

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

Application 12-01-____
Exhibit No.: _____

**PREPARED DIRECT TESTIMONY OF
DAWN OSBORNE
CHAPTER 2
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY**

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

JANUARY 17, 2012



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1 **PREPARED DIRECT TESTIMONY OF**

2 **DAWN OSBORNE**

3 **CHAPTER 2**

4 *Connected.....to the sun.*

5
6 **I. INTRODUCTION**

7 My testimony describes SDG&E’s proposed pilot programs, termed “*SunRate*” and
8 “*Share the Sun*™”. These two offerings will be collectively branded under SDG&E’s
9 “*connected.....to the sun.*” umbrella name and will give all bundled customers the opportunity to
10 access solar power. My testimony includes a short introduction to “green pricing” concepts,
11 program overview, structure, enrollment process, marketing and outreach, and administration of
12 SDG&E’s proposal. In addition, my testimony will explain how these programs are intended to
13 grow and evolve based on customer participation. To implement the proposed *SunRate* and
14 *Share the Sun* pilot programs, SDG&E seeks the following authority from the Commission:

15 *SunRate* and *Share the Sun* pilot programs:

- 16 • Approval to implement the pilot programs based on the policies and guidelines
17 outlined in this testimony, which include the structure for establishing participant
18 costs and energy credits (as described in this testimony and the testimony of Chris
19 Yunker¹);
- 20 • Approval to adjust bundled ratepayers RPS² Responsibility (as described in testimony
21 of Chris Yunker).

¹ References to testimony herein are to the testimony submitted in support of this Application.

² Renewable Portfolio Standard pursuant to P.U. Code §§ 399.11 *et seq.*

1 *SunRate* pilot program:

- 2 • Approval for RPS compliance flexibility for *SunRate* (as described in the testimony
3 of Chris Yunker);

4 *Share the Sun* Pilot Program:

- 5 • A proceeding schedule that includes workshops with stakeholders to refine the
6 relationship between solar providers and customers.

7 My testimony is organized as follows (see table of contents for more detail):

- 8 • Section II – Industry Experience and SDG&E’s Own Research Suggest Customers
9 Will Support the Proposed Programs
- 10 • Section III – Description of SDG&E Pilot Programs;
- 11 • Section IV – Enrollment Process for Both Programs;
- 12 • Section V – Subscriptions Provide Participants with Green Energy;
- 13 • Section VI – Combined Programs - Customer Outreach & Participant
14 Communications;
- 15 • Section VII – Program Benefits;
- 16 • Section VIII – Program Expansion;
- 17 • Section IX – Program Timing
- 18 • Section X - Summary and Conclusion;
- 19 • Statement of Qualifications.

20 **II. INDUSTRY EXPERIENCE AND SDG&E’S OWN RESEARCH SUGGEST**
21 **CUSTOMERS WILL SUPPORT THE PROPOSED PROGRAMS**

22 **A. Green Pricing and Community Solar initiatives are supportive precedent**

23 Experience in the industry in the context of “green pricing” and “community solar”

24 suggests that there will be substantial customer interest in subscribing to one of the program

25 options offered in this application.

1 “Green pricing” is defined as an optional utility service that allows customers an
2 opportunity to support a greater level of utility company investment in renewable energy.³
3 Recently, the concept of community solar has emerged within the renewable energy sector,
4 whereby customers purchase or subscribe to the rights to the capacity of a portion of a
5 community solar system. In return, customers obtain a proportionate allocation of the system’s
6 output, which is then credited on their utility bill.⁴ SDG&E’s proposed pilots are similar to both
7 of these concepts while also containing some unique attributes.

8 The National Renewable Energy Laboratory’s (“NREL”) recent report, *Status and Trends*
9 *in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 Data)*, provides
10 a good overview of green pricing and community solar programs status today. The following
11 highlights some of the report’s information:

- 12 • Growth in renewable energy development over the past decade has led to the
13 increasing adoption of renewable energy credits (“RECs”) as a means to track and
14 trade the environmental benefits of renewable energy generation. RECs can be sold
15 either unbundled (separate from electricity) or bundled (included with the sale of
16 electricity) (*id.*, p. 1).
- 17 • “Compliance” markets refer to RECs that can be used to meet state RPS requirements
18 (*id.*).
- 19 • “Voluntary” markets for renewable energy, or “green power” markets, are those in
20 which consumers and institutions purchase renewable energy to match their
21 electricity needs on a voluntary basis. (*id.*)
- 22 • Today, more than 860 utilities offer green power programs to their customers. As a
23 result, more than half of U.S. electricity customers have an option to purchase some
24 type of green power. In utility green pricing programs, RECs are obtained by the
25 utility and offered to customers. Utilities differ in how they procure RECs for their
26 green pricing programs but often enter into power purchase agreements for the energy
27 and RECs. In other cases, they may procure unbundled RECs (*id.*)

³ DOE’s Green Power Network website: <http://apps3.eere.energy.gov/greenpower/markets/index.shtml>.

⁴ NREL report: *Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 Data)*, p.28.

- 1 • In 2010, on average, renewable energy sold through green pricing programs in 2010
2 represented 1.1% of total utility electricity sales (on a megawatt-hour basis). Top
3 performing programs saw rates ranging from 3.4% to 22.6%. (*id.*, p.. 22).
- 4 • At the end of 2010, the average participation rate in utility green pricing programs
5 was 2.1% with top-performing programs indicating participation rates ranging from
6 5.3% to 21.5% in 2010. Generally utility green pricing programs experienced a slight
7 decrease from 2009 likely due to the economy (*id.*, pp. 26-27)
- 8 • Typically, green pricing programs are structured so that customers can either
9 purchase green power for a certain percentage of their electricity use (often called
10 “percent-of-use products”) or in discrete amounts or blocks at a fixed price (“block
11 products”), such as a 100 kWh block. Most utilities offer block products but may also
12 allow customers to buy green power for their entire monthly electricity use. Utilities
13 that offer percent-of-use products generally allow residential customers to elect to
14 purchase 25%, 50%, or 100% of their electricity use as renewable energy, while a few
15 offer fractions as small as 10%. Under these types of programs, larger purchasers,
16 such as businesses, can often purchase green power for some fraction of their
17 electricity use as well (*id.*, p. 28)
- 18 • The majority of new utility programs introduced in recent years have been
19 community solar programs. Between January 2008 and September 2011, twelve
20 community solar programs were developed by or in conjunction with utilities, and
21 many have expanded program sizes over that time period (*id.*, p. 36).

22 **B. SDG&E’s Research Indicates Residential Customer Interest**

23 During SDG&E’s investigation of a community solar option, it also conducted residential
24 customer research⁵ to see if SDG&E customers would have similar levels of interest in a green
25 pricing program, or more specifically supporting a local solar green pricing program. The
26 research found that based on the survey respondent’s first impression of a local solar green
27 program, 60% of respondents were at least somewhat interested in participating without knowing
28 the price and of this group, 18% were very interested. Of those interested, 40% expressed
29 willingness to pay an additional cost between \$11 - \$25 a month to participate in a program.

⁵ SDG&E residential customer web-based panel survey, Feb. 2011. A total of 842 panelist completed survey providing 95% confidence level with margin of error +/- 2%.

1 While these results are substantially higher than what other programs are experiencing
2 and likely will not reflect actual participation levels, they do signal a healthy customer interest
3 level and confirm that SDG&E should move forward with a pilot program to test actual customer
4 interest. Moreover, customers may now expect SDG&E to offer a voluntary green pricing
5 program based on the adoption of programs by other utilities and increased awareness of
6 renewable energy in the nation. SDG&E also found in its research that customers were almost
7 evenly split between preferring a simple “green tariff” vs. a “community solar type program,”
8 and respondents tended to prefer solar over other renewable energy sources.⁶

9 SDG&E’s research and the experience of other programs aided SDG&E in designing the
10 proposed pilot offerings. As a few examples, SDG&E’s decision to develop programs which support
11 local solar development in the region (rather than a program where the utility provides unbundled
12 RECs) both supports customer’s preferred renewable energy source while also providing greater
13 direct value to the region. In addition, proposing two solar pilot offerings, one a simple solar tariff
14 rate and the other providing more of a community solar experience, is also supported by customer
15 research and provides expanded opportunities to San Diego’s solar industry. SDG&E believes the
16 timing is right to move forward with its proposed solar pilots given the declining cost of solar,
17 customer interest and successful performance of other similar green offerings.

18 **III. DESCRIPTION OF SDG&E PILOT PROGRAMS**

19 While most customers support the development of solar energy, relatively few actually
20 have the ability to own or lease solar photovoltaic (“PV”) systems. Many customers would like
21 to install solar, but may rent their residence, do not live in homes/own businesses that allow for

⁶ Customer preference for solar compared to other renewable resources was also found in Nielsen Research, *Energy Trends* in October, 2009 which indicated that of 32,000 respondents, 37% preferred solar compared to 32% having no preference 32% and 16% preferring wind.

1 solar installations or can't make a long term commitment. SDG&E's proposed pilot programs,
2 *SunRate* and *Share the Sun*, are intended to provide options for customers who do not have the
3 opportunity to pursue rooftop solar energy and will allow all customers served by SDG&E to
4 purchase green energy from local solar projects and directly participate in the market for solar
5 energy generated within the San Diego region, without the need for rooftop solar installation.
6 Participating customers will benefit from solar energy produced by local solar facilities, and will
7 directly support the development of new solar projects, ultimately increasing the amount of solar
8 renewable energy in the region, thereby helping the environment and increasing new job
9 opportunities. And, the proposed solar pilots will complement rooftop solar, expanding the solar
10 market to a new segment of customers.

11 SDG&E's proposed solar pilots will initially be comprised of two offerings, for which
12 SDG&E is not requesting incremental funding to develop or implement in this application. The
13 first of these offerings, referred to as *SunRate*, will allow customers an option to buy solar energy
14 through a simple, tariff-based rate. The second offering, called *Share the Sun*, will allow
15 customers the option to purchase solar services (such as the rights to the capacity) produced by a
16 specific solar facility directly from participating solar providers. The *Share the Sun* program
17 provides customers with more direct solar experience with the additional benefit of having a
18 choice of solar providers who may potentially offer more varied solar services. Both programs
19 are described in greater detail below.

20 **A. *SunRate* Overview**

21 Under the *SunRate* program, SDG&E will make available solar energy through a
22 voluntary tariff. SDG&E will allocate up to a maximum of 10MW of solar energy for this
23 program, derived from its current portfolio of local solar facilities. Customers will have the
24 option to buy solar energy in volumes equal to all or just a portion of their total energy usage

1 which will be priced based on the average cost of local solar from projects delivering into
2 SDG&E's portfolio with the necessary adjustments to keep non-participating customers
3 indifferent.⁷

4 The program is designed for simplicity and to allow customers to take their solar service
5 with them if they move to another location served by SDG&E. A customer's participation in the
6 program provides them with "green" local solar energy and all such energy under program
7 subscription will not be included under SDG&E's RPS requirements. To this end, SDG&E will
8 retire the RECs associated with the customer's participation on their behalf through the Western
9 Renewable Energy Generation Information System ("WREGIS"), providing the customer with
10 assurance that their energy purchases actually support the development of renewable resources
11 that are above and beyond SDG&E's power purchases to meet RPS requirements. Section V of
12 my testimony further describes how the RECs associated with participant subscriptions will be
13 retired on the customer's behalf.

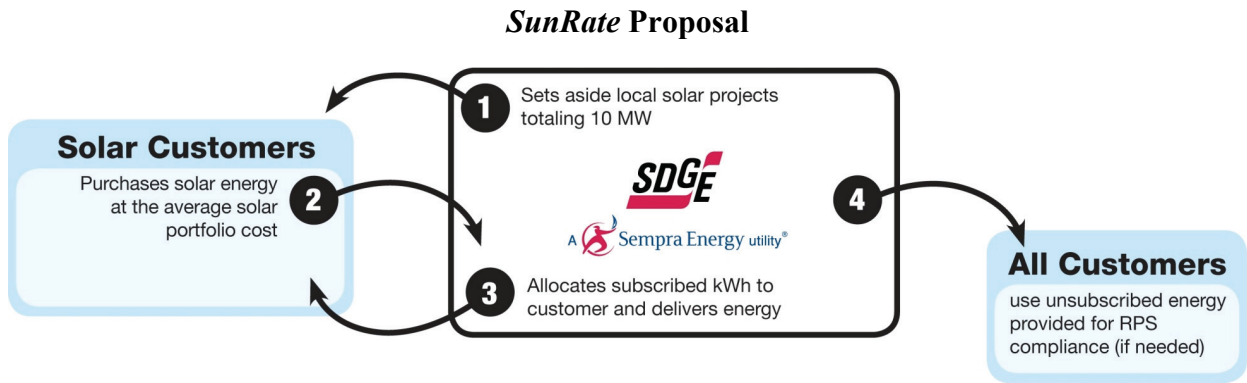
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⁷ The direct testimony of Chris Yunker, Chapter 3, Section II, describes the rate design of this program.

Here, schematically, is how the proposal works:



Customers can purchase local solar energy from SDG&E at the solar portfolio cost. A minimum one-year subscription commitment is required. Subscription's monthly cost updates annually for annual subscribers and remains fixed for long-term subscribers.

SDG&E's *SunRate* program's initial offering will test customer interest and program design. Based on actual customer interest and experience, availability of solar resources that can be extracted from SDG&E's RPS portfolio, the program may be expanded and refined.

1. SunRate Program Structure

The following describes the *SunRate* program structure in greater detail, including the program's participation potential, how the customer enrolls, how their bill will change, how SDG&E will retire a participant's RECs associated with their subscription and lastly, the program's terms and conditions.

a. SunRate Customer Participation Potential:

As described in the direct testimony of Chris Yunker, SDG&E will propose to allocate, as available, energy from existing local solar facilities generated within SDG&E's service territory totaling no more than 21,900 MWh annually (approximately equal to 10MW) to provide the solar energy that will be used to launch the pilot offering of the program. For the pilot, SDG&E will designate up to half of this allocation for residential customers and the remainder for

1 business customers to ensure that each customer group has adequate access to participation.
2 Assuming an initial offering of a 21,900 MWh annually, the *SunRate* program is expected to be
3 fully subscribed with less than 5,000 customers or less than 0.5% of SDG&E’s residential and
4 business customer base.⁸ Compared to the 2% average participation rate of other utility green
5 pricing programs,⁹ this is a conservative initial offering.

6 **b. Participant Subscriptions – Quantity of solar**

7 The *SunRate* program is a voluntary subscription-based program. Participants will pay
8 for their solar energy subscription through a monthly charge on their SDG&E bill and be able to
9 tailor their subscription to meet their individual needs by electing the percent of solar energy
10 they wish to purchase for a certain length of time.

11 Customers can subscribe to pay the *SunRate* price for 50%, 75% or 100% of their
12 electricity use.¹⁰ To help customers select the participation percentage level that best meets their
13 needs, SDG&E will offer an on-line estimation tool to match the appropriate percent options
14 compared to customers’ energy use. The on-line tool will also display easy-to-understand
15 pricing information to help the customer select the subscription level that best meets both their
16 energy and financial needs. Since the program is intended to offset the customer’s energy use

⁸ Customers will subscribe to the program by electing to purchase local solar power for a certain percentage of their electricity use (50%, 75% or 100%). Based on a 50/50 split between residential and business customers, less than 4,000 residential customers and 1,000 business customers will fully subscribe the initial offering of 10MW. This assumes an average energy use per customer that elects to participate at a 50% level.

⁹ NREL, *Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 Data)*, pp. 26-27.

¹⁰ Note that the customer is buying solar energy in volumes equal to their desired percentage of actual energy use. This solar energy will be produced according to the solar portfolio’s delivery profile and does not imply that the customer will actually receive solar energy to meet their energy use profile. Commercial subscriptions will be limited to subscribe to 109,500 kWh annually, or approximately 50 kW, during the pilot to help ensure greater access to smaller and medium-sized customers in this segment.

1 with local solar energy, subscriptions can be made at the 100% of the customer's energy usage.
2 The on-line tool will also help customers wishing to consider the amount of renewable energy
3 that is already present through SDG&E's RPS requirements.

4 **c. Length of Subscription Commitment Options**

5 Participants will be able to tailor their subscription in the program further by committing
6 to the length of time they wish to participate. All customers participating in the *SunRate*
7 program will be charged monthly for the service. Customers can opt to: (1) participate on a
8 month-to-month subscription basis (minimum of 1 year requirement) or, (2) commit to a long-
9 term contract of either 5, 10 or 15 years. These options are intended to serve the varying needs
10 of customers and allow customers committing to a longer term to lock in their local solar energy
11 cost (for their subscription level) over that term.

12 **2. Month-to-Month Subscription**

13 Customers can participate under a month-to-month basis, which means that the
14 customer's program participation continues until they proactively terminate from the program.
15 To manage administrative costs and SDG&E's energy portfolio, new customers will be required
16 to stay on the program for at least 12 months.¹¹ Customers wishing to cancel prior to the first 12
17 months will be subject to a termination fee.¹² After the first year, customers on the month-to-
18 month cycle will be subject to annual subscription rate changes and can cancel at any time. The
19 primary customer benefit of this option is that customers are not required to commit to a period
20 greater than 1 year.

¹¹ A one year minimum enrollment is consistent with SDG&E's Rule 12.d which indicates a customer may request only one rate schedule change for the purpose of obtaining preferential rates, priority of service, or avoiding minimum charges in any twelve-month period.

¹² The termination fee rate design is described in the testimony of Chris Yunker at Chapter 3, Section IV.

1 **3. Long-term Contract Option**

2 Customer can commit to a long-term contract (5, 10 or 15 years) and lock in their local
3 solar energy cost (for their subscription level) over that term. During the selected participation
4 term, the participant’s monthly SDG&E bill will indicate the time remaining in their term. As a
5 courtesy, SDG&E will also send a message to the customer a month before their subscription
6 term ends. Once a customer’s term ends, they will have the option to terminate their
7 participation in the program with no penalty, commit to a new term under the then-current tariff
8 rate or continue to participate under the month-to-month basis. Customers not electing an action
9 at the end of their term will default to participating under a month-to-month basis, at the then-
10 current subscription rate until SDG&E receives further notification from the customer. SDG&E
11 has elected this default action once a customer’s term has ended to ensure availability for the
12 customer under the program. The customer will have the ability to cancel or commit to a new
13 long-term contract at anytime thereafter without a termination fee. Customers that choose to
14 terminate prior to their commitment term ending will be subject to a termination fee.¹³ The
15 primary customer benefit of a longer term is that they can secure a fixed solar energy cost over a
16 period of years, providing the participant with greater commodity cost certainty.

17 **4. Participant’s SunRate Solar Energy Charges and Billing Changes**

18 Customers participating in the program will continue to be billed for their usual
19 transmission and distribution charges and commodity charges. *SunRate* participation will result
20 in one new billing line item, *SunRate* Energy Payment, on customer’s SDG&E bill that reflects
21 the customer’s incremental cost of participating in the program. The program’s rate design
22 methodology and calculations are described in the testimony of Chris Yunker. The *SunRate*

¹³ The termination fee rate design is described in the testimony of Chris Yunker at Chapter 3, Section IV.

1 Energy Payment charge will be calculated by multiplying the number of kWh associated with the
2 customer's subscription by the *SunRate* incremental cost. The subscription's associated kWh is
3 the elected participation percentage (50, 75 or 100%) of the total kWh used by the customer
4 during that month. As an illustrative example, if the customer's energy use is 500 kWh for a
5 particular month and the customer has subscribed to "greening" 75% of their energy use – the
6 kWhs associated with their subscription for that month would be 375 kWh (500*.75). If the
7 *SunRate* incremental cost is \$0.04 per kWh -- the customer's *SunRate* Energy Payment charge
8 would be \$15.00 (375*.04 = \$15.00).¹⁴ This cost is in addition to the customer's other SDG&E
9 charges and will vary monthly with the customer's actual energy use. For customers
10 participating under a *SunRate* long-term commitment, the *SunRate* Energy Payment could result
11 in a premium or discount to the customer's other billing charges depending upon how total
12 electric commodity costs compare to the cost of local solar.

13 **B. Additional *SunRate* Terms and Conditions**

14 **1. Customer Eligibility**

15 All bundled SDG&E customers will be eligible to participate in the program based on
16 availability of the program's energy allotment. SDG&E will subscribe customers to the program
17 on a first come first served basis, in accordance with the established residential and business
18 program allocations. Additionally, business customers will be initially limited to a maximum
19 subscription level that does not exceed 109,500 kWh annually (equivalent to approximately
20 50kW). While SDG&E believes the program will be most attractive to its smaller and mid-sized
21 business customers that have less access to solar, limiting subscriptions to approximately 50kW
22 per customer will ensure access to the pilot program for a larger number of business customers.

¹⁴ The example's costs do not represent a forecast of future costs and is presented for illustrative purposes only.

1 **2. Subscription Portability, Resale and Transferability**

2 Participants will be able to take their subscriptions with them when they move, as long as
3 the participant continues to have an electric service account with SDG&E. While SDG&E will
4 make best efforts to remind the customer about transferring their subscription to the new address,
5 it will be the customer’s ultimate responsibility to request the transfer. If the customer’s
6 subscription is canceled due to the customer’s error, the customer’s re-enrollment will be subject
7 to program availability under the program’s current rates.

8 Participants will not be able to resell, transfer, bequest, gift or convey their subscriptions
9 to any another party.

10 **C. Share the Sun Program**

11 The second solar offering, *Share the Sun*, provides a means for customers to purchase
12 solar services from a solar provider in a specific participating solar facility. The *Share the Sun*
13 program gives customers a choice of participating solar providers and solar services they are
14 most interested in.

15 **1. Overview**

16 The program creates a new opportunity for solar providers to develop additional solar
17 projects and gives them access to SDG&E bundled customers who do not have the ability to
18 invest in or lease rooftop PV systems. SDG&E will inform solar providers about the opportunity
19 to participate in *Share the Sun*, establish provider eligibility requirements, solar facility
20 requirements and pricing terms. Interested solar providers must meet eligibility criteria
21 pertaining to both their ability to successfully work with customers and to build a renewable
22 energy facility. SDG&E will also inform customers of the solar facilities participating in the
23 program without endorsing specific companies or projects. SDG&E will execute a power
24 purchase agreement (“PPA”) with each solar provider as described in the testimony of Chris

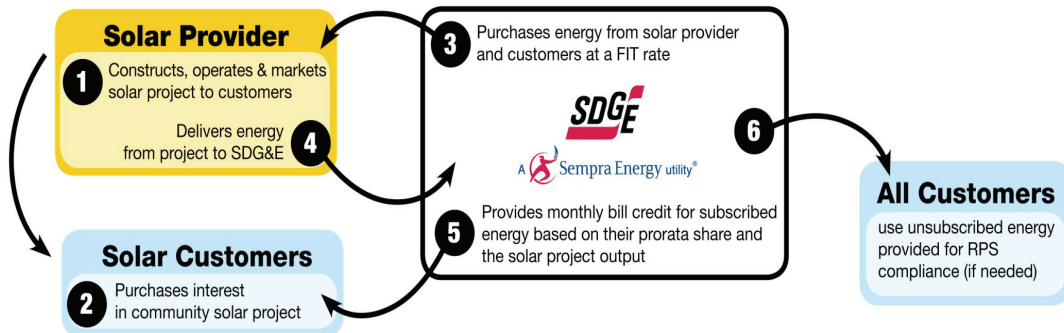
1 Yunker. This PPA will include additional provisions regarding the provider's *Share the Sun*
2 obligations and will provide for SDG&E to pay the provider's contracted customers via a bill
3 credit based on the solar provider's contracted FiT price with SDG&E for any subscribed
4 capacity.

5 SDG&E will also execute a standard program agreement with each provider establishing
6 their enrollment in the program and certain program rules regarding the provider-customer
7 relationship intended to protect customers as described in this testimony below under Solar
8 Provider Program Qualifications (Section III.C.3.a). Customers will work directly with the solar
9 provider to develop distinct contract terms in accordance with general program rules and receive
10 the necessary information and confirmation from the solar provider to certify their subscription
11 level. Once customers have completed their arrangement with the solar provider they will enroll
12 in the program with SDG&E by submitting to SDG&E a completed program participation
13 agreement (provided by SDG&E) along with the appropriate verification information solar
14 provider has given the customer. Once the agreement has been completed based on program
15 requirements, SDG&E will enroll the customer's account in the program and make the necessary
16 billing adjustments (a credit depending on the value of energy purchased from the solar
17 provider's facility and offsetting otherwise applicable charges on the customer's bill).

18
19 [Remainder of page intentionally left blank]

Here, schematically, is how the proposal works:

Share the Sun Proposal



RECs associated with subscribed energy are retired by SDG&E on behalf of the customer. Customer subscriptions do not count toward SDG&E's RPS requirements. Unsubscribed shares count towards SDG&E's 60 MW Renewable FiT requirements if FiT cap not yet reached.

While SDG&E's *Share the Sun* pilot has similarities to other community solar programs, it is unique in that customers will contract directly with the solar provider. In addition, the *Share the Sun* program will create more opportunities for solar providers and more options for customers. Through this pilot program, SDG&E will be able to test customer and solar provider preferences.

2. SDG&E requests workshops to refine provider/customer relationship

SDG&E has met with representatives from several solar industry businesses and stakeholders¹⁵ to get feedback and input on the development of the *Share the Sun* proposal. SDG&E received valuable feedback from solar providers that more discussion is needed to collaboratively work through certain program issues. The issues raised in these discussions include the FiT price, financing, solar provider qualifications, provider/project selection process and potential SDG&E property availability. SDG&E also understands the need to ensure consumers are reasonably protected while not creating unnecessary restrictions on solar

¹⁵ Over 25 companies were represented in the referenced discussions.

1 providers. Another key issue is to ensure that diverse business enterprises are participating in the
2 program.

3 As a result of these meetings, SDG&E proposes a series of workshops on the *Share the*
4 *Sun* program in San Diego, under Commission oversight. The purpose of the workshops is to
5 reconcile design and program requirements as revealed by SDG&E's discussions with solar
6 providers. SDG&E proposes to conduct these workshops during the pendency of this
7 Application before the Commission, rather than prior to submitting the Application to ensure
8 transparency and openness for all interested parties. The Application submitted in this
9 proceeding proposes a procedural schedule that can accommodate these workshops.¹⁶ Any new
10 programs and services developed during these workshops will be submitted in a separate
11 application.

12 Specifically, SDG&E proposes a series of five workshops in San Diego with Commission
13 oversight to work through the issues to ensure program viability. Each of the following topics
14 will be the subject of one workshop:

15 1) Pricing – this would include implementation of the SB32 FiT within the program,
16 explanation of the customer rate design structure related to customer participation, calculation
17 and application of customer billing changes to accommodate program participation, including
18 bill credits, reconciliation of customer credits with solar provider FiT payment and customer
19 subscription terms;

20 2) Solar facility site development, with a goal to remove project siting barriers - potential
21 topics including discussion of potential site opportunities, project locations, project permitting,

¹⁶ See Application at Section V.A.4.

1 project interconnection, financing opportunities, SDG&E land opportunities and project size
2 limits and subscription levels;

3 3) Provider qualifications with the goal to ensure the program/project integrity and
4 support necessary consumer protection safeguards - potential topics including provider/project
5 selection process, participation requirements and conditions including appropriate consumer
6 protection safeguards, project viability and timing, customer commitments and potential standard
7 contract provisions to ensure customers are fully aware of solar provider and utility terms and
8 conditions;

9 4) Marketing and outreach, with the goal to ensure customers are aware of solar service
10 options and aid in facilitating action – potential topics include what information SDG&E should
11 provide to customers in understanding the program, how SDG&E can best facilitate customer
12 participation and which tools SDG&E should provide on its website to aid the customer and the
13 solar provider to enable customers making informed decisions.

14 SDG&E recommends a day long workshop for each of these four subjects, plus a final,
15 fifth workshop to address any other outstanding issues that have been identified during the
16 process.

17 SDG&E recommends the first workshop be held in the June timeframe after the
18 Commission has issued a decision in its SB32 FiT proceeding,¹⁷ because the pricing established
19 in that proceeding will be critical to the program's structure.

¹⁷ R.11-05-005.

1 **3. *Share the Sun Program Details***

2 The following provides a description of the program which may be supplemented based
3 upon input from workshops with the goal to further define some aspects of the program, keeping
4 true to the program’s overarching principles and objectives.

5 **a. Solar Provider Program Qualifications**

6 Program participation will require solar providers to meet certain qualifications to ensure
7 that solar providers are fully aware and can comply with the program’s requirements and
8 processes, and to aid in consumer protection. While SDG&E expects the workshops to yield
9 specific information, SDG&E proposes to require, at a minimum, that providers meet certain
10 project requirements as described in the testimony of Chris Yunker. My testimony focuses on
11 the provider requirements related to program participation and consumer protection. In addition,
12 the solar provider will be required to meet the following additional requirements related to
13 consumer protection: Registration as a Renewable Retailer & Installer with the California
14 Energy Commission, be licensed and bonded, and have proof of good standing on record with
15 the California Secretary of State as required for corporate and limited liability entities. Providers
16 will also be required to be properly licensed, fully experienced and qualified for the services or
17 business transactions performed with retail customers. The standard program agreement
18 executed between the solar provider and SDG&E will include minimum insurance requirements,
19 bonds to cover the failure of the project and compliance with applicable laws, among others.
20 Due to the program design, SDG&E will not be able to allow solar providers to offer or sell
21 securities and the standard program agreement will also include certain other safeguards as
22 necessary for the viability of the program. As a consumer protection, solar providers will agree
23 to allow the Commission oversight over consumer complaints that cannot be resolved between

1 the customer and solar provider, similar to Energy Service Providers.¹⁸ Solar providers will not
2 be allowed to co-market or co-brand with SDG&E. SDG&E will not endorse or recommend a
3 solar provider to its customers, but will create awareness of the program and provide a list of
4 qualified projects and solar providers.

5 SDG&E recommends the Commission as the best entity to qualify solar providers,
6 similar to its Energy Service Provider certification for Direct Access.

7 **b. Solar Provider Facilities:**

8 SDG&E proposes to allocate a maximum of 10MW for this program. As described in the
9 testimony of Chris Yunker, these projects will be local solar facilities under PPAs with SDG&E
10 and will provide the solar capacity to be offered to customers by the solar providers. SDG&E
11 will purchase energy from any unsubscribed portion of the solar project for its RPS at the FiT
12 price as described in the testimony of Chris Yunker.

13 In addition to the facility requirements outlined in the testimony of Chris Yunker, the
14 following are required to ensure that solar providers are building projects for the purpose of
15 transacting with customers and to guard against SDG&E's over procurement. Each solar
16 provider will be limited to 1MW of qualifying generation development until that solar project is
17 80% subscribed. Solar providers must also describe their development team in their bid package,
18 provide documentation that their business structure can support customer marketing activities
19 and provide all information necessary to meet program qualifications. In addition, the solar
20 provider will be responsible for marketing their qualified solar facility to customers and
21 addressing all customer inquiries related to their participation.

¹⁸ <http://www.cpuc.ca.gov/PUC/aboutus/Divisions/Consumer+Protection/>

1 **c. Participant Subscriptions**

2 Customers will work directly with solar providers to contract for their solar services in a
3 specific participating solar facility. Solar providers will have the flexibility to offer the
4 contracted arrangement that best meets their business model related to customer subscriptions in
5 facilities, as long as such arrangement meets the legal requirements of participation in the
6 program, and will deliver to SDG&E the percentage of the provider’s total system the customer
7 has subscribed to. Participants will pay the solar provider directly for costs related to their
8 contractual arrangement. Except as otherwise described in this testimony, SDG&E will not
9 include provider costs as a part of the customer’s SDG&E bill. SDG&E will provide to the
10 customer a bill credit for the actual energy generated from the customer’s subscribed portion of
11 the applicable participating solar energy project.

12 Solar providers will subscribe customers to their facility based on a percentage of that
13 facility. The subscription level per participating customer is at the discretion of the Solar
14 Provider providing it does not exceed the following requirements:

- 15 • Customers can subscribe up to 200% of their annual energy usage with SDG&E
- 16 • Solar Providers will be responsible for managing participation to no more than 100%
17 of a facility
- 18 • Solar providers will determine customer eligibility and how subscriptions are
19 managed between interested customers
- 20 • Service under this program must be taken in combination with the customer’s
21 otherwise applicable rate schedule

- 1 • For the pilot and ease of implementation, SDG&E will limit *Share the Sun*
2 subscription terms with customers to be 5, 10 and 15 years. This is an area that
3 SDG&E plans to discuss with solar providers in workshops.

4 SDG&E will pay the solar provider consistent with FiT pricing directly for any
5 unsubscribed capacity from the participating project. Such capacity will count towards any
6 unfulfilled RPS goals, including any unmet renewable FiT capacity targets.

7 **d. *Share the Sun* Subscription Commitment Options**

8 The participant’s subscription in the program will require a long-term contract
9 commitment with the solar provider of 5, 10 or 15 years. This will enable customers to lock in
10 their SDG&E local solar energy cost (for their subscription level) over the chosen term. During
11 the customer’s participation term, the participant’s monthly SDG&E bill will indicate the time
12 remaining in their term.

13 As described herein under Section IV- Enrollments, SDG&E will enroll and assign the
14 customer to the specific solar facility based on their subscription with the solar provider. The
15 customer will remain assigned to the facility until terminated by the customer, solar provider or
16 until the end of the customer’s subscription term with SDG&E. Upon conclusion of the
17 customer’s *Share the Sun* subscription term with SDG&E, SDG&E will remove the customer
18 from the program with notice to the customer and solar provider. Customers that chose to
19 terminate prior to their commitment term will be subject to an SDG&E termination fee as
20 described in the testimony of Chris Yunker. Customers may have additional contractual
21 requirements associated with early termination with the solar provider which would be dealt with
22 separately between the solar provider and the customer.

1 **e. Participant’s Solar Energy Credits and Charges**

2 As a part of enrollment, customers will provide their SDG&E account number(s) and the
3 allocation of their subscription to those accounts. Customers will also agree to move all enrolled
4 accounts to a new SDG&E-determined billing cycle so SDG&E can more efficiently conduct
5 billing activities related to their subscribed solar facility. SDG&E will process the customer’s
6 enrollment and start providing solar energy benefits the following month after enrollment is
7 made.

8 Participating customers will receive a bill credit pursuant to their allocation of the actual
9 solar energy generated by the facility. On a monthly basis, SDG&E will allocate the generation
10 among participants based on their percentage of the facility assigned by their *Share the Sun* solar
11 provider. This allocation will determine the participating customer’s kWh associated with the
12 customer’s subscription for billing purposes.

13 **i. Monthly billing**

14 Customer participating in the program will continue to be billed for their usual
15 transmission and distribution charges and commodity charges. While the program uses the same
16 fundamental billing processes as *SunRate*, there are several differences. First, the amount of
17 energy the customer receives related to their subscription will depend on their agreement with
18 their solar provider and the actual generation output of their assigned solar facility (meaning the
19 customer’s monthly kWh in their subscription will be independent of the customer’s actual
20 energy usage). In addition, participants will receive a bill credit for the value of their solar
21 energy subscription assigned from their solar provider. The program’s rate design methodology
22 and calculations are described in the testimony of Chris Yunker. My testimony provides
23 additional details below regarding how the customer’s bill will change.

1 The *Share the Sun* participation will result in two new billing line items for customer's
2 participating in the program:

3 1) *Share the Sun* Bill Credit

4 2) *Share the Sun* Energy Payment

5 **ii. *Share the Sun* Bill Credit**

6 SDG&E will purchase the solar energy associated with the customer's subscription via a
7 *Share the Sun* Bill Credit which will be the first new billing line item on the customer's bill. The
8 bill credit will be based on the SB32 FiT pricing for the energy delivered under the customer's
9 *Share the Sun* subscription and will be applied to the customer's total SDG&E bill. Any
10 remaining credit will be carried over to the customer's next monthly bill, eliminating the need for
11 a program annual reconciliation. The design of the program limits customer subscriptions to
12 200% of their annual energy use which will reduce the likelihood of participant's seeing a
13 substantial credit balance remaining on the customer's account on an annual basis. However, if a
14 credit balance exists customers can request and receive a refund annually.

15 The *Share the Sun* Bill Credit provides participants with a credit for the energy generated
16 monthly from the participant's solar project and will be calculated by allocating to the participant
17 their prorata allocation of the project's FiT payment. As an illustrative example, if the customer
18 subscription is 0.5% of a 1 MW facility and the facility's production that month results in
19 182,000 kWh with a total facility FiT payment \$20,000, the customer's allocation would be
20 basically 0.5% of each of these -- or 192 kWh ($182,000 \times .005$) and \$100 *Share the Sun* Credit
21 ($\$20,000 \times .005$). The *Share the Sun* Bill Credit will be calculated based on this prorata allocation
22 of the FiT payment or using the facility's FiT average kWh for the month ($\$20,000/182,000$)

1 multiplied by the participant's allocation of 192 kWh. Both provide the same result.¹⁹ The
2 customer's monthly *Share the Sun* Credit will vary monthly based on the facility's FiT payment
3 which is based on both the time and amount of energy produced by the system during the month.

4 **iii. *Share the Sun* Energy Payment**

5 The second billing line item will show the incremental cost for the *Share the Sun* solar
6 energy delivered through the customer's subscription. The *Share the Sun* charge will be
7 calculated by multiplying the number of kWh associated with the customer's subscription, by the
8 *Share the Sun* incremental cost. The kWh associated with the customer's subscription will be the
9 prorata allocation of the actual generation output of their assigned solar facility. Depending
10 upon how total electric commodity costs compare to the subscription's cost of local solar, the
11 billing line item for *Share the Sun* can result in a premium or discount to the customers other
12 billing charges. As an illustrative example, if the customer's subscription is 0.5% of the facility
13 and 182,000 kWh were generated by the facility during the month, the customer's prorata
14 allocation of the kWh would be 910 kWh ($910 * .005$). Assuming a *Share the Sun* incremental
15 energy cost of \$.04/kWh, the customer's solar energy charge would be \$36 ($910 * .04$).²⁰ This
16 cost will vary monthly based on the kWh produced by the system and is in addition to the
17 customer's other SDG&E charges.

18 To summarize, the incremental energy costs and bill credit for the examples illustrated
19 above would be as follows:

20 *Share the Sun* Bill Credit: \$100

¹⁹ The example's costs do not represent a forecast of future costs and is presented for illustrative purposes only.

²⁰ The example's costs do not represent a forecast of future costs and is presented for illustrative purposes only.

1 *Share the Sun* Energy Payment: \$36

2 *Share the Sun* credit balance: \$64

3 **f. Additional *Share the Sun* Program Terms and Conditions**

- 4 • All bundled SDG&E customers are eligible to participate in the program for up to
5 200% of their annual electrical usage, allowing customers to offset a larger amount of
6 their bill. By allowing a 200% cap, participants may be able to reach a net-zero
7 electric bill after the customer's *Share the Sun* Bill Credit (described above) is
8 applied.
- 9 • Subscriptions will travel with the customer to new addresses, as long as the customer
10 continues to be served electric commodity by SDG&E at the new address. While
11 SDG&E will make best efforts to remind the customer about transferring their
12 subscription to a new address, it will be the customer's ultimate responsibility to
13 request the transfer. If the customer's subscription is canceled due to the customer's
14 error, the customer will need to arrange re-enrollment through their solar provider.
- 15 • A participant's ability to resell and transfer their subscriptions to another party will be
16 determined by their contractual arrangement with their solar provider, as permissible
17 under applicable law and in accordance with SDG&E's program rules and
18 requirements. SDG&E will facilitate changes in subscription enrollment once
19 SDG&E has received the appropriate certification from the solar provider.
- 20 • All subscriptions must remain with customers being served electric commodity by
21 SDG&E.

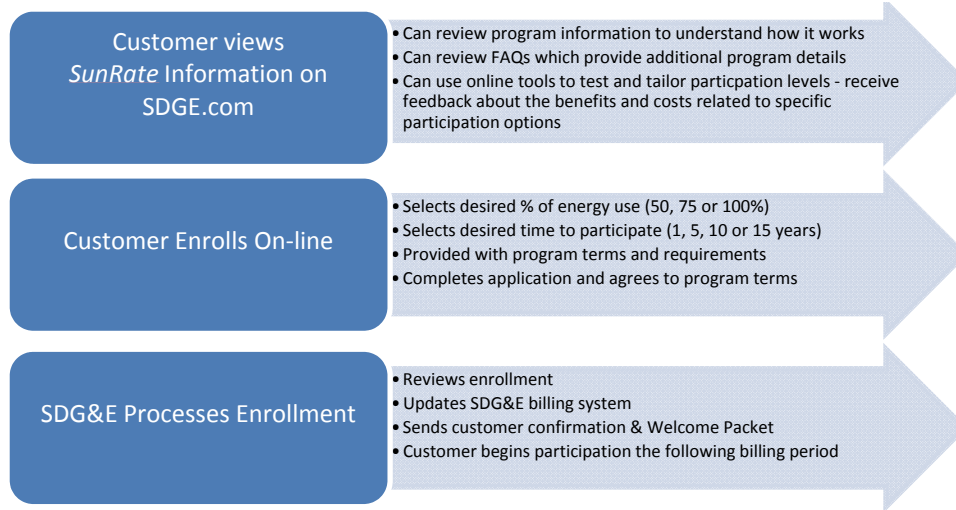
1 **IV. ENROLLMENT PROCESS FOR BOTH PILOTS**

2 For the *SunRate* program, once a customer has tailored the subscription to fit their needs
3 via the on-line tools, the customer will be able to enroll online²¹ by completing a short
4 application and accepting the programs terms and conditions. SDG&E will review the
5 application and confirm it meets the program’s guidelines, then process the customer’s
6 enrollment in the program. The customer will receive a confirmation email and Welcome Packet
7 which will confirm the customer’s subscription, program terms and conditions and will show
8 how the program’s subscription charges will appear on the customer’s bill as well as information
9 on other services the customer may be interested in such as energy efficiency programs, SDG&E
10 billing and payment options and other sustainability tips. Participants will also be recognized for
11 their participation and helping to make their community a better place to live and work through
12 their support of solar energy with a small token of appreciation, such as a window sticker for
13 their car, home or business. The customer will begin participation in the *SunRate* program the
14 following billing period month after their enrollment application is processed.

15
16 [Remainder of page intentionally left blank]

²¹ SDG&E will encourage customers to enroll online since it will offer customers with the best option to learn about the program, the easiest process to enroll and the least cost administration. If preferred, customers will also be able to receive help from an SDG&E representative and enroll for the program over the phone.

1 The following provides a process flow of the *SunRate* enrollment process:



2

3

4 For the *Share the Sun* program, once the customer has concluded their arrangement with

5 the solar provider, the provider will give the customer a standard form developed by SDG&E

6 certifying and authorizing SDG&E to subscribe the customer to the provider's solar project.

7 This form must include the percent of the facility's output that is going to the customer and the

8 customer's contract term (5, 10 or 15 years) with the provider. This information is required so

9 SDG&E can determine how much energy it will allocate to the customer in order to perform the

10 billing activities (described above) and how much unsubscribed energy SDG&E must procure

11 under its RPS. The customer will present this certification to SDG&E to be enrolled in the

12 program. As a part of the customer's enrollment in the *Share the Sun* program, they will be

13 required to sign a standard program agreement with SDG&E, accepting the terms and conditions

14 of the program. Once the enrollment process is complete, both the customer and the solar

15 provider will receive a confirmation from SDG&E which will identify the effective date of the

16 customer's participation in the program. Participating customers will also receive a *Share the*

17 *Sun* Welcome Packet from SDG&E similar to that described above for the *SunRate* program.

1 Because the *Share the Sun* program requires the receipt of the solar provider’s certification, the
2 customer will not be able to complete the full enrollment process online during the pilot.

3 The following provides a process flow of the *Share the Sun* enrollment process:



4
5
6 **V. SUBSCRIPTIONS PROVIDE PARTICIPANTS WITH GREEN ENERGY**

7 SDG&E will retire the associated green attributes of the energy subscribed under the
8 program, the Renewable Energy Credits (“RECs”), on behalf of all participating customers.

9 SDG&E will not include subscribed program RECs in its RPS requirements. Retiring the RECs
10 in this manner will permit participants to claim in a very real sense that their subscriptions
11 contribute to the demand for, and the development of, local solar generation.

12 To track the RECs associated with the customer’s participation in the programs, SDG&E
13 will create one sub-account for the programs as a part of its WREGIS account. Monthly,
14 SDG&E will track and transfer the number of cumulative kWh related to the program into this

1 WREGIS sub-account. At least annually, SDG&E will retire the RECs that have accumulated
2 within the program's WREGIS account.

3 **VI. COMBINED PROGRAMS -- CUSTOMER OUTREACH & PARTICIPANT**
4 **COMMUNICATIONS**

5 **A. Outreach**

6 SDG&E will educate customers about both programs using various forms of
7 communications such as local media, electronic communications, messages on customer bills,
8 SDG&E's website and in coordination with other SDG&E services. In addition, SDG&E will
9 work with local communities, environmental groups, and other sponsors to assist with outreach.
10 SDG&E's intends to keep outreach costs at a minimal level and expects the pilot to be fully
11 subscribed using these tactics. SDG&E may consider expanding to other marketing tactics as
12 needed based on actual pilot experience.

13 Interested customers will be directed to SDG&E's website to learn about the program,
14 including Frequently Asked Questions ("FAQs"). The website will also include on-line tools to
15 help customers understand different participation levels, the options available that may best suit a
16 customer's individual needs, and how the customer's participation translates into environmental
17 benefits. For the *SunRate*, interested customers may also use online enrollment tools to
18 determine their preferred percentage level, and the subscription level's specific price. For the
19 *Share the Sun* program SDG&E will post the list of qualified solar providers both on SDG&E's
20 website and on promotional material. The website will also include online tools so customers
21 can better understand how their SDG&E bill will be impacted by their participation in the
22 program. SDG&E will not provide an economic analysis since the investment terms will be
23 between the solar provider and the customer. SDG&E has targeted this area for discussion in
24 workshops to help determine the best communication tactics for the program. SDG&E will also

1 provide the Commission the opportunity to review and comment on its outreach materials prior
2 to publication.

3 **B. Participant Communications**

4 SDG&E will keep participants updated on the program through quarterly electronic
5 newsletters. The newsletters will include information such as the number of the programs
6 participants, achieved environmental benefits, and other relevant information. SDG&E will also
7 work with solar providers to provide participants a way to view their solar facility's energy
8 generation online.

9 **VII. PROGRAM BENEFITS**

10 Each program benefits customers, solar providers and the environment in a wide variety
11 of ways:

- 12 1. Provides customers with an easy way to access local, solar energy. Customers have
13 the flexibility to tailor their subscription to meet their individual needs by selecting
14 the amount of solar energy in the subscription and the term. In addition, *Share the*
15 *Sun* participants will have a choice of different suppliers and different service options.
16 Customer subscriptions can also relocate to a new address as long as the customer
17 remains within SDG&E's service territory.
- 18 2. Provides an alternative to customers who do not have ability or the desire to install
19 solar on their roof. Customers will be able to have solar energy without the concern of
20 physical property limitations, maintenance or large outlays of funds.
- 21 3. Allows customers to subscribe to solar energy from local solar facilities that may
22 benefit from economies of scale of larger solar facilities and more optimal solar
23 conditions.

1 **VIII. PROGRAM EXPANSION**

2 The initial pilot of 20MW (up to 10MW allocated to the *SunRate* and up to 10MW
3 allocated to *Share the Sun*) is intended to test customer interest, program offerings, as well as the
4 pilot's processes, customer communications, and on-line enrollment tools. Based on this
5 experience and continued customer interest, SDG&E plans to expand the programs annually to
6 include additional solar facilities for customer subscriptions – as well as potentially new program
7 offerings. Therefore, SDG&E requests authorization to request, by Advice Letter, the expansion
8 of both pilots available MW capacity periodically, to meet the needs of customer demand.
9 SDG&E also requests the flexibility as a part of the Commission's program approval to manage
10 the *SunRate* allocation between residential and business customers, as well as the program limits
11 SDG&E has established for business customers, to best meet customer demand. SDG&E will
12 assess the amount of subscriptions in each area annually and may change these percentages and
13 limits based on the number of subscribers.

14 **IX. PROGRAM TIMING**

15 SDG&E proposes to implement both pilots in 2013, following all Commission approvals
16 and necessary program implementation requirements. For the *SunRate* program, SDG&E
17 expects it can begin program outreach and enrollment of customers within six months after the
18 Commission's final approval of program tariffs. The launch of *SunRate* will be contingent upon
19 the completion of billing system updates to support customer enrollments and customer billing
20 changes necessary for the program.

21 SDG&E will implement the *Share the Sun* program following Commission approvals of
22 program tariffs. Customer enrollments will begin upon the completion of qualified projects and
23 solar provider program start-up.

1 **X. SUMMARY AND CONCLUSION**

2 While most customers support the development of solar energy, relatively few actually
3 have the ability to own or lease solar PV systems. Many customers would like to install solar,
4 but may rent their residence or do not live in homes/own businesses that allow for solar
5 installations. SDG&E’s proposed pilot programs, *SunRate* and *Share the Sun*, are intended to
6 provide options for customers who do not have the opportunity to pursue rooftop solar energy
7 and will allow all customers served by SDG&E to purchase green energy from local solar
8 projects and directly participate in the market for solar energy generated within the San Diego
9 region, without the need for rooftop solar installation. Participating customers will benefit from
10 solar energy produced by local solar facilities, and will directly support the development of new
11 solar projects, ultimately increasing the amount of solar renewable energy in the region, thereby
12 helping the environment and increasing new job opportunities. And, the proposed solar pilots
13 will complement rooftop solar, expanding the solar market to a new segment of customers.

14 SDG&E’s proposed solar pilots will initially be comprised of two offerings, for which
15 SDG&E is not requesting incremental funding to develop or implement in this Application. The
16 first of these offerings, *SunRate*, will allow customers an option to buy solar energy through a
17 simple, tariff-based rate. The second offering, *Share the Sun*, will allow customers the option to
18 purchase solar services (such as the rights to the capacity) produced by a specific solar facility
19 directly from participating solar providers. The *Share the Sun* program provides customers with
20 more direct solar experience with the additional benefit of having a choice of solar providers
21 who may potentially offer more varied solar services.

22 Experience in the industry in the context of “green pricing” and “community solar” as
23 well as SDG&E’s customer research suggests that there will be substantial customer interest in

1 subscribing to one of the program options offered in this application. SDG&E believes the
2 timing is right to move forward with its proposed solar pilots with the declining cost of solar,
3 customer interest and successful performance of other similar green offerings.

4 This concludes my prepared direct testimony.

5

1 **XI. STATEMENT OF QUALIFICATIONS**

2 My name is Dawn Osborne. My business address is 8335 Century Park Court, San
3 Diego, CA. 92123. I am employed at San Diego Gas and Electric Company (SDG&E) as an
4 Energy Programs Manager.

5 I have been employed at SDG&E since 1971 and I have directed and managed customer
6 service, call center, branch office, staff support, energy efficiency, direct access and other
7 customer services operations at SDG&E. My work experience has included the development,
8 implementation, management and marketing of programs for energy efficiency, customer
9 services, direct access and distributed generation; supervision of customer contact center, bill
10 payment offices and customer service staff. From 1998 through 2008 I was responsible for
11 managing the customer service-related development, implementation and operations of Direct
12 Access, including the oversight of policy matters, development of rules/procedures, billing
13 system changes, ESP/SDG&E interactions and relations, regulatory issues and leading SDG&E
14 activities at statewide working groups. I was also responsible for managing the development and
15 implementation of SDG&E's Billing Agent responsibilities to Department of Water Resources as
16 a result of the energy crisis, including contract development/negotiations/management,
17 development/implementation of customer billing system changes/ DWR revenue
18 submittals/financial reporting, training of customer contact personnel and regulatory issues.

19 In 2008, I assumed my current position managing the Sustainable Communities Program
20 which installs utility-owned clean energy systems, such as solar, within highly energy efficient
21 and sustainably designed buildings. These systems provide locally generated energy to the grid.
22 I have previously testified before the California Public Utilities Commission.