

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA



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Application of San Diego Gas & Electric
Company (U 902 M) for Approval of The SDG&E
Solar Energy Project

Application 08-07-017

OPENING BRIEF OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902-M)

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OPENING BRIEF OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902-M)

**I.
INTRODUCTION AND SUMMARY OF ARGUMENT**

Pursuant to the California Public Utilities Commission’s (“Commission”) Rules of Practice and Procedure and the Rulings of the Presiding Administrative Law Judge (“ALJ”), San Diego Gas & Electric Company (“SDG&E”) hereby submits one of two Opening Briefs in the above-captioned proceeding.

This brief addresses the merits and requests approval of SDG&E’s Solar Energy Project as filed on July 11, 2008 (the “Base Case Brief”). Pursuant to the Presiding ALJ’s instructions, SDG&E files concurrently herewith a companion brief which requests the Commission approve, in the alternative, the Joint Settlement in this proceeding reached among the Settling Parties, SDG&E, the Utility Consumer’ Action Network (“UCAN”), the Western Power Trading Forum (“WPTF”), and Californians for Renewable Energy (“CARE”) (the “Settlement Brief”).

SDG&E urges the Commission to approve the Settlement Agreement reached among the Settling Parties as filed with Commission. If, however the Commission rejects such Settlement, SDG&E urges the Commission approve its original application.

On July 11, 2008, SDG&E filed its application requesting approval to implement the SDG&E Solar Energy Project as a proactive step toward protecting the environment and providing clean energy to customers, and aimed at increasing the adoption of solar power among San Diego-area commercial customers, municipalities and institutions.

As set forth in great detail in its Application and accompanying testimony, the SDG&E Solar Energy Project is designed to remedy the lack of solar photovoltaic (PV) generation plants in SDG&E's load basin that are optimized for integration on the distribution grid (1-2 MW_{ac} in size expected) and that are capable of maximizing their capacity output coincident with the time that SDG&E experiences its system peak in SDG&E's territory. In SDG&E's load basin, installations of this size are either too large to take full advantage of the Commission's CSI incentives which are limited to the first MW_{ac} of capacity installed and only provide incentives to maximize energy production, or are likely too small to effectively bid into SDG&E's RPS RFOs.

To remedy this deficiency, SDG&E proposes to turnkey, own and operate up to 52 MW_{dc} of distribution-connected, solar PV generating facilities in SDG&E's load basin procured over a five year period with a spending cap of \$250 million and to provide the opportunity to co-construct up to 25 MW_{dc} of solar PV facilities with those of its customers who could construct solar PV facilities under the CSI that might otherwise not build them. To augment host sites, SDG&E seeks the flexibility for turnkey projects on property it presently owns.

Specifically, SDG&E requests the Commission to approve the SDG&E Solar Energy Project application by:

1. Authorizing SDG&E to turnkey, own, maintain and operate up to 52MW_{dc} of utility owned solar PV generating facilities of approximately 1 to 2 MW_{ac} each from 2009 through 2013 with a spending cap of \$250 million;
2. Approving SDG&E's request for funding to support the SDG&E Solar Energy Project in the amounts of \$214,000 in 2008 and \$1,662,000 for each year from 2009 until included in the base margin generation revenue requirement after SDG&E's 2012 general rate case (GRC) for annual administration and preliminary development costs (five year total \$8,524,000 in \$2008); and
3. Finding that SDG&E's proposed Tier 3 Advice Letter approval process is reasonable.

SDG&E is not asking for immediate funding of \$250 million for its Solar Energy Project. Rather, SDG&E is seeking approval to spend \$1.66 million dollars per year for five years to fund staff and consultants to investigate and develop solar PV projects on host and utility owned property in conformance with its Application. Once a viable project is identified, SDG&E will submit it to the Commission for its approval, prior to the expenditure of funds associated with

said project, via a Tier 3 Advice Letter filing consistent with the Commission decision authorizing the SDG&E Solar Energy Project. The \$250 million figure simply represents the cap on costs for the five-year program.

As no credible testimony has been filed by any party to this proceeding to show that SDG&E is incorrect in asserting that: (1) there is a lack of solar photovoltaic (PV) generation plants in SDG&E's load basin that are optimized for integration on the distribution grid (1-2 MW_{ac} in size) and that are capable of maximizing their capacity output coincident with the time that SDG&E experiences its system peak in SDG&E's territory; (2) SDG&E's Solar Energy Project will support SDG&E attaining its RPS goals; (3) SDG&E's competitive site by site project solicitation and approval strategy is efficient, cost efficient and prudent; and, (4) approval of SDG&E' initial administrative and preliminary development costs of \$214,000 in 2008 and of \$1,662,000 per year beginning in 2009 for 5 years should is necessary for SDG&E to administer its Solar Energy Project.

SDG&E therefore requests the Commission approve its Solar Energy Project as filed.

II. DESCRIPTION AND BACKGROUND OF SDG&E'S PV PROGRAM

Consistent with and in furtherance of State policy, and addressing a particular part of the solar photovoltaic ("PV") market that to this point has been underdeveloped, SDG&E seeks Commission approval to implement its SDG&E Solar Energy Project. SDG&E expects that this proposal could result in up to 77 MW_{dc} of new installed solar capacity in the San Diego load basin. Roughly two-thirds would be built, owned and operated by SDG&E and one-third would be owned by host customers or independent third parties. For SDG&E's portion of the project, SDG&E proposes to build, own and operate up to 52¹ megawatts direct current ("MW_{dc}") of

¹ The direct current capacity reporting basis is frequently utilized in the PV industry to report PV system output. If capacity is expressed on an alternating current (ac) basis the dc to ac conversion will be based on the CEC conversion of 1 watt (dc) = 0.67 watt (ac) detailed as follows:

A Guide to Photovoltaic (PV) System Design and Installation, CEC 2001, pg. 8-9

DC to AC inverter conversion:	.90
Production tolerance derate:	.95
Temperature derate:	.89
Dirt & dust derate:	.93
<u>Mismatch & wiring derate:</u>	<u>.95</u>
Total (product):	.67

Using this conversion factor, 52 MW_{dc} equates to approximately 35 MW_{ac}.

distribution-connected solar PV generating facilities in SDG&E's load basin with a spending cap of \$250 million over a five year period. SDG&E further expects that the opportunities the SDG&E Solar Energy Project will create for customers to co-construct solar PV facilities with SDG&E under this proposal may result in the installation of up to an additional 25 MW_{dc} of capacity under the California Solar Initiative ("CSI") that would not have otherwise been built.

SDG&E proposes that its portion of the SDG&E Solar Energy Project consist of multiple individual installations of solar PV generating facilities each in the 1 - 2 MW_{ac}² size range. SDG&E proposes to file a Tier 3 Advice Letter containing the details of the competitive solicitation, installation cost, and ongoing O&M cost along with seeking approval for cost recovery associated with that installation.

SDG&E sees the benefit and could potentially utilize tracking technology that will maximize PV system output coincident with the predicted SDG&E system peak. SDG&E proposes to partner with hosts offering sites with open areas and parking lots, such as shopping malls and local governments, and with solar industry vendors and installers. The open areas and parking lots of the host partners offer particular advantages in that they are located close to SDG&E's load areas and are in close proximity to locations where SDG&E's distribution system can accommodate systems of 1 – 2 MW_{ac} in size. SDG&E also proposes to issue a competitive solicitation for the equipment and installation of the systems.

If approved, the SDG&E Solar Energy Project will:

- ◆ Promote the development of multiple commercial PV projects with the participation of SDG&E, third party developers and customers supporting the development of a PV market segment (installations between 1 and 2 MW_{ac}), that is not currently being served through either utility or private investments; and
- ◆ Deploy tens of megawatts of solar tracking technology to maximize power production of a PV system during the SDG&E system peak and thereby substantially enhancing the value of the installations to serve peak demand.

² While 1-2 MW_{ac} is the primary target range, installations could be larger depending on specific site and local distribution system conditions.

A key benefit of the SDG&E Solar Energy Project will be the ability to increase amounts of PV capacity coincident with the SDG&E annual peak demand. Under conventional solar rooftop initiatives, as much as 50% of the name plate capacity of the solar arrays is lost at the time of system peak, which significantly reduces the on-peak benefits delivered by such installations. Throughout the state of California, different utilities face different challenges. In the San Diego region, SDG&E is severely capacity constrained. For this reason, by designing solar PV installations to increase their capacity output at the time of system peak, the value of solar PV power can be increased significantly.

Maximizing output at time of system peak can be done by one of two ways, orientating fixed tilt panels towards the afternoon sun or utilize tracking technology that follows the sun throughout the day. Tracking technology will increase a PV system power output coincident with the predicted SDG&E system peak, while also realizing additional annual energy production over what would have been produced by a conventional rooftop installation of similar size. Such a system can increase on-peak output by as much as 65% relative to a typical flat-panel rooftop installation while producing 40% more energy in the course of a year.

Specifically, SDG&E seeks Commission approval to:

- Implement the SDG&E Solar Energy Project that would consist of investment in up to 52 MW_{dc} of utility-owned solar PV generating facilities with a spending cap of \$250 million over a five-year period. The proposed SDG&E Solar Energy Project consists of multiple individual installations of solar PV generating facilities of approximately 1 to 2 MW_{ac} each from 2009 through 2013. SDG&E proposes to file Tier 3 Advice Letters for approval of cost recovery for individual PV generating facilities.
- Recover initial administrative and preliminary development costs of \$214,000 in 2008 and of \$1,662,000 per year beginning in 2009 through the Non-fuel Generation Balancing Account (“NGBA”);
- Recover capital-related and operations and maintenance (“O&M”) revenue requirements for completed SDG&E Solar Energy Project installations through the NGBA;

- Create a new balancing account, the Solar Energy Project Balancing Account (“SEPBA”), to balance the authorized revenue requirement for administrative and preliminary development costs as requested in this application and authorized revenue requirement for each SDG&E Solar Energy Project facility with the actual capital-related revenue requirement and O&M expenses; and
- File a Tier 3 Advice Letter for Commission approval to construct solar generation asset and for recovery of the capital-related and O&M revenue requirements associated with construction of those assets through the NGBA.

III. POLICY ISSUES

The SDG&E Solar Energy Project addresses how a particular part of the solar PV market which, to this point, has been underdeveloped, can be developed through the Commission’s approval of its Application to own and operate up to 52 MW_{dc} of distribution-connected solar PV capacity and energy in SDG&E’s load center.

A. SDG&E’s Solar Energy Project Supports Existing State Policy

California state policy is to increase the use of renewable energy. The renewable portfolio standard (“RPS”) program, which requires 20% of retail electric sales be served by renewable resources by 2010, is foundational. Building on this, Governor Schwarzenegger signed landmark legislation establishing the Million Solar Roofs Plan or CSI, to develop 3,000 MW of rooftop solar photovoltaic installations by 2016.

More recently, the State set forth greenhouse gas (“GHG”) emission reduction targets by enacting Assembly Bill (“AB”) 32 to reduce statewide GHG emissions to 1990 levels by 2020, to be achieved in large part through increased production of renewable energy. Executive Order No. S-21-09, recently signed by Governor Schwarzenegger, orders the California Air Resources Board (“ARB”) to adopt a regulation that requires all California load-serving entities, to deliver at least 33 percent renewable energy by no later than 2020. Further, the Commission and the California Energy Commission (“CEC”) provided joint leadership in implementing programs to meet the renewable energy goals of the State in their 2003 joint Energy Action Plan (“EAP”), in which they stated their intent to achieve the 20% renewables goal by 2010, seven years ahead of the statutory deadline in effect at the time. In their 2008 update to the EAP, the Commission and

the CEC placed particular emphasis on the potential benefits of solar energy: "...since California has an abundance of powerful sunlight."

In order to meet the State's renewable and GHG goals the Commission has focused significant attention on implementing the RPS program, the CSI program as well as encouraging investor owned utilities to build, own and operate renewable generation assets, particularly solar PV.

No party has shown that SDG&E's solar Energy Project fails to support and further the State's stated energy policies and it should be approved.

IV. OTHER ISSUES

A. SDG&E Is Committed To Exploring Opportunities For Wholesale PV Solar Installation In Accordance With State Policy

CARE recommends that SDG&E focus on larger wholesale PV solar installations, comparable to the recent 10 MW First Solar installation for Sempra Energy in Nevada.³ SDG&E testified that it supports development of larger scale PV solar installations. However, the SDG&E Solar Energy Project is not a substitute for larger wholesale PV solar installations. SDG&E has demonstrated that there are ample existing incentives and opportunities available for such transmission system delivered developments through SDG&E's annual solicitations for renewable resources. Through its annual RFO solicitations, SDG&E provides an opportunity for independent developers to submit such projects, to the extent they are economically and technically viable, for consideration. The SDG&E Solar Energy Project is specifically designed so that it does not compete with such projects.

The SDG&E Solar Energy Project is designed to complement the existing small-sized CSI and large-sized RPS solar programs to help SDG&E reach its renewables goal. Just as the State's policy to increase the use of renewable energy is demonstrated in many ways, e.g. RPS, CSI and assembly bill (AB) 32, SDG&E's efforts to achieve its RPS goals of 33% by 2020 are also multi-faceted.

In order to achieve this goal, SDG&E will need to pursue multiple strategies, and the Solar Energy Project represents one more tool enabling SDG&E to meet this target.

As the SDG&E Solar Energy Project only represents a contribution of 0.4% of SDG&E's

³ Exh. 300, Prepared Direct Testimony of Juliette Anthony on behalf of CARE, pp. 10-11.

retail electric sales in 2012, SDG&E recognizes that it may have to explore opportunities for utility owned larger scale PV installations in order to meet the aggressive target of 33% renewables by 2020. Exploring other larger scale opportunities does not mean SDG&E should ignore smaller opportunities which will help it meet its own ambitious RPS goals. SDG&E intends to evaluate opportunities for larger scale PV solar installations and, to the extent that SDG&E elects to pursue such a project, SDG&E will submit a separate application to the Commission for consideration thereof.

B. The SDG&E Solar Energy Project Will Focus Initially On Utility Owned Property

UCAN recommends that SDG&E focus initially on utility owned property with less than \$50 million to commit initially.⁴ SDG&E testified that it agrees that there is value in focusing initially on utility owned property in order to gain more experience and is willing to redirect its focus in that direction. However the cap, as proposed, is unnecessary as each project will be submitted to the Commission for approval on a project-by-project basis.

Alternatively, DRA recommends that SDG&E implement a 1-2 year pilot program or short-term project that would require at least one-third CSI program ownership, imposing a cap of \$25 million.⁵ As stated above, SDG&E testified that it agrees with UCAN's recommendation to focus initially on utility owned property. Imposing a one-third CSI program ownership requirement, as DRA proposes, conflicts with this idea to concentrate initially on utility properties.

SDG&E pointed out that DRA's recommendation to impose a cap of \$25 million dollars for a proposed pilot program is unnecessary. As stated above, the Commission will have the project-by-project discretion to approve or deny any SDG&E project thereby negating the necessity for additional program limitations.

C. UCAN's Proposal To Develop Larger PV Arrays At/Near SDG&E Substations Is Reasonable

UCAN recommends that SDG&E develop larger PV arrays at/near SDG&E substations to take advantage of low cost PV technologies.⁶ As discussed above and in SDG&E's

⁴ Exh. 501, Prepared Direct Testimony of David R. Croye on behalf of UCAN, pp.6-7.

⁵ Exh. 200, Prepared Direct Testimony of David Peck on behalf of DRA, p.15.

⁶ Exh. 500, A.08-07-017, Direct Testimony of Powers Engineering on Behalf of UCAN, January 14, 2009, p. 22

Application, SDG&E is not asking to develop projects which adopt any specific technology.⁷ SDG&E agrees that it makes sense to focus initially on utility owned property. In addition, the SDG&E Solar Energy Project does not preclude any PV technologies, and SDG&E intends to evaluate specific projects utilizing available PV technologies on a cost-efficiency basis when taking into consideration both capacity and energy.

With respect to SDG&E developing larger PV arrays than contemplated under this Application, as stated in “A” above, to the extent that SDG&E identifies such a distribution system tied project and elects to pursue it, SDG&E is not asking the Commission to approve such a project here, but will submit a separate application to the Commission for consideration.

D. SDG&E Does Not Disagree with UCAN’s Recommendation That SDG&E Allow Bids From Thin-film Panel Systems As Well As Single And Dual Axis Tracking Systems

UCAN recommends that SDG&E allow bids from thin-film fixed panel systems (like First Solar) as well as single and dual axis tracking systems.⁸ As stated above, SDG&E is not precluding any technology and will be competitively bidding all projects and will entertain bids from thin-film fixed panel systems (like First Solar).

E. UCAN’s Proposals For Consideration of Projects Similar in Nature to Southern California Edison’s Urban PV Program Is Unreasonable.

UCAN recommends that SDG&E use approximately “4600 MW of PV potential (2010 estimate) on commercial buildings, parking structures, and parking lots” to deploy thin-film PV⁹. UCAN also recommends that SDG&E replicate Southern California Edison’s urban PV program in a similar setting in San Diego County, such as the Otay Mesa border warehouse area.¹⁰ SDG&E agrees that these “opportunities” merit further evaluation. However, as SDG&E has pointed out in testimony, these types of projects more appropriately belong in the CSI or SDG&E’s Sustainable Communities Program (“SCP”). To the extent that such opportunities are identified while evaluating projects under the SDG&E Solar Energy Project, SDG&E will

⁷ Exh. 07, A.08-07-017, SDG&E Solar Energy Project, Chapter II Detailed Description, Errata to Prepared Direct Testimony of Frank W. Thomas and Thomas O. Bialek, January 7, 2009, pg. II-13, “The solar generating facilities will utilize either crystalline or thin film PV technologies determined on a facility by facility basis. Other solar generating technologies will be considered during the duration of the SDG&E Solar Energy Project if they meet cost and selection criteria.”

⁸ Exh. 500, A.08-07-17, Prepared Direct Testimony of Powers Engineering on Behalf of UCAN, January 14, 2009, p.7

⁹ Id, at p.2.

¹⁰ Id.

evaluate the opportunity to expand its SCP program and, if meritorious, will submit a separate application to the Commission for its consideration. UCAN's proposal for the Otay Mesa warehouse district, while outside the scope of the Solar Energy Project, may be such an opportunity and SDG&E will consider it for further evaluation under the SCP program.

F. UCAN's Recommendation That SDG&E Deploy Rooftop Thin-film PV Combined With Limited Battery Storage On A Large Scale As An Alternative To Conventional Combustion Turbines And A Source Of Emergency Power Is Premature

UCAN recommends that SDG&E deploy rooftop thin-film PV combined with limited battery storage on a large scale as a cost effective alternative to conventional combustion turbines and a source of emergency power.¹¹ SDG&E testified that it is currently waiting funding from the U.S. Department of Energy and California Energy Commission for R&D projects concerned with these subjects. These projects will explore the role, cost and benefits associated with distribution connected energy storage. At this juncture, it is pre-mature to consider such nascent technologies in this Application. Once SDG&E and the industry at large gain more experience and knowledge with the use of and potential for batteries to be a source of larger scale utility grade emergency power, SDG&E will be in a position to consider such an application.

G. SDG&E Supports Examining Opportunities To Utilize Storage Systems for Off-Grid Emergency Power and On-Grid Peaking Power To Mitigate Fire Risk In East County

UCAN recommends that SDG&E utilize storage systems for 45,000 customers for off-grid emergency power and on-grid peaking power to address backcountry wildfires¹². SDG&E testified that such a proposal warrants further consideration as it could provide the East County with additional emergency response and that it is prepared to raise this issue in either the Commission's Fire OIR under separate application or incorporate it under SDG&E's SCP.

H. Existing State Mandates Concerning Renewable Energy and Greenhouse Gas Reduction Demand Immediate Action

UCAN proposes that SDG&E employ a "wait scenario" when evaluating any solar technology where costs are expected to decline or performance to improve.¹³ SDG&E testified that this recommendation, if taken at face value and adopted by the Commission, is actually a

¹¹ Id. at p. 20

¹² Id.

¹³ Exh. 501, Prepared Direct Testimony of David R. Croyle on behalf of UCAN, pp.51-52.

“never scenario” as it will always be possible for one so inclined to claim that solar PV costs are just about to improve, even though for many, many years such claims have consistently failed to materialize. The reality is that California has committed itself to aggressive renewable and greenhouse gas reduction targets¹⁴ and UCAN’s temporizing impedes rather than assists SDG&E in helping to achieve those goals.

The SDG&E Solar Energy Project application is designed in such a way to enable the Commission to make a case by case cost determination as it evaluates each project at the time SDG&E submits it for approval. If, on the other hand, UCAN’s proposition is adopted, the Commission may, realistically, never be presented with a project to evaluate.

SDG&E testified that while it actively promotes energy efficiency as a first resource per the State’s loading order, renewable generation is still needed in addition to energy efficiency. The SDG&E Solar Energy Project provides SDG&E with an additional tool to meet renewable and greenhouse gas reduction targets. This is not an either/or situation. The State needs both.

**V.
THE SDG&E SOLAR ENERGY PROJECT MEETS THE REQUIREMENTS OF
PUBLIC UTILITIES CODE SECTION 454.3(C)**

DRA does not believe that the SDG&E Solar Energy Project warrants an extra one percent rate of return. DRA states that: “SDG&E’s application does not meet any of the three requirements specified by section 454.3¹⁵.” Contrary to DRA’s testimony on this point, SDG&E’s proposal does meet the requirements of Public Utilities Code Section 454.3(c).

Regarding the qualification of the SDG&E Solar Energy Project for the incentive provided for in PUC section 454.3(c)¹⁶, DRA argues there is little justification for considering the installations “experimental” in nature. DRA states: “Specifically, solar PV panels, inverters, combiner boxes, wiring, disconnects, and mounts are the main elements of land-based solar PV systems installed today and these same components also make up the basis of systems included

¹⁴ The Air Resources Board recently adopted its Scoping Plan assigning approximately 40% of the economy-wide responsibility for mandatory emissions reductions to the electricity sector, even though electricity represents only 25% of the statewide emissions see D.08-10-037, Final Opinion on Greenhouse Gas Regulatory Strategies p.122.

¹⁵ Exh. 200, Prepared Direct Testimony of David Peck on behalf of DRA, p17.

¹⁶ PUC Section 454.3(c) states qualification for the incentive as: “The facility is experimental and is, in the determination of the commission, reasonably designed to improve or perfect technology for the generation of electricity from renewable energy resources or to more efficiently utilize other resources in a manner which will decrease environmental pollution from and lower the costs of the electricity generated.”

in this application¹⁷.” DRA fails to address the explanation for SDG&E’s qualification for the incentive SDG&E put forth in its testimony. Specifically, DRA ignores SDG&E’s stated purpose that “...the SDG&E Solar Energy Project will build on current research to provide for a thorough and complete study as to the benefits created by locating large concentrations of solar generation on SDG&E’s distribution system. These real world demonstrations deploying 1 to 2 MW_{ac} of PV in multiple locations will provide confirmation as to the value of distribution system benefits and under what conditions those benefits are maximized.” The challenge to notable PV generation tied to the distribution system is not the generation technology itself, but rather recognizing the benefits and accommodating the detriments associated with distribution system operations due to the injection of intermittent generation. The basis for DRA’s argument is based solely on the nature of the individual components of a land-based solar PV system which does not address SDG&E’s stated purpose for qualification under PUC 454.3(c).

The Commission should authorize the full 100 basis point increase that SDG&E has requested to maximize SDG&E’s incentive to pursue the full scope of its proposal.

VI. CSI COMPARISONS PUT FORTH BY CARE AND DRA ARE FLAWED

The comparisons between CSI and the SDG&E Solar Energy Project put forth by DRA and CARE share a fundamental flaw¹⁸. SDG&E testified that while both CSI and the SDG&E Solar Energy Project costs are funded by ratepayers, only the energy produced by the SDG&E Solar Energy Project, as utility owned generation, actually serves all bundled ratepayers. The energy produced by CSI installations goes to the participant who received the CSI subsidy funded by the ratepayers. Also, from a societal perspective the cost of the SDG&E Solar Energy Project is equivalent to or less than CSI in that the upper range of the SDG&E Solar Energy Project of \$7,000/kW_{ac} was set based on actual installed costs of CSI solar PV systems.

¹⁷ Id. at p.18.

¹⁸ See, Exh. 200, Prepared Direct Testimony of David Peck on behalf of DRA p.8, *"In any case, solar PV system installation costs of SDG&E's SEP are 3.5 times more costly than comparable CSI installations and must also cover additional O&M expenses. Once again, SDG&E's SEP does not compare favorably against similar sized CSI Installations."* And Direct Testimony of Juliette Anthony on behalf of CARE at p.14, *"The CSI program has provided private funding for solar PV installations in the past, which has made it more cost effective for the ratepayer than the full recovery of costs that SDG&E has proposed for their Solar Energy Project."*

VII.
TIER-3 ADVICE LETTER PROCESS IS PRUDENT

UCAN questions SDG&E's proposal of an advice letter process for evaluating individual solar projects under the umbrella of the SDG&E Solar Energy Project claiming such an approval process suffers from a lack of sufficient review and will tax Energy Division with additional analysis, while DRA supports the Tier-3 advice letter process as a viable approach.

As SDG&E testified, the Commission's existing Tier-3 advice letter process requires a Commission Resolution and provides several ways for market stakeholders to participate in the review process including a comment period on any draft resolution and, of course, formal protest. After the policy matters are litigated in this proceeding and a framework of approved criteria for individual/or a small group of solar projects is established by the Commission, the Tier-3 advice letter will provide all required compliance information regarding each project subject to the advice letter process and allow viable solar projects (those that meet the pre-established criteria requested, litigated, and authorized by the Commission in this proceeding) to be placed in service in a more timely manner than that provided by the application process.

SDG&E's Tier-3 advice letter proposal will provide a Commission designed streamlined process to complete the SDG&E Solar Energy Project installations that comply with pre-established project criteria as authorized in this proceeding in a timely manner while still allowing market stakeholders to participate in the SDG&E Solar Energy Project evaluation process.

VIII.
THE SOLAR ENERGY PROJECT'S SOLICITATION AND SELECTION PROCESS

A. All PV Technologies Solicited

Intervenors have expressed concerns that SDG&E has too narrowly focused its photovoltaic technology desires. To make it clear that its program goals were not exclusionary, SDG&E testified that it will accept bids for stationary and tracking technologies, thin film or crystalline technologies. As such, after its solicitation of information from vendors, SDG&E will shortlist entities that offer the above commercially proven technologies such that it can receive competitive bids for these technologies for any given project site or bundle of project sites as

may be so offered. Shortlisted vendors may represent a particular technology or be technology agnostic. SDG&E will not mandate that all technologies be bid for each project since vendors that are technology agnostic will choose technologies they believe will be most likely to be selected pursuant to SDG&E's selection process discussed further below.

B. All projects will be turnkey and competitively bid

DRA has requested that projects be delivered by vendors on a turnkey basis as the result of a competitive process if the CPUC chooses to adopt some form of the SDG&E Solar Energy Project. Specifically, DRA states: "SDG&E should also be required to hold competitive RFOs for turnkey system implementation. This allows the Commission to review each project on an all-in cost basis and will help insure that SDG&E brings in projects that meet their joint UOG/CSI requirement and are located in areas where load is concentrated¹⁹."

SDG&E testified that it supports DRA's recommendation to secure projects on a turnkey basis and, as such, is consistent with SDG&E's Application whereby it intends to solicit qualifications from interested vendors. SDG&E further testified that it would then shortlist vendors for later competitive bidding on specific project(s) that would be delivered on a turnkey basis. If pricing appears attractive, then SDG&E would submit to the Commission for approval on an all-in cost basis.

To clarify, SDG&E testified that it will not undertake projects in an EPC (engineer, procure, and construction) fashion. SDG&E is confident that there are numerous qualified vendors that can take on the EPC role and provide a successful turnkey project to SDG&E.

C. Lowest cost, commercially viable technology

UCAN has posed several points dealing the need to clarify and identify up front selection criteria applicable to SDG&E's Solar Energy Project. To address these concerns SDG&E testified that it proposes to use its Procurement Review Group ("PRG") to review its process, evaluation criteria and results as it does with other procurement. The PRG, which primarily includes representatives from the Commission staff and consumer groups, will review and comment on the evaluation process prior to bids being received. SDG&E further testified that it would then bring its evaluation results back the PRG to demonstrate how it followed the pre-determined evaluation process. SDG&E testified that this process will provide clarity

¹⁹ Exh. 200, Prepared Direct Testimony of David Peck on behalf of DRA at p.16.

concerning the entire selection process and allow a showing via advice letter, that it has put forth the best candidate projects.

D. Site ranking

To further clarify its proposed site selection SDG&E process, SDG&E testified that it proposes, along with its consultant to perform a ranking of prospective sites so that vendors can bid on the best sites first. SDG&E testified that competition between sites will be via a ranking of the sites by SDG&E that will include its consultant's evaluation of solar development potential coupled with the complexity of lease requirements. The best ranked sites would then move forward to be permitted and then offered to vendors for turnkey pricing quotes.

E. Cost Evaluation

SDG&E testified that it will evaluate bids on a 20 year levelized basis with the key drivers being energy cost and capacity benefit. SDG&E stated it intent to evaluate each project on an individual basis relative to cost of energy and capacity benefit regardless of the panel type and tracking mechanism, and that each bidder would be required to identify expected energy production over a 20-year period and justify performance expectations. SDG&E testified that its consultant will review and verify²⁰.

F. Leasing and Lease Costs

UCAN suggested that SDG&E conduct a review of lease terms for potential solar power plant sites and the issues surrounding such hypothetical leases. SDG&E testified that such upfront deliberation concerning lease requirements is unnecessary as leasing property for utility use is common practice by SDG&E. SDG&E has real estate experts and commercial attorneys that routinely do this work. To entertain the concept that upfront guidelines need to be developed as part this proceeding is premature, allows unnecessary delay and wastes the Commission's time.

SDG&E testified that SDG&E has the burden to demonstrate in its advice letter that any monetary compensation related to lease sites is consistent with pricing guidelines and that the form of compensation is appropriate for the given counterparty.

²⁰ While SDG&E will monitor and log post-construction energy production, it does not believe it is necessary to undertake performance reporting because it will not select technologies that have not already proven themselves to be commercially viable with longevity.

IX.
COST CONTROL AND PROJECT TIMING

SDG&E testified that DRA and UCAN and SDG&E share cost control concerns, but the methods of cost control suggested by DRA and UCAN, i.e. mandated cost caps by technology, are unnecessary due to the project evaluation process and advice letter approval process described above. To reiterate, SDG&E will seek the most cost efficient, commercially available photovoltaic applications regardless of technology, be it fixed, tracking, thin-film, or crystalline. To protect against possible project cost over-runs, SDG&E will submit for approval only fixed price turnkey projects. That said, SDG&E testified that it does not request that a price cap be set at the historic CSI pricing at the time of a given submittal. SDG&E merely identifies that it would simply not present projects to the Commission for approval unless such projects had costs that were lower than the installed cost of projects under the CSI program.

X.
GUARANTEES AND WARRANTIES

SDG&E testified that it shares UCAN's concern with long-term performance of a solar energy plant. To address this concern, SDG&E testified that as part of its bid selection process, that SDG&E would, as a standard business practice, use manufacturer and vendor guarantees and warranties as differentiators as well as examining the credit worthiness and product history of the vendor and underlying manufacturers in .

XI.
CO-LOCATING WITH CSI INSTALLATIONS

DRA recommends limiting the SDG&E Solar Energy Project to projects that provide two-thirds UOG and one-third CSI if the Commission chooses to adopt some form of the Solar Energy Project²¹. SDG&E testified that it does not agree that this is the most cost efficient way of delivering projects under the SDG&E Solar Energy Project. The ranking and selection of individual Solar Energy projects should be as provided in SDG&E's testimony and described above. SDG&E testified that it will consider solar energy projects offering an additional CSI attribute to be preferred when differentiating between similarly priced projects on host properties.

²¹ Exh. 200, DRA page 16, lines 5 & 6. To clarify, the DRA is mistaken that this was a self-imposed requirement set by SDG&E.

XII.

THE SDG&E SOLAR ENERGY PROJECT IS DIFFERENT FROM CSI AND RPS

DRA and UCAN spend much of their testimonies trying to explain why the SDG&E Solar Energy Project is inferior to RPS or CSI or is in some way will supplant either renewable energy resource program, with the implication that if RPS and CSI exist, the Solar Energy Project cannot.

SDG&E submits that such a judgmental exercise is beside the point entirely. As SDG&E testified that, as stated in its testimony, outlined herein, and elaborated below, the SDG&E Solar Energy Project is qualitatively and quantitatively different from RPS or CSI and can really only be fairly considered on its own merits. SDG&E's Solar Energy Project is competition based and allows the market to provide the best price for solar energy unconstrained by CSI and RPS.

More importantly, SDG&E's Solar Energy Project will provide renewable energy **in addition** to CSI and RPS and should be approved not rejected.

XIII.

THE SDG&E SOLAR ENERGY PROJECT IS IN ADDITION TO AND DOES NOT OVERLAP CSI

In its testimony, SDG&E explained that the Solar Energy Project did not overlap with CSI, particularly since the SDG&E Solar Energy Project targets photovoltaic projects **greater** than 1 MW_{ac}.

XIV.

THE SDG&E SOLAR ENERGY PROJECT AUGMENTS RPS

SDG&E testified that its Solar Energy Project does not supplant or fit within RPS. The fundamental criteria of the SDG&E Solar Energy Project are that individual solar energy projects must provide renewable distributed generation in SDG&E's service territory to its distribution grid. In setting these criteria, the Solar Energy Project targets a niche not delivered under RPS, and therefore cents/kWh price comparisons between the Solar Energy Project and RPS resources are not applicable.

SDG&E testified that but for relatively small biomass potential, SDG&E's service territory basically has wind and solar renewable energy potential and in its load areas, just photovoltaic opportunities. In its Application and testimony, SDG&E identified the expected

energy deliveries stemming from the SDG&E Solar Energy Project. Although small relative to the magnitude needed to meet RPS requirements, SDG&E seeks to have these deliveries counted.

RPS resources, on the other hand, are bid from many areas, tied to the grid from many different locations, and are of various technologies which offer different delivery profiles and technology risks, and subject to various transmission uncertainties. The formal LCBF process is appropriate to evaluate all of these nuances. The SDG&E Solar Energy Project proposes a robust process to get competitive market pricing, which does not require the myriad of requirements imposed by the LCBF process needed for RPS. Imposing the same LCBF process on the SDG&E Solar Energy Project will result in wasted efforts, and a more lengthy selection, and costly, process.

UCAN suggests that a myriad of commercial transactions be considered and presents a complex matrix of wide ranging scenarios in testimony.²² If the Commission believes these or other transactions are worthy of further consideration, SDG&E testified they would be more appropriately introduced into the feed-in tariff proceeding. SDG&E testified that it proposed its Solar Energy Project to better ensure that the product purchased in its load area delivers for the duration of its product life which is expected to be 20 years or more and that its proposed turnkey structure and approval process provides the best approach to accomplishing this objective.

UCAN further suggests that SDG&E should focus on larger scale photovoltaic projects within its service territory, specifically tied to the transmission grid near its existing substations. SDG&E testified that, while a plausible alternative to distributive renewable generation, such opportunities already exist for merchants via the RPS solicitation. In addition, this is counter to the SDG&E Solar Energy Project's intent to focus on property where photovoltaic deployment is an ancillary benefit.

XV. SECTION 2775.5(b)

CARE states: "SDG&E is seeking Commission approval to begin participating in the solar PV market which will directly compete with those commercial companies which provide solar for large flat warehouse-type roofs."(p5). SDG&E shares this concern. Therefore, SDG&E has designed its Application in such a way as to take advantage of such commercial

²² Exh. 501, Prepared Direct Testimony of David R. Croyle on behalf of UCAN- Table 1 at pp 40-42.

companies to provide turnkey bids. SDG&E does not intend to EPC these projects itself but will rely on the competitive market place. As such, SDG&E will not be competing with these companies.

In exhibit 300, p. 7, CARE cites Pub. Util. Code §2775.5 (b): “Before granting any such authorization, the commission shall find that the program of solar energy development proposed by the corporation will accelerate the development and use of solar energy systems in this state for the duration of the program.”

SDG&E testified that since it identified a market niche of 1-2 MW solar generating plants unserved through either CSI or RPS that will be served by the SDG&E Solar Energy Project, the Commission should make such a finding.

XVI.
PHASED PROJECT IMPLEMENTATION AND SMALLER CAP FOR THE SDG&E SOLAR ENERGY

Both the DRA and UCAN suggest that if the SDG&E Solar Energy Project is approved, a smaller cap should be imposed and the project should be done in phases. This suggestion is unnecessary as the Commission has the flexibility to deny advice letter filings by which SDG&E will seek approval of individual projects.

XVII.
STAFFING WILL NOT SUPPLANT MARKET SUPPLIED O&M SERVICES

CARE suggests that O&M services are readily available from the marketplace. SDG&E testified that it agrees with CARE and intends to utilize such O&M services because it presently does not have those resources available internally. SDG&E testified that the FTEs requested in its Application will not perform or undertake the actual solar installation work. The staffing plan presented by SDG&E does not overlap with commercially available services, but instead, is reflective of the effort needed to implement and manage the SDG&E Solar Energy Project. SDG&E testified that in its next GRC, SDG&E commits to review these staffing needs and modify as needed commensurate with progress of the SDG&E Solar Energy Project.

**XVIII.
CONCLUSION**

Specifically, SDG&E respectfully requests the Commission to approve the SDG&E Solar Energy Project application by:

1. Authorizing SDG&E to turnkey, own, maintain and operate up to 52MW_{dc} of utility owned solar PV generating facilities of approximately 1 to 2 MW_{ac} each from 2009 through 2013 with a spending cap of \$250 million;
2. Approving SDG&E's request for funding to support the SDG&E Solar Energy Project in the amounts of \$214,000 in 2008 and \$1,662,000 for each year from 2009 until included in the base margin generation revenue requirement after SDG&E's 2012 general rate case (GRC) for annual administration and preliminary development costs; and
3. Finding that SDG&E's proposed Tier 3 Advice Letter approval process is reasonable.

Dated this 3rd day of November, 2009.

Respectfully submitted

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