Application of SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E) For Authority To Implement Optional Pilot Program To Increase Customer Access To Solar Generated Electricity

And Related Matter

Application Nos. 12-01-008, 12-04-020 (consolidated)
Exhibit No.: _____

UPDATED PREPARED DIRECT TESTIMONY OF

HILLARY HEBERT

CHAPTER 4

ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

DECEMBER 6, 2013

TABLE OF CONTENTS

I. OVERVIEW AND PURPOSE 1

A. General Overview 1

B. Conformance to Senate Bill 43 (Wolk) 2

II. *SUNRATE* RESOURCE PROCUREMENT 4

A. Process for Procuring *SunRate* Generation 4

B. Project Eligibility for *SunRate* 6

1. Eligibility: 7

C. Existing RPS Portfolio Will Serve Early *SunRate* Customers 8

D. *SunRate* Pricing 9

1. *SunRate* Customers' Solar Commodity Price 9

2. SDG&E's *SunRate* Procurement Price Cap 10

III. *SHARE THE SUN* RESOURCE PROCUREMENT 11

A. Overview of Procurement Process for *Share the Sun* 11

B. Eligibility Requirements for *Share the Sun* Developers 12

C. Pricing of for *Share the Sun* Projects 16

IV. INTERACTION WITH SDG&E'S RPS PROCUREMENT OBLIGATIONS 17

A. Subscriptions Provide Participants with Green Energy 17

B. Impact to RPS Goals 18

V. INTERACTION WITH SDG&E'S RESOURCE PLANNING 21

A. *SunRate*'s Impact on Procurement Planning 21

B. Commitment Periods Help SDG&E Manage Resource Planning 21

VI. STATEMENT OF QUALIFICATIONS 23

UPDATED PREPARED DIRECT TESTIMONY OF

HILLARY HEBERT

ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

CHAPTER 4

connected.....to the sun

I. OVERVIEW AND PURPOSE

A. General Overview

With respect to the "*connected.....to the sun*"[1] options proposed in this Application, my testimony describes how San Diego Gas & Electric Company ("SDG&E" or the "utility") will procure solar energy and how the procurement and use of solar energy in these programs interacts with SDG&E's Renewable Portfolio Standard ("RPS") requirements. Specifically, my testimony outlines the project eligibility requirements and processes for procuring projects that will serve *SunRate*^{sm} and *Share the Sun*^{sm} customers, as well as the impacts that this procurement could have to SDG&E's RPS goals. While projects procured for *connected.....to the sun* are currently limited to solar, SDG&E may choose to expand the program to include all renewable technology types as the program matures.

[1] As described in the updated prepared testimony of James P. Avery and Aaron Franz submitted with this Application, *connected.....to the sun* is the umbrella term under which SDG&E will offer its customers two tariffed options to access solar electricity. The options are "*SunRate*," under which customers may elect to have a portion of their electric commodity costs derived from the portfolio of local solar generating projects under contract to SDG&E, and "*Share the Sun*," which gives customers the opportunity to contract directly with solar providers for electricity to be delivered to the customer by SDG&E. Citations to testimony herein will be to the updated prepared testimony submitted in support of this Application, unless otherwise indicated.

B. Conformance to Senate Bill 43 (Wolk)

As stated in the testimony of James Avery (Ch.1) and as ordered in ALJ Clark's scoping memo and ruling issued in this proceeding on October 25, 2013, my testimony has been updated[2] to conform to the provisions of California Senate Bill ("SB") 43, which will become law on January 1, 2014. I summarize these changes below:

- § 2833 (c):[3] Legislation requires that a participating utility use commission approved tools and mechanisms to procure green tariff shared renewable projects. SDG&E has clarified that should this application be approved after the issuance of the 2014 Renewable Auction ("RAM") mechanism solicitation, it will consider holding an additional RAM solicitation to procure for *SunRate*, and/or SDG&E may also utilize the Feed-in Tariff ("FiT") program or utility scale renewable solicitations to procure for *SunRate*.
- § 2833 (d): The *SunRate* and *Share the Sun* program capacity caps have been updated to reflect SDG&E's proportionate share of the statewide limitation for customer participation in the green tariff shared renewables programs required by SB 43.

---

[2] I originally submitted prepared testimony in support of this A.12-01-008 on January 17, 2012. A scoping memo issued in that matter (November 1, 2012, p.7) granted SDG&E's request for workshops, and ordered SDG&E to submit updated testimony to reflect workshop input. Accordingly, I submitted updated prepared testimony on May 10, 2013. Subsequently, SDG&E's application was consolidated with that of PG&E (A.12-04-020). A scoping memo issued in the consolidated proceeding on October 25, 2013, which orders SDG&E to submit revised testimony to support its proposed programs. This revised prepared testimony, along with SDG&E's other testimony described herein, is submitted pursuant to the October 25 scoping memo. The testimony is revised from that served May 10, 2013, in three regards: (1) to address compliance with Senate Bill ("SB") 43; (2) to reflect program modifications based on further consideration, including input from other interested parties; and (3) edits aimed to improve presentation.

Citations to testimony herein are to the updated testimony in this matter served December 6, 2013 unless otherwise indicated.

[3] Citations to statutory sections are to SB 43 as codified in the Public Utilities Code, unless otherwise indicated.

Testimony has been updated to explain that capacity will be increased above the initial 10 MW pilot amounts based on customer interest until subscriptions reach SDG&E's program cap.

- § 2833 (d)(1)(A): Legislation includes a 100 MW state-wide carve-out for communities identified by the California Environmental Protection Agency ("CalEPA"). SDG&E has clarified that its share of the 100 MW state-wide carve-out will be determined by applying SDG&E's percentage share of statewide retail sales and shall be reserved for facilities no larger than 1 MW. SDG&E will procure projects for this carve-out via the FiT mechanism, and will allow one project per period that is located in an area ranked among the top 20% of communities as identified by CalEPA pursuant to statute requirements to move to the front of its queue so that it can execute a PPA, until it has met its carve-out target.
- § 2833 (e)-(f): SB 43 encourages the support of diverse procurement and the goals of Commission General Order 156, as well as procurement of resources that are located in reasonable proximity to enrolled participants. The *SunRate* procurement strategy has been clarified to explain that if two projects are similarly priced, location and diverse business enterprise status will be used as tie-breakers.
- § 2833 (t): Legislation allows a utility to subtract all green tariff shared renewable program generation from its total retail sales when calculating its RPS targets. SDG&E has revised its testimony to state that it will deduct all generation associated with *connected.....to the sun* subscriptions from its total retail sales when calculating its RPS targets.

II. *SunRate* RESOURCE PROCUREMENT

SDG&E proposes to procure a limited quantity of local solar RPS resources[4] to support a tariff providing customers with access to local solar generation. The procurement process, project eligibility requirements and pricing will be based on Commission-approved renewable procurement programs, in order to provide administrative efficiencies. The renewable energy credits ("RECs") subscribed under the tariff that exceed each customer's current RPS targets will be retired by SDG&E on behalf of the customer and not counted towards SDG&E's RPS compliance. This REC treatment ensures that the customer, not SDG&E, can claim the benefit of the customer's solar procurement under the program. In addition, this REC treatment will ensure that the program results in additional renewable procurement.

A. Process for Procuring *SunRate* Generation

SDG&E proposes to use SDG&E's existing Renewable Auction Mechanism[5] ("RAM") process as the vehicle for procuring *SunRate* generation projects.[6] The Commission developed the RAM program in 2011 for the purpose of streamlining RPS procurement. The program is open to projects located within the service territories of Pacific Gas & Electric, Southern California Edison ("SCE") or SDG&E, and must be sized between 3 and 20 megawatts ("MW"). SDG&E chooses the least cost bids to meet its mandated RAM procurement targets based on each project's bid price as adjusted by adders that reflect transmission costs and deliverability

---

[4] "RPS" refers to California's "Renewables Portfolio Standard" established pursuant to California Public Utilities Code ("P.U. Code") § 399.11, under which California investor-owned utilities ("IOUs") are obliged to procure 33% of their electric energy from renewable resources by 2020.

[5] The Commission implemented the RAM program through the following decisions and resolutions: Decision ("D.") 10-12-048 and Resolutions E-4144, E-4489, E-4546, and E-4582.

[6] At this point, RAM is the most appropriate Commission-approved procurement mechanism, but SDG&E will procure *SunRate* capacity through the most appropriate method as the Commission amends current programs or creates new ones.

benefits. For the purpose of procuring for *SunRate*, SDG&E will use the projects' location or Diverse Business Entities ("DBE") status as a tie breaker for projects that are similarly priced. Winning bidders must execute a standard, non-modifiable RAM Power Purchase Agreement ("PPA") with SDG&E. The resulting PPA will then be filed for approval with the Commission via a Tier-2 advice letter pursuant to the RAM rules.

SDG&E intends to use this RAM procurement process to acquire projects for *SunRate*. SDG&E will target up to an additional 10 MW of solar procurement from local projects during the first RAM solicitation that is scheduled to occur once this application is approved. Selecting a 10 MW (or smaller) *SunRate* project through a solicitation that permits projects sized up to 20 MW could create shortlisting challenges. SDG&E's goal is to select the least expensive bids that it needs to meet any existing RAM procurement requirements, and then select the next least expensive local solar project that meets SDG&E's expected *SunRate* capacity needs. For example, if the next least expensive bid is a 20 MW solar project in SCE's service territory, SDG&E would move down to the next bid, and would continue in this fashion until it reaches a bid located in SDG&E's service territory that is 10 MW or smaller. At this point, SDG&E proposes that the bid be selected only if the price does not exceed a price that is $4 higher than the weighted average price for shortlisted solar RAM bids (discussed in more detail in section II(D)(2) below).

SDG&E intends to pool the solar projects from the first RAM solicitation following approval of this application, and use a portion of each to serve the initial 10 MW of *SunRate* customers. The starting point of 10 MW is appropriate given SDG&E's smaller procurement target. It will: (1) enable the procurement of additional renewable energy; (2) ensure that this procurement does not out-pace customer interest; (3) increase seller diversity; and (4) reduce the

exposure of non-participating customers. This procurement amount is also compliant with SB 43's requirement that projects not exceed 20 MW. Following the first program year, the rate of procurement by year will be determined by evaluating customer interest in the program. An advice letter stating the capacity SDG&E intends to procure to meet the level of customer interest in *SunRate* will be submitted each year until the program cap is reached, prior to the date upon which SDG&E expects the authorized program MWs to be fully subscribed. The advice letter will also state the capacity allocated to each of the *connected.....to the sun* options.

SDG&E's RAM program is currently scheduled to conclude with its fifth solicitation in the summer of 2014.[7] If the authorized RAM solicitations have concluded prior to the point at which SDG&E is ready to initiate procurement on behalf of *SunRate* customers, SDG&E will utilize other Commission-approved procurement programs like the renewable Feed-in-Tariff ("FiT") or utility scale renewable solicitations, or hold an additional RAM solicitation, to procure *SunRate* capacity. *SunRate* will create a sustainable market for offsite (utility scale) renewable projects by resulting in the procurement of renewable generation above the current RAM, and potentially FiT (if this mechanism is used for *SunRate* procurement), program targets.

B. Project Eligibility for *SunRate*

SunRate projects must meet the same eligibility requirements as all RAM projects, with some additional requirements necessary for the *SunRate* program. The most current RAM program eligibility requirements are set forth in Appendix D of Resolution E-4546.[8] The critical elements, including those criteria that are specific to *SunRate* projects, are outlined below:

---

[7] Resolution E-4582 issued May 9, 2013.

[8] The RAM program is designed to evolve through an advice letter process outlined in D.10-12-028. SDG&E expects that any new RAM requirements will apply to *SunRate* projects as well, but reserves the right to request exceptions or modifications to such rules through the advice letter process.

1. Eligibility:

- Minimum Size: 3 MW.[9]
- Project Vintage: *SunRate* project must be new build (not existing facilities).[10]
- Location: Within the service territory of SDG&E.[11]
- Project and Transaction Limit: 10 MW.[12]
- Seller Concentration: IOUs have the discretion to apply a seller concentration limit after the bids are received.
- Site Control: Bidder must show 100% site control through (a) direct ownership, (b) lease or (c) an option to lease or purchase that may be exercised upon award of the RAM contract.
- Development Experience: Bidder must show that at least one member of the development team has (a) completed at least one project of similar technology and capacity or (b) begun construction of at least one other similar project.

[9] § 2833 (d)(1)(A) includes a 100 MW carve-out for facilities that are no larger than 1 MW and that are located in areas ranked among the top 20% of communities as identified by CalEPA pursuant to statute requirements. SDG&E's share of this 100 MW will be determined by applying SDG&E's percentage share of statewide retail sales. SDG&E will utilize the FiT program to procure for these projects as the RAM program does not accept bids from projects of this size, and will follow the same procedures as described under section III of my testimony.

[10] This eligibility requirement differs from the RAM program, which allows both new and existing projects to participate.

[11] SDG&E filed Advice Letter 2437-E December 18, 2012 requesting that the RAM program be expanded to include projects located in the Imperial Valley ("IV") region that are dynamically scheduled to the California Independent System Operator Corp. ("CAISO") at the Imperial Valley substation. If the Commission approves this request, SDG&E would solicit projects for *SunRate* that are located either within SDG&E's service territory or in IV and dynamically scheduled to the CAISO at the IV Substation.

[12] This eligibility requirement differs from the RAM program, which allows projects up to 20 MWs.

- Commercialized Technology: Bidder must show the project is based on commercialized technology (*e.g.*, is neither experimental, research, demonstration, nor development).
- Interconnection Application: Bidder must show that it has filed its interconnection application. In addition, bidder must have completed a System-Impact Study, Cluster Study Phase 1, or have passed Fast Track screens.

C. Existing RPS Portfolio Will Serve Early *SunRate* Customers

To the extent customers wish to participate in *SunRate* before the projects procured for the program can begin deliveries, SDG&E proposes to serve such customers from its existing pool of Southern California RAM and FiT solar projects (the "*SunRate* Pool").[13] SDG&E must expand this pool beyond the boundaries of its service territory because it has not yet procured sufficient volumes within such boundaries through either the RAM or FiT program to meet the needs of *SunRate* customers. SDG&E expects approximately 10 MW of solar FiT and RAM projects located with SDG&E's service territory to begin deliveries by the middle of 2014, while it expects nearly 44 MW of capacity from Southern California FiT and RAM projects to be delivering solar energy to SDG&E in the same timeframe. If the projects currently in the *SunRate* Pool experience delays such that an insufficient volume of energy is available to serve *SunRate* customers when the program begins, SDG&E will delay the full enrollment of *SunRate* customers until sufficient volumes are available. Using this pool of Southern California RAM and FiT solar projects allows SDG&E to launch the program in 2014 instead of delaying

[13] The *SunRate* Pool includes projects located in Southern California in the service territories of SDG&E, Southern California Edison, and, potentially the Imperial Valley (if SDG&E's advice letter requesting modification of the RAM project location requirement is approved).

customer participation into 2016, which is when new *SunRate* projects procured through the RAM would likely begin deliveries.[14]

D. *SunRate* Pricing

1. *SunRate* Customers' Solar Commodity Price

The price that customers pay for the *SunRate* commodity[15] should be based on the cost of the incremental local solar projects that SDG&E procures for *SunRate* through the RAM process. For example, if the average price of the projects procured for *SunRate* at the time a customer signs up for the program is $100/MWh, then that customer should pay $100/MWh for its solar commodity. If such projects have not yet begun delivering when *SunRate* customers begin participating in the program, the price should be based on the average price of the projects in the existing *SunRate* Pool that have achieved full commercial operation when the program begins. If all of the projects currently in the *SunRate* Pool (listed in the table below) have achieved full commercial operation, then the expected time of day-adjusted, weighted average price would be approximately $89.

[14] If SDG&E is able to procure *SunRate* projects in a June 2014 RAM solicitation, such projects would have 24 months to achieve commercial operations, making them available to begin deliveries in the middle of 2016.

[15] The discussion of pricing in this testimony is focused only on the price of the solar commodity. Discussion of the total cost to participating customers is discussed in the updated testimony of Chris Yunker.

Expected *SunRate* Pool

Project Name	MW	Estimated MWh/Yr	Location
Con Dios Solar 33 - CRE (FIT)	1.5	4,776	Valley Center, CA
Victor Mesa Linda B-RAM	5.0	9,501	Victorville, CA
Western Antelope Dry Ranch-RAM	10.0	19,003	Lancaster, CA
SunEdison Cascade (RAM)	18.5	55,897	Sun Fair, CA
Zodiac Power Solar A - CRE (FIT)	1.5	2,600	Potrero, CA
Zodiac Solar E - CRE (FIT)	1.0	1,633	Potrero, CA
Fresh Air Energy Buckman Springs PV 1 (FIT)	1.5	2,512	Pine Valley, CA
Fresh Air Energy Buckman Springs PV 2 (FIT)	1.5	2,512	Pine Valley, CA
Fresh Air Energy Viejas Blvd PV 1 (FIT)	1.5	2,512	Descanso, CA
Fresh Air Energy II (Viejas Blvd PV 2) (FIT)	1.5	2,232	Descanso, CA
Total	**43.5**	**103,178**	

If some of these projects are delayed, the average price of the pool could vary depending on which projects have achieved commercial operation by the time program begins. This structure ensures that participating customers pay a rate that reflects the price of the projects that are serving their needs.

2. SDG&E's *SunRate* Procurement Price Cap

SDG&E intends to cap the price of any new *SunRate* procurement at the price that is $4 higher than the weighted average price of solar bids that are shortlisted in the RAM solicitation in which the *SunRate* project(s) is procured. This price cap ensures that the price for *SunRate* capacity does not exceed the market range. SDG&E may have to skip over the next least expensive RAM bid on the list to get to a project that is appropriate for *SunRate*, but it will not go so far down the list that the price exceeds the market range.

If the market fluctuates to the point that the existing price cap is no longer viable, SDG&E will request an adjustment to the cap through the Commission's advice letter process. SDG&E will justify the need for the change in the advice letter and request the Commission's approval of an appropriate adjustment.

III. *SHARE THE SUN* RESOURCE PROCUREMENT

SDG&E proposes to contract for a limited quantity of local solar resources to support *Share the Sun.* This program is intended to provide an additional solar alternative for customers and to expand the potential customer base for solar developers.

A. Overview of Procurement Process for *Share the Sun*

For the purposes of providing bundled ratepayers renewable energy through *Share the Sun*, SDG&E will procure up to 10 MW of solar energy from new projects located within SDG&E's service territory. SDG&E will rely upon the FiT process for *Share the Sun* procurement. The initial FiT decision (D.12-05-035, as modified by D.13-01-041) is the basis for the eligibility criteria outlined in this testimony, with modifications made where appropriate to reflect issues that are specific to *Share the Sun*.

SDG&E will procure 3 MW for *Share the Sun* in each bi-monthly FiT program period until it has procured up to 10 MW for *Share the Sun*. As SDG&E explained in comments to the most recent FiT PD, and as the Commission agreed in the subsequently adopted FiT Decision (D.13-05-034), offering more than 3 MW in the first bi-monthly program period would result in SDG&E offering substantially all of its program capacity in that period, which would not be in the best interest of ratepayers. The same logic applies here. Therefore, SDG&E will retain this mechanism for the *Share the Sun* program to procure 3 MW of capacity per bi-monthly period until the cumulative total reaches 10 MW. For example, assuming SDG&E has 9 MW in its initial FiT queue, some of which have indicated an interest in building a *Share the Sun* project and some of which have not, SDG&E will select projects on a first come first served basis in each bi-monthly period until it has fulfilled both its FiT capacity requirements and its 3 MW *Share the Sun* target. If there is a FiT applicant with a project located in an area ranked among the top 20% of communities as identified by CalEPA pursuant to statute requirements, SDG&E

will allow, on a first-come-first-served basis, for the project to advance in the queue so that they are awarded a PPA. For example, if this project holds Queue number 15 and SDG&E intends to award FiT PPAs to projects in Queue positions 1 through 5, SDG&E would instead award PPAs to projects in Queue positions 15, 1, 2, 3, and 4. SDG&E will allow one such project to advance in the queue per bi-monthly period until the quota for these projects has been met.

SDG&E will execute a PPA with these *Share the Sun* developers and commit to purchasing all output from the project in order to facilitate project financing and construction. This PPA will, in large part, mirror the standard contract that is ultimately approved by the Commission for the FiT. Once the project achieves commercial operation, the developer will work to subscribe the capacity to customers.

B. Eligibility Requirements for *Share the Sun* Developers

Developers who wish to participate in *Share the Sun* must submit the same application materials as typical FiT participants, along with an indication that they intend to participate in *Share the Sun*. During each bi-monthly period, SDG&E will select, on a first come-first served basis, 3 MW of eligible projects to participate in its *Share the Sun* program. *Share the Sun* developers must meet two sets of eligibility criteria; one set pertaining to the developer's ability to successfully interact with SDG&E's customers and another pertaining to the developer's ability to build a renewable facility. The eligibility criteria pertaining to the developer's ability to successfully interact with customers is addressed in the updated testimony of Aaron Franz. The eligibility criteria pertaining to the developer's ability to build a renewable facility will mirror those required for FiT projects, with some additional requirements necessary for the *SunRate* program. SDG&E encourages DBE projects to participate in the FiT program and will also encourage them to participate in the *Share the Sun* program. Pursuant to D.12-05-035, as modified by D.13-01-041, requirements for respondent developers will include:

Resource:

1. Resources must be California Energy Commission-certifiable as an eligible renewable resource;
2. The Respondent must register the project with the Federal Energy Regulatory Commission ("FERC") as a Qualifying Facility;
3. Resources must be new facilities;[16] and
4. Delivering partial output from a large system shall not be permitted.

Project Size:

1. 3 MW or less.
2. Developers must sell the full output of their facility to SDG&E. Excess sales structures will not be permitted unless SDG&E agrees to do so at is sole discretion. Nameplate capacity must not exceed 3 MW, even for excess sales projects.[17]

Location/Site Control:

1. Project must be located within the service territory of SDG&E;
2. The respondent must attest that the project is the only one being developed by respondent or respondent's affiliates on any single or contiguous piece of property.
3. The respondent must have site control for the duration of 10, 15 or 20-year power purchase agreement. Site control may be evidenced by documentation of:

[16] This requirement is not included in D.12-05-035, as modified by D.13-01-041.

[17] This requirement differs from D.12-05-035, as modified by D.13-01-041. Because of the added complexity involved with customer participation in *Share the Sun* facilities, SDG&E must review the viability of any potential excess sales structures.

a. direct ownership;

b. a lease; or

c. an option to lease or purchase.

Interconnection:

1. The respondent must have completed a System Impact Study, Phase 1 Study, or have passed WDAT[18] Fast Track screens or Supplemental Review. Evidence of the most recent completed study or equivalent results from the Fast Track process must be provided.

2. The project must be interconnected to the distribution system, as opposed to the transmission system, and must be sited near load, meaning sited in an area where interconnection of the proposed generation to the distribution system requires $300,000 or less of upgrades to the transmission system.

Developer Experience:

1. The respondent and/or members of the project development team must have experience. Respondents and/or members of the project development team must provide evidence of having completed, or begun construction, of a project using a technology similar to the offered technology, that is at least the same size as the project being proposed.

Project Start Date:

1. Developers must be able to bring the project on line within 24 months of contract execution.

[18] SDG&E's FERC Wholesale Distribution Access Tariff.

Other Incentives Not Permitted for the Project Being Offered:

1. Respondents shall not have sought California Solar Initiative ("CSI") or Self-Generation Incentive Program ("SGIP") funds for the projects being offered within the 10 years immediately preceding the respondent's application for the *Share the Sun* program, and shall not plan to seek CSI or SGIP for the entire term of the contract;
2. Respondents shall not have participated in the Net Energy Metering ("NEM") Program for the projects being offered and shall not plan to participate in the NEM Program for the projects being offered for the entire term of the contract.

Seller Concentration Limit:

1. The maximum cumulative capacity of executed contracts with a respondent affiliated with any one parent company, or using any one development team, EPC contractor, or panel supplier under the *Share the Sun* program cannot exceed 5 MW. A seller concentration limit was proposed in the original FiT decision, but was removed in the most recent FiT Decision (D.13-05-034). This requirement will be maintained for *Share the Sun* in an effort to ensure that multiple respondents have the opportunity to participate in the program and to avoid a situation in which a single respondent is able to secure all *Share the Sun* capacity.

Bid Fee:

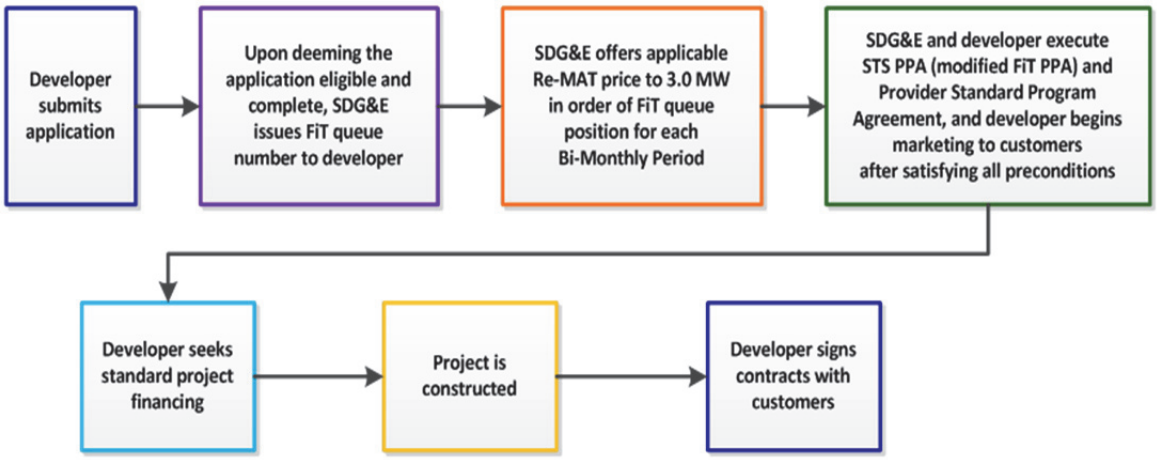
1. Respondent shall submit a non-refundable payment of $2/kW when applying to participate in the *Share the Sun* Program.

C. Pricing of for *Share the Sun* Projects

The contract pricing for eligible *Share the Sun* projects will be set at the then applicable Re-MAT price[19] for both subscribed and unsubscribed portions of *Share the Sun* projects for the first 3 years of the delivery term. This price will be determined based on the Re-MAT program starting price of $89.23/MWh, as escalated by the market adjusting method, both of which have been approved by the Commission. Since unsubscribed portions of the *Share the Sun* projects are purchased by bundled ratepayers, using the same price for like projects will avoid gaming issues between the two programs because of price differentials. In order to incent developers to secure customer participation, SDG&E will pay the lower of the Default Load Aggregation Point ("DLAP") price[20] or applicable Re-MAT price for unsubscribed portions of the project after the first 3 years of the delivery term. A schematic summary of the *Share the Sun* procurement process is provided below:

[19] D.12-05-035, as modified by D.13-01-041, created the renewable market adjusting tariff ("Re-MAT"), a mechanism that allows the FIT price to adjust based on market conditions.

[20] SDG&E's DLAP price reflects the costs that SDG&E avoids in procuring short term wholesale energy. The DLAP price is the load weighted average price of all the locational marginal prices located inside the CAISO-defined DLAP. In short, SDG&E's DLAP acts as a proxy for the utility's service territory. The CAISO Fifth Replacement FERC Electric Tariff defines Default LAP as "The LAP [Load Aggregation Point] defined for the TAC [Transmission Access Charge] Area at which all Bids for Demand shall be submitted and settled, except as provided in Sections 27.2.1 and 30.5.3.2." *See id.,* Appendix A (Master Definitions).



IV. INTERACTION WITH SDG&E'S RPS PROCUREMENT OBLIGATIONS

A. Subscriptions Provide Participants with Green Energy

SDG&E will retire all of the RECs associated with the energy subscribed under the *connected.....to the sun* programs on behalf of all participating customers. In other words, SDG&E will not apply any subscribed program RECs towards its RPS requirements. SDG&E will also subtract all generation associated with *connected.....to the sun* from its total retail sales when calculating its RPS targets, consistent with SB 43. Retiring the RECs in this manner will permit participants to claim in a very real sense that their subscriptions contribute to the demand for, and the development of, additional local solar generation in addition to RPS mandates.

To track the RECs associated with the customer's participation in the programs, SDG&E will create one sub-account per year for the *connected.....to the sun* programs as a part of its Western Renewable Energy Generation Information System ("WREGIS") account. Monthly, SDG&E will track and transfer the number of cumulative kWh related to the *connected.....to the sun* programs into the newly created *connected.....to the sun* WREGIS sub-account. SDG&E will retire the RECs that have accumulated within the *connected.....to the sun* program's WREGIS sub-account on an annual basis under the Utility Pricing Program Category currently

available through WREGIS. This category is separate and apart from the Provincial Report Category that WREGIS provides for RPS compliance reporting. The RECs from one category cannot be comingled with another, which provides customers with added assurance that the *connected.....to the sun* program RECs are attributed to the customer and not used for SDG&E's RPS compliance. SDG&E will include a statement in its annual RPS Compliance filing stating that the RECs for these programs that exceed the mandated RPS level were not used for RPS compliance. This statement will include the annual total of RECs for these programs that were retired in the prior year on behalf of customers. Concurrently with its annual RPS compliance filing, SDG&E will also generate, and post to its website, a Utility Pricing Program Category report from WREGIS summarizing the RECs retired for the *connected.....to the sun* programs in the prior year.

B. Impact to RPS Goals

SDG&E expects that the *connected.....to the sun* programs will have little impact to its RPS procurement obligations because it will strive to procure *connected.....to the sun* capacity in tandem with customer interest, and will mitigate the occurrence of any unsubscribed capacity as described below. For *Share the Sun* in particular, SDG&E has minimized the potential need to purchase unsubscribed energy by: (1) incentivizing developers to secure customer participation; and (2) requiring developers to provide proof of their ability to market to customers as an eligibility requirement for the program.

SB 43 is explicit in allowing SDG&E to apply unsubscribed generation to present and future RPS procurement obligations.[21] To that end, capacity that is procured for *connected.....to*

[21] Section 2833 (s): *A participating utility shall, in the event of participant customer attrition or other causes that reduce customer participation or electrical demand (footnote continued onto next page…)*

the sun but ultimately not subscribed by customers can be managed in the following ways: (1) used for unmet RPS requirements, including FiT or RAM obligations; (2) banked by SDG&E for future RPS compliance requirements; or (3) sold in the open market to, for example, utilities that are under-subscribed for RPS. Even in the worst case scenario where no customers choose to participate, the 20 MW of procurement proposed for SDG&E's pilot programs, or the total program capacity limit of 59 MW,[22] equates to approximately 0.2% or 0.7%, respectively, towards SDG&E's RPS goals for Compliance Period 3. While non-participating customers will pay for unsubscribed energy, the associated RECs will ultimately be applied towards meeting SDG&E's RPS requirements, thereby avoiding a cost shift.

Furthermore, even if *connected.....to the sun* procurement exceeds RPS requirements, voluntary procurement in excess of RPS requirements is contemplated by SDG&E's 2013 RPS Procurement Plan.[23] Any procurement associated with *connected.....to the sun* is within the normal range of procurement that SDG&E would typically do to manage potential

---

(...footnote continued from previous page) below generation levels, apply the excess generation from the eligible renewable energy resources procured through the utility's green tariff shared renewables program to the utility's renewable portfolio standard procurement obligations or bank the excess generation for future use to benefit all customers in accordance with the renewables portfolio standard banking and procurement rules approved by the commission.

[22] 59 MW is based on SDG&E's share of 2012 Bundled Retail Sales as a percentage of the total 2012 Bundled Retail Sales for California's 3 Investor Owned Utilities:

2012 Bundled Retail Sales:
SDG&E: 16,626,721 MWh (9.87%)
SCE: 75,596,658 MWh (44.88%)
PG&E: 76,205,120 MWh (45.25%)
Statewide Total: 168,428,499

Share of Statewide 600 MW SB 43 Target:
SDG&E (9.87%) = 59 MW
SCE (44.88%) = 269 MW
PG&E (45.25%) = 272 MW

[23] SDG&E 2013 RPS Procurement Plan Compliance Filing (Public Version) (December 4, 2013) Attachment A SDG&E 2013 RPS Plan, pp. 33-36.

underperformance of its RPS portfolio. Program procurement is expected to be subscribed by participating customers and to have little impact to non-participating customers. Program procurement that is unsubscribed is part of SDG&E's Voluntary Margin of Over Procurement ("VMOP")[24] that it will use to ensure RPS compliance. SDG&E's VMOP is designed to achieve its RPS goals with a "buffer" to account for unforeseen changes to either the RPS targets or deliveries.[25] Because it is more difficult to predict retail sales and project performance in future years, SDG&E's VMOP is higher in those years.[26] The VMOP for the second RPS compliance period (2014 – 2016), when the *connected.....to the sun* projects are expected to begin deliveries, is up to SGD&E's anticipated net long position at the time it filed the RPS Plan (December 2013).[27] Since that time, SDG&E has terminated multiple contracts, leaving room for additional procurement within its authorized VMOP. SDG&E is concerned with minimizing the impact of over procurement to our bundled customers, but must also respond to the desires of our customers to increase their contribution to environmental goals. As stated above and in the 2013 RPS Plan, SDG&E will make efforts to mitigate over procurement if necessary through selling and banking. In addition, SDG&E emphasizes in its 2013 RPS Procurement Plan that its

---

[24] The ALJ's Ruling in Rulemaking ("R.")11-05-005 (August, 2, 2012) (Attachment A, p. 6) provided that utilities could adopt a voluntary margin consistent with P.U. Code § 399.13 (a)(4)(D) as follows:

> Voluntary Margin of Over-procurement – The margin of over procurement necessary to account for project/forecasting risk in any year that the likelihood of not achieving compliance is called in question. The margin of over-procurement relates only to a voluntary margin of over procurement and not the statutory margin of procurement. This is different than the statutory margin of over-procurement which is already reflected in the risk-adjustments to portfolios to account for the likelihood or project failure or delay

[25] SDG&E 2013 RPS Procurement Plan Compliance Filing (Public Version) (December 4, 2013) Attachment 1, pp. 33-36.

[26] *Id*.

[27] *Id*., pp. 34-35.

voluntary over procurement strategy includes a limited volume of procurement associated with new programs that reflect the changing needs of our customers, such as *connected.....to the sun*.

It is also possible that the *SunRate* program could jeopardize SDG&E's ability to meet its RPS targets. If SDG&E makes a portion of its existing RPS generation available to *SunRate* customers during the interim period when *SunRate*-specific procurement is not yet built, SDG&E could fall short of its RPS goals because of this shifting of RPS generation to *SunRate* customers. Although this scenario is currently unlikely based on SDG&E's RPS position in the coming years, SDG&E requests that if it does fall short of RPS goals in any compliance period because of the *SunRate* program, that such shortfall be carried over to the following portfolio cycle without associated penalties.

V. INTERACTION WITH SDG&E'S RESOURCE PLANNING

A. *SunRate*'s Impact on Procurement Planning

For the *SunRate* program SDG&E will estimate total MWhs needed to serve *SunRate* customers based on their previous year's energy use. SDG&E will then use this estimate to ensure that the total volume of energy needed to serve *SunRate* customers does not exceed the 10 MW procured for the pilot program. Actual energy use at the end of the year, however, may exceed this 10 MW allocation. SDG&E will draw from its existing *SunRate* Pool to fulfill any unanticipated increase in customer energy usage that exceeds the volume of energy procured for the *SunRate* program. However, as the program expands, SDG&E must further address how to manage this risk. SDG&E will study this during the pilot and address it if and when it applies to expand the program.

B. Commitment Periods Help SDG&E Manage Resource Planning

To the extent SDG&E can encourage *connected.....to the sun* participants to sign up for longer commitment periods, it will be better able to plan for required resource procurement. To

this end, SDG&E will lock in the cost of the solar resource for each of the *SunRate* and *Share the Sun* programs only for the duration of the customer's commitment period. This is a critical element in establishing a sustainable program model. When a customer commits to participating in *connected.....to the sun* for a longer period of time,[28] SDG&E can take this solar requirement into consideration and incorporate it into the planning process. In exchange for this certainty, SDG&E will offer a fixed commodity price to bundled customers. If SDG&E offered a fixed price absent a commitment period, then the uncertainty in planning, or procurement risk, would be shifted to non-participating customers. While the *connected.....to the sun* pilot program is small today, it is still critical to incentivize customers to participate for longer periods of time, otherwise what is a program concession today can quickly become an entitlement whose cost is born by non-participating customers. Requiring a commitment in exchange for a fixed price will provide greater stability on which to grow the *connected.....to the sun* program.

This concludes my prepared direct testimony.

[28] As discussed in more detail in Aaron Franz's testimony, SDG&E will require a minimum subscription period of 1 year for each program, after which they may remain subscribed to the program on a month to month basis without a lock on their commodity price.

VI. STATEMENT OF QUALIFICATIONS

My name is Hillary Hebert and I am the Programs and Partnerships Manager for SDG&E's Origination and Portfolio Design group in its Electric and Fuels Procurement department. My business address is 8315 Century Park Court, CP21D, San Diego, California, 92123.

I am responsible for designing solicitations for utility scale renewable projects and for managing renewable solicitations such as the Renewable Auction Mechanism and the Feed-in-Tariff. I also monitor regulatory issues impacting procurement and work with the California Public Utilities Commission to provide feedback on such issues from the utility's perspective. I also manage regulatory aspects of SDG&E's investments in renewable projects. I have a B.A. in Urban Studies from the University of Minnesota and a J.D. from the University of Denver. Prior to joining SDG&E, I was an attorney with Holland & Hart, LLP where I represented wind developers in PPA negotiations and project financings. Since joining SDG&E in 2006, I have focused mostly on regulatory aspects of renewable procurement. I have not previously provided testimony to the Commission.