides customers with the ability to purchase energy that contains a higher percentage of renewable power than offered under other scheduled service. The ECR program provides customers with the ability to purchase renewable energy from community-based projects directly through the developers of those projects ("Developer").

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[36] SDG&E's RPR is referred to as the Cost of Local Solar.
[37] D.15-01-051, COL 53.
[38] *Id.* COL 51.

The rate components for the GT and ECR rates[39] associated with these programs are as follows:

1. **Cost of Local Solar** for the GT rate is the price that customers pay for the commodity portion which is based on the cost of the incremental local solar projects that the Utility procures for the program. The 2018 cost of local solar component of the GT is $93.68/MWh as described in the direct testimony of SDG&E witness Jennifer Montanez[40].
2. **Renewable Energy Commodity Price[41]** for the ECR rate is equal to the portion of the renewable generating facility's output that the customer has subscribed to, multiplied by the amount per kWh that the Utility has agreed to pay the developer ("Renewable Energy Commodity Price"). These values are part contract agreement with the Developers and therefore not addressed in this proceeding.
3. **Renewable Energy Value Adjustment[42]** for the GT and ECR rates calculates the relative value of energy and capacity for the solar resources supporting the GT and ECR programs compared to the Utility's current portfolio of resources serving all bundled load. The 2018 Renewable Energy Value Adjustment component is not yet available,[43] therefore the 2017 Renewable Energy Value Adjustment of ($0.00316/kWh) was used in the preliminary calculation of GT and ECR rates.

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[39] All GT and ECR rate components include FF&U unless otherwise noted.
[40] SDG&E witness Jennifer Montanez shows the cost of local solar as $92.56/MWh, which is without FF&U. $93.68/MWh includes FF&U.
[41] Formerly the Solar Commodity Price.
[42] D.16-05-006 at page 27 changed the name from Value of Solar Energy and Capacity Adjustment to Renewable Energy Value Adjustment to reflect the ability of multiple renewable technology types to participate in the GTSR Program.
[43] This value will be updated in the November update.

4. **Administrative Costs** for the GT and ECR rates includes incremental costs such as labor and non-labor for program management and policy support, Green-e certification, and information technology ("IT") costs. Per Resolution ("R.") E-4734 which approved the administrative costs for the GT and ECR programs, the charge for administrative costs remains at $0.00385/kWh for GT and $0.00343/kWh for ECR.

5. **Marketing Costs** for the GT and ECR rates includes incremental costs needed to implement the marketing plan. These costs are composed of labor (spent for planning, managing to the marketing plan, and community outreach) and non-labor tactical implementation (i.e. creative design, production, translation and mailing fees). Per Resolution ("R") E-4734 which approved the marketing costs for the GT and ECR programs, the marketing charge remains at $0.00117/kWh for GT and $0.00013/kWh for ECR.

6. **Renewable Energy Commodity Credit**[44] for the ECR rate assumes the customer has already purchased the rights to this output from the developer, the Utility concurrently assigns a credit to the customer equal to Renewable Energy Commodity Price ("Renewable Energy Commodity Credit"). These values are part of the contract agreement with the Developers and therefore not addressed in this proceeding.

7. **SDG&E's Average Commodity Cost Adjustment** for the GT and ECR rates is intended to approximate the avoided commodity costs and is based on SDG&E's

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[44] Formerly known as Solar Commodity Credit.

class average commodity cost at the time of this filing which is credited to the customer and is discussed in more detail below.

8. **Western Renewable Energy Generation Information System ("WREGIS")** for the GT and ECR rates may include, but is not limited to, the annual WREGIS fee and a per megawatt-hour ("MWh") certificate fee that is charged as Renewable Energy Credits ("RECs") are retired. As discussed in the direct testimony of Jennifer Montanez, the WREGIS costs are $0.00001/kWh[45].

9. **CAISO GMC** for the GT and ECR rates include CAISO charges are associated with grid management charges ("GMC") and energy scheduling. The 2018 CAISO costs, as described in the direct testimony of Jennifer Montanez, are $0.00071/kWh[46].

10. **Renewable Integration Costs ("RIC")** for the GT and ECR rates are currently set at $0/kWh as a placeholder.[47] A RIC Charge that is greater than $0/kWh may be imposed in the future on a going-forward basis only to all Customers served under this Schedule, unless otherwise directed by the Commission.

11. **PCIA** for the GT and ECR rates is intended to serve as a reasonable proxy for the GTSR customer indifference charge and is discussed further below.

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[45] SDG&E witness Jennifer Montanez shows WREGIS as $0.00001/kWh, which is without FF&U. $0.00001/kWh includes FF&U.

[46] SDG&E witness Jennifer Montanez shows CAISO GMC as $0.00070/kWh, which is without FF&U. $0.00071/kWh includes FF&U.

[47] D.15-01-051 recognized that "[b]ecause GTSR is made up of renewable resources, the cost of renewables integration is of particular importance." (p.115) D.15-01-051 further directed the IOUs to set a RIC charge of $0 as a placeholder. Within 60 days of a decision setting a RIC charge for ratepayers, the IOUs must file a Tier 3 Advice Letter setting forth how the RIC charge will be allocated to customers (both new and existing). (p.119).

Table 7 – GT Rate Components

	GT Rate Components	
	Current Authorized[48]	**Proposed**
Renewable Power Rate[49]	$0.09368	$0.09368
Renewable Energy Value Adjustment[5]	($0.00316)	($0.00316)
Administrative Costs	$0.00385	$0.00385
Marketing Costs	$0.00117	$0.00117
SDG&E's Average Commodity Cost Adjustment	See Table 9 below	
WREGIS	$0.00001	$0.00001
CAISO GMC	$0.00071	$0.00071
Renewable Integration Cost	$0.00000	$0.00000
PCIA	See Table 10 below	

Table 8 –ECR Rate Components

	ECR Rate Components	
	Current Authorized[51]	**Proposed**
Renewable Energy Commodity Price[52]	Refer to Contract	
Renewable Energy Value Adjustment[5]	($0.00316)	($0.00316)
Administrative Costs	$0.00343	$0.00343
Marketing Costs	$0.00013	$0.00013
Renewable Energy Commodity Credit[54]	Refer to Contract	
SDG&E's Average Commodity Cost Adjustment	See Table 9 below	
WREGIS	$0.00001	$0.00001
CAISO GMC	$0.00071	$0.00071
Renewable Integration Cost	$0.00000	$0.00000
PCIA	See Table 10 below	

SDG&E's Average Commodity Cost Adjustment is used as a proxy to reflect SDG&E's avoided commodity costs, which ideally would be reflected in the average commodity rate by

[48] Authorized by D.16-12-053 and effective 3-1-17 per AL 3034-E/E-A.
[49] Formerly known as Cost of Local Solar per SDG&E AL 3006-E.
[50] Formerly known as Value of Solar Energy and Capacity Adjustment per SDG&E AL 3006-E.
[51] Authorized by D.16-12-053 and effective 3-1-17 per AL 3034-E/E-A.
[52] Formerly known as Solar Commodity Price.
[53] Formerly known as Value of Solar Energy and Capacity Adjustment per SDG&E AL 3006-E.
[54] Formerly known as Solar Commodity Credit.

customer class. To better reflect the avoided commodity cost, the average commodity rate is adjusted for ERRA-related balances given that such balances can cause the average commodity rate to differ from the costs. For this reason, SDG&E is substituting the ERRA component of the average commodity rate by customer class with an ERRA forecast value in order to adjust for ERRA Balances to better approximate avoided costs, as authorized in D.15-01-051. SDG&E's 2018 adjusted class average commodity rate for the GTSR rate components are based on effective average commodity rate by customer class at the time of this filing adjusted for ERRA-related balances as shown in the Table 8 below. These values will be updated in November to reflect the most current values at that time.

Table 9: GT and ECR Rate Components – Class Average Commodity Adjustment Rates ($/kWh)

	Current Authorized[55]	Proposed
Residential	($0.10688)	($0.09814)
Small Commercial	($0.10433)	($0.09641)
M/L C&I	($0.10472)	($0.09630)
Agricultural	($0.08743)	($0.08028)
Streetlighting	($0.07055)	($0.06477)

The PCIA component of the GT and ECR rates comprises the indifference adjustment or the above market cost of the Utility's existing procurement portfolio and is calculated annually. D.15-01-051 FOF 100states, "The PCIA calculated for DA and CCA customers provides a reasonable proxy for the GTSR customer indifference charge". Accordingly, the utilities were directed to use vintaged PCIA as a proxy for the indifference adjustment.[56] This is a cost that is ultimately born by all customers for resources that were procured on their behalf. GT and ECR

[55] Effective 3-1-17 per AL 3034-E/E-A.
[56] D.15-01-051 at 103.

customers' PCIA rates will be billed by customer class using the 2018 non-continuous rates discussed above and identified below.

Table 10: GT and ECR Rate Components – PCIA ($/kWh)

	Current Authorized[57]	Proposed
Residential	$0.02095	$0.01871
Small Commercial	$0.01805	$0.01920
M/L C&I	$0.01594	$0.01492
Agricultural	$0.01173	$0.01058
Streetlighting	$0.00000	$0.00000

Per Resolution E-4734, GTSR participants are subjected to a termination fee if they cancel their subscription after the 60 day cooling off period[58] beginning on the effective date of the subscription, but prior to the minimum one year agreement term. The GT and ECR Termination Fee is comprised of the above-market costs associated with the participant's subscription of solar energy plus any administrative and marketing costs associated with the participant's subscription. The above market costs are calculated as the present value of the forecasted difference between the Solar Commodity Price and the sum of MPB in the PCIA calculation, the solar value adjustment, and green attributes.

The GTSR Termination Fees vary by class as follows:

- GTSR Residential Termination Fee: one termination fee for the residential class to make it easier for customers to understand and to provide cost certainty in the event of a customer desiring an early termination. The current GT Residential Termination Fee is $70.00 and the current ECR Residential Termination Fee is

[57] Effective 3-1-17 per AL 3034-E/E-A.
[58] Per SDG&E AL 2745-E.

$80.00.[59] SDG&E is not proposing a change to the Residential Termination fee at this time.

- GTSR Non-Residential Termination Fee: due to the wide potential variation in usage and corresponding subscription level for the commercial customers. SDG&E calculates the GTSR Non-Residential Termination Fee using above-market costs associated with the customer's subscription of solar energy plus administrative and marketing costs.

Table 11 below presents the termination fees for both the GT and ECR programs for non-residential customers.

Table 11: GTSR Non-Residential Termination Fees ($/kWh)

	Current Authorized[60]	**Proposed**
GT	$0.03550	$0.01861
ECR	$0.04023	$0.01849

The detailed components of the GT and ECR rates and the total GT and ECR rates are presented in Attachments B and C of this testimony.

VI. SUMMARY AND RELIEF REQUESTED

Consistent with the rate recovery proposed in this testimony, SDG&E requests the following relief in the Commission's forthcoming decision in this proceeding:

1. Approve for recovery in rates: (1) the 2018 ERRA revenue requirement, which includes GHG costs, of $1,297.545 million; (2) the 2018 CTC revenue requirement of $16.329 million; (3) the 2018 LG revenue

[59] Per SDG&E AL 3006-E
[60] Per SDG&E AL 3006-E.

requirement of $169.424 million; (4) the SONGS revenue requirement of $1.086 million and (5) the balances recorded to the LGBA of $0.497 million.

2. Approve SDG&E's 2018 proposed rates for:

   a. GHG Allowance return to customers, specifically the EITE return, the Small Business Volumetric Return Rate presented in Table 5 and the Residential Semi-Annual CCC of $31.23

   b. 2018 PCIA rates presented in Attachment A; and

   c. 2018 rate components for the GTSR Program, which includes rates for the GT program and ECR program presented in Attachment B and C.

This concludes this prepared direct testimony.

VII. QUALIFICATIONS

My name is Cynthia Fang and my business address is 8330 Century Park Court, San Diego, California 92123. I am the Rate Strategy and Analysis Manager in the Customer Pricing Department of San Diego Gas and Electric Company (SDG&E). My primary responsibilities include the development of cost-of-service studies, determination of revenue allocation and electric rate design methods, analysis of ratemaking theories, and preparation of various regulatory filings and overseeing the electric load analysis, electric demand forecasting and electric rate strategy for SDG&E. I began work at SDG&E in May 2006 as a Regulatory Economic Advisor and have held positions of increasing responsibility in the Electric Rate Design group. Prior to joining SDG&E, I was employed by the Minnesota Department of Commerce, Energy Division, as a Public Utilities Rates Analyst from 2003 through May 2006. In 1993, I graduated from the University of California at Berkeley with a Bachelor of Science in Political Economics of Natural Resources. I also attended the University of Minnesota where I completed all coursework required for a Ph.D. in Applied Economics. I have previously submitted testimony before the Federal Energy Regulatory Commission and have submitted testimony and testified before the California Public Utilities Commission and Minnesota Public Utilities Commission.

SAN DIEGO GAS & ELECTRIC COMPANY - ELECTRIC DEPARTMENT
2018 ERRA Forecast

Attachment A

Power Charge Indifference Adjustment Rates for Direct Access and Community Choice Aggregation Customers[1]

($/kWh)

Customer Class	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Residential	0.00229	0.00194	0.00223	0.00248	0.00250	0.00356	0.00659	0.00577	0.00553	0.00870	0.01543	0.01711	0.01704	0.01707	0.01769	0.01769	0.01769	0.01871
Small Commercial	0.00235	0.00199	0.00228	0.00254	0.00257	0.00365	0.00676	0.00592	0.00567	0.00893	0.01583	0.01756	0.01748	0.01752	0.01815	0.01815	0.01815	0.01920
Medium & Large C&I	0.00183	0.00154	0.00178	0.00197	0.00199	0.00284	0.00526	0.00460	0.00441	0.00694	0.01230	0.01364	0.01359	0.01362	0.01411	0.01411	0.01411	0.01492
Agriculture	0.00130	0.00109	0.00126	0.00140	0.00141	0.00201	0.00373	0.00327	0.00313	0.00492	0.00872	0.00968	0.00963	0.00966	0.01000	0.01000	0.01000	0.01058
Streetlighting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
System Total	0.00203	0.00171	0.00197	0.00219	0.00222	0.00315	0.00584	0.00512	0.00490	0.00771	0.01367	0.01516	0.01509	0.01513	0.01567	0.01567	0.01567	0.01658

[1] As noted in Section IV, SDG&E has implemented the proposed common workpapers for PCIA rates, which do not distinguish between Continuous and Non-Continuous customers. SDG&E's PCIA rates are applicable to both DA and CCA customers, although SDG&E currently does not have CCA customers.

SAN DIEGO GAS & ELECTRIC COMPANY - ELECTRIC DEPARTMENT
2018 ERRA Forecast

Attachment B

Green Tariff (GT)

Line		$/kWh	$/kWh	$/kWh	$/kWh	$/kWh
	Rate Components	Residential	Sm Commercial	M/L C&I	Ag	Streetlighting
1	Cost of Local Solar	0.09368	0.09368	0.09368	0.09368	0.09368
2	Renewable Energy Value Adjustment	(0.00316)	(0.00316)	(0.00316)	(0.00316)	(0.00316)
3	Administrative Costs	0.00385	0.00385	0.00385	0.00385	0.00385
4	Marketing Costs	0.00117	0.00117	0.00117	0.00117	0.00117
5	SDG&E's Average Commodity Cost Adjustment	(0.09814)	(0.09641)	(0.09630)	(0.08028)	(0.06477)
6	WREGIS	0.00001	0.00001	0.00001	0.00001	0.00001
7	CAISO GMC	0.00071	0.00071	0.00071	0.00071	0.00071
8	Renewable Integration Cost	0.00000	0.00000	0.00000	0.00000	0.00000
9	***GT Differential*** *(Line 1 through Line 8)*	(0.00186)	(0.00013)	(0.00003)	0.01599	0.03151
10	PCIA	0.01871	0.01920	0.01492	0.01058	0.00000
11	***Total*** *(Line 9 + Line 10)*	0.01685	0.01907	0.01490	0.02657	0.03151

SAN DIEGO GAS & ELECTRIC COMPANY - ELECTRIC DEPARTMENT
2018 ERRA Forecast

Attachment C

Enhanced Community Renewables (ECR)

Line	Rate Components	$/kWh Residential	$/kWh Sm Commercial	$/kWh M/L C&I	$/kWh Ag	$/kWh Streetlighting
1	Renewable Energy Commodity Price	Refer to Contract				
2	Renewable Energy Value Adjustment	(0.00316)	(0.00316)	(0.00316)	(0.00316)	(0.00316)
3	Administrative Costs	0.00343	0.00343	0.00343	0.00343	0.00343
4	Marketing Costs	0.00013	0.00013	0.00013	0.00013	0.00013
5	Renewable Energy Commodity Credit	Refer to Contract				
6	SDG&E's Average Commodity Cost Adjustment	(0.09814)	(0.09641)	(0.09630)	(0.08028)	(0.06477)
7	WREGIS	0.00001	0.00001	0.00001	0.00001	0.00001
8	CAISO GMC	0.00071	0.00071	0.00071	0.00071	0.00071
9	Renewable Integration Cost	0.00000	0.00000	0.00000	0.00000	0.00000
10	***ECR Bill Credit*** *(Line 1 through Line 9)*	(0.09702)	(0.09529)	(0.09518)	(0.07916)	(0.06365)
11	PCIA	0.01871	0.01920	0.01492	0.01058	0.00000
12	**Net Adjustment to Customer for SDG&E Bill Only** *(Line 10 + Line 11)*	(0.07830)	(0.07609)	(0.08026)	(0.06858)	(0.06365)