Application No.: A.08-07-017
Exhibit No.: SDG&E
Date: August 13, 2009

SAN DIEGO GAS & ELECTRIC SOLAR ENERGY PROJECT

SUPPLEMENTAL TESTIMONY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

August 13, 2009

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I.
INTRODUCTION

Q.1 What is the purpose of your supplemental testimony in this proceeding?

A.1: The purpose of this testimony is to respond to the issues identified as requiring additional testimony outlined in the Amended Scoping Memo and Ruling of Assigned Commissioner Peevey and Administrative Law Judge Ebke issued on August 3. This supplemental testimony is jointly sponsored by San Diego Gas & Electric ("SDG&E"), Western Power Trading Forum ("WPTF"), Utility Consumers Action Network ("UCAN"), and California for Renewable Energy ("CARE") (collectively "Joint Parties").

II.
UTILITY-OWNED-GENERATION (UOG) PORTION, PHASE 1A

Q.2 What is the size range of the projects?

A.2 In its original application, SDG&E indicated that it expected projects to be in the 1 to 2 MW_{ac} range. However, the upper end of the range for installed capacity of individual projects will be limited on the principle that no notable distribution system upgrades would required as a result. Settling parties anticipate projects could be as large as 5 MW_{ac}.

Q.3 What is a reasonable estimate of the levelized cost of electricity from the project?

A.3 Assuming \$4000/kW_{dc} as a reasonable turnkey vendor installed cost (e.g. overnight cost) and a 0.67 conversion factor dc to ac (original application, page II-3), the levelized cost of energy would be 35 to 39 cents/kWh.

Q.4 What is the proposed methodology for indexing the cost cap to the average California Solar Initiative (CSI) price?

A.4 The cap cost for the installed cost of a photovoltaic generating facility in terms of $/kW will be indexed to the average installed price for commercial CSI projects listed for the most recent 12 month period. Installed cost are listed in the following periodically updated link: http://www.californiasolarstatistics.ca.gov/reports/8-12-2009/DataFiles/PublicExport_8-12-2009.xls

III.
UOG/POWER PURCHASE AGREEMENT (PPA) COMPETITION, PHASE 1B

Q.5 By what criteria would SDG&E compare the turnkey and UOG solicitations, or alternatively, how will those criteria be developed?

A.5 UOG will be compared to PPAs by subtracting the capacity benefit from each approach from the net present value of their respective annual energy costs, using the same discount rate. The approach that results in the higher value to ratepayers will be accepted. Capacity benefit is based on the capacity anticipated to be delivered on late summer afternoons, e.g. August, when SDG&E needs capacity the most. Annual capacity benefits, in terms of kW capacity delivered times the avoided capacity cost of a gas-fired peaker will be subtracted from the total annual energy cost.

Q.6 What are the components of the UOG costs?

A.6 Components of UOG costs include overnight installed cost, AFUDC if any funding is provided to the turnkey vendor prior to commercial operation, sales tax if not included in overnight installed cost, internal labor/owner’s engineer for oversight during construction, federal and state taxes, depreciation, return on investment, O&M, and property taxes.

IV.
FOUR-MW SET-ASIDE FOR NEW AND EMERGING TECHNOLOGIES, PHASE 1C

Q.7 What is the proposed ratemaking/ownership structure?

A.7 The scope of the projects within the innovative applications area will be determined by SDG&E and a Procurement Review Group (PRG) comprised of key stakeholders. One ownership model considered will be utility owned assets while another will be PPA financing. If the project only provides electric generation benefits, the costs will be collected through generation rates. Ultimately, the ownership will be determined by what offers the most value for ratepayers and operational information for the utility.

Q.8 What is the criteria and process proposed for selecting projects?

A.8 The main criteria for selecting the projects are as follows: a project must; (1) create tangible benefits for ratepayers; (2) provide SDG&E with experience to ultimately integrate future systems into its distribution and/or resource planning processes; and, (3) be scalable to allow SDG&E or 3rd parties to create new programs and services that will proliferate these new and emerging technology applications. SDG&E will work with the PRG and its IE/SEE to develop the specific criteria and selection process.

Q.9 Is there a monetary cap or revenue requirement proposed for this portion?

A.9 The monetary cap for the innovative applications projects is $20M ($2009).

V.
PPA PORTION, PHASE 2

Q.10 What is the estimate of the revenue requirement for this portion of the program?

A.10 A total expenditure has not been identified for PPAs as the quantity and price of PPAs can not be ascertained at this point. Ultimately, the size of this program will be limited by the number of sites that are developable as a function of the relative price of said sites. For example, the settling parties believe that it is reasonable to conclude that developers will bid in projects based on the relative price to develop each project. From there, SDG&E, in conjunction with the PRG and the IE/SEE, will identify what would be an appropriate cut-off point on the bids submitted, and SDG&E will only submit those bids that are determined to be in the best interest of its customers, considering both the bids submitted and the capacity value provided. See also answer to #3 above.

Q.11 Who will have responsibility for aggregating bids up to 5 MW?

A.11 Market participants will have the responsibility for aggregating bids.

Q.12 How will SDG&E determine how many MW of bids to execute in each solicitation?

A.12 The quantity selected will be a function of market prices offered for PPAs considering both the bid price and capacity value provided, benchmarked to the UOG cost (as described above under Question 1 for Phase 1b) and other relevant public cost information for similar projects in California. The quantity and prices paid will be decided after consultation with SDG&E's PRG.

Q.13 How will SDG&E determine extra revenues to be collected to compensate for debt equivalence?

A.13 When PPAs are submitted to the CPUC for approval, SDG&E will estimate the equity needed to rebalance its debt to equity ratio to pre-PPA conditions. Future revenue requirements will be based on the post-PPA actual capital structure created by the increase in equity required to rebalance the debt equivalence impact. The process followed will be identical to that already approved by this Commission as it related to SDG&E's PPA with Calpine for the Otay Mesa Energy Center.

Q.14 How is a price in dollars per Kilowatt hour ($/kWh) translated into a $/kW cost cap?

A.14 A revenue requirement model is used to derive $/kWh from a given $/kW installed cost, and therefore, could be used to back calculate $/kW from $/kWh. This model includes numerous parameters, that without knowledge of which, as detailed below, would make it impossible to estimate $/kW with any confidence. For example, a $/kWh price could be converted to a $/kW cost by multiplying unit energy cost by expected annual units delivered. The total annual energy cost plus annual debt-equivalence cost would be analogous to an annual revenue requirement. Assumptions on O&M, taxes, and carrying costs (a function of cost of capital) would be required to estimate annual costs. Installed cost would be derived from the annual carrying cost based upon the developer's underlying cost of capital, which in and of itself, is a function of cost of debt and equity and the tax treatment thereof. Developer's cost of capital is typically regarded as confidential. These complexities and extent of potentially wide ranging underlying assumptions necessarily preclude the SA parties from recommending that a conversion factor from $/kWh to $/k be utilized.