

The primary objective of the Solar Two Project and its ancillary facilities (Project) is to provide clean, renewable, solar-powered electricity and to assist San Diego Gas & Electric (SDG&E) in meeting its legislatively mandated obligations under California's Renewable Portfolio Standard (RPS) Program. A secondary goal is to assist SDG&E in reducing its greenhouse gas emissions as required by the California Global Warming Solutions Act. The Project is a solar power electric generation project that has been developed and designed to conform to the requirements of the 20-year Power Purchase Agreement (PPA) between SDG&E and SES Solar Two, LLC (Solar Two or Applicant). The following discussion provides the background pertinent to the PPA for the sale of power from the Project.

2.1 UTILITIES' REQUIREMENT TO PROCURE RENEWABLE POWER

The main objective of the Project is to provide clean, renewable, solar-powered electricity to the state of California. The Project will assist the state in meeting the objectives mandated by the RPS Program and the California Global Warming Solutions Act. The Project will also address other local mandates that California's electric utilities have adopted for the provision of renewable energy. The following state legislation has been passed relating to renewable energy that are relevant to the Project.

- **2002:** Senate Bill 1078 established the RPS Program, which requires 20 percent of the electricity sold by regulated California utilities to be generated from renewable energy by 2017.
- **2003:** Energy Action Plan I accelerated the 20 percent deadline to 2010.
- **2005:** Energy Action Plan II examined a further goal of 33 percent by 2020. Assembly Bill 200 modified some requirements for electric corporations that serve customers outside of California and have 60,000 or fewer customer accounts in California.
- **2006:** Senate Bill 107 codified the accelerated 20 percent deadline into law.

To achieve these targets, the state's electric utilities, under the direction and oversight of the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC), initiated several processes to competitively select renewable power projects that would minimize costs for their customers, minimize effects to the existing electricity system, and comply with state and federal permitting requirements. These utilities have signed several PPAs as a result of this procurement process. The Applicant has signed an initial 20-year contract with SDG&E under which SDG&E will buy all the energy produced from the first 300-megawatt (MW) phase of the Project and has options to purchase all the energy from the 450-MW expansion phase as well.

To date, the CPUC has addressed its responsibilities in implementing the RPS in R.01-10-024, Order Instituting Rulemaking to Establish Policies and Cost Recovery Mechanisms for Generation Procurement and Renewable Resource Development, and R.06-02-012, Order Instituting Rulemaking That Is Specific to Renewables, which replaced earlier proceeding R.04-04-026.

In response to the RPS procurement process, the Applicant investigated potential sites throughout California that were suitable for the development of a utility-scale solar electric generating facility, particularly those sites that were near transmission substations and in areas of good solar direct normal insolation.

The location selected for the Project is ideally suited for solar generation, given the high availability of solar energy at the site throughout the year, the level site topography, the ease of site access, the minimum effect of the Project on environmental resources, and the availability of transmission capacity from the nearby SDG&E Imperial Valley Substation.

2.2 POWER PURCHASE AGREEMENT

Specific provisions of the PPA between SDG&E and Solar Two are described below.

- The initial contract term is 20 years.
- SDG&E commits to purchase all the output of the 750-MW capacity solar power Project; the Project will consist of approximately 30,000 solar dish Stirling systems, also referred to as SunCatchers.
- The Project will be situated on approximately 6,500 acres of land in western Imperial County, California, and will be constructed in two separate phases.

Under Phase I, Solar Two will construct a solar power Project with a total capacity of 300 MW that will connect to the SDG&E Imperial Valley Substation via a new 230-kilovolt (kV) interconnect transmission line that the Applicant will construct. Transmission studies indicate that the addition of this volume of electricity to the grid will require the proposed 500-kV Sunrise Powerlink (or equivalent) transmission line. Under Phase II, SDG&E has the option to take the additional power from Phase II, which will provide an additional capacity of 450 MW to the Imperial Valley Substation via the installation of a second circuit to the 230-kV interconnect transmission line that the Applicant will construct during Phase I. Transmission studies indicate that the addition of this volume of electricity to the grid will require the proposed 500-kV Sunrise Powerlink (or equivalent) transmission line. The total Project capacity, when complete, will be 750 MW.

2.3 GREENHOUSE GAS REDUCTION

Because global climate change poses a serious environmental and economic threat, California's governor and legislature have approved legislation to reduce California's contribution to greenhouse gas emissions. Under legislation approved in 2006 (Assembly Bill 32, Nunez, California Global Warming Solutions Act of 2006), the state established a goal of reducing its greenhouse gas emissions to 1990 levels by 2020. The California Air Resources Board, working with other agencies (including the CEC and CPUC), is developing a program that will achieve this goal. State agencies are currently considering a "cap and trade" system to reduce greenhouse gas emissions from several sectors of the California economy, particularly the electricity sector. Several western states, including California, have formed the Western Climate Initiative, which has the objectives of reducing regional greenhouse gas emissions to 15 percent below 2005 levels by 2020 and enacting a regional cap and trade system. Currently, this system is focused on the region's electric utilities.

From both a state and a regional perspective, the Project will contribute to reductions in greenhouse gas emissions from the electricity sector. The Project will provide 750 MW of additional generating capacity and produce virtually no greenhouse gas emissions. The Project could also assist SDG&E in meeting a portion of its obligations under a state or western regional emissions reduction program. The nature of the Project technology is modular; therefore, as each 1.5-MW group of SunCatchers is installed, it can immediately commence power production. This characteristic means that the Project can start reducing the greenhouse gas emissions associated with meeting the electricity needs of SDG&E's customers shortly after installations begin.

2.4 PURPOSE AND NEED

Under the provisions of the National Environmental Policy Act of 1969 (NEPA), the primary purpose and need for the Project is to assist the state of California and SDG&E in meeting the RPS Program goals and reducing greenhouse gas emissions. Current state legislation calls on the state's electric utilities to produce 20 percent of their electricity from renewable sources by 2010 and reduce greenhouse gas emissions to 1990 levels by 2020.

2.4.1 Purpose of the Proposed Action

The purpose of the proposed action is to:

- provide up to 750 MW of renewable electric capacity under a 20-year PPA to SDG&E,
- contribute to the 20 percent renewables RPS target set by California's governor and legislature,
- assist in reducing greenhouse gas emissions from the electricity sector,
- contribute to California's future electric power needs, and
- assist the California Independent System Operator (CAISO) in meeting its strategic goals for the integration of renewable resources, as listed in its Five-Year Strategic Plan for 2008-2012 (CAISO 2007).

2.4.2 Need for the Proposed Action

The primary need for the Project is to assist SDG&E to meet its legislative mandate under California's RPS Program. SDG&E selected the Project to help it procure 20 percent of its retail electricity sales with eligible sources of renewable energy by 2010. The Project will also assist the CAISO to implement its strategic initiative to integrate renewable energy into the electricity system, as listed in its Five-Year Strategic Plan (CAISO 2007).

The secondary need for the Project is to help the state meet its goal to reduce greenhouse gas emissions to 1990 levels by the year 2020. (Solar energy production emits virtually no carbon dioxide.)

The Project will also help meet the need for additional energy supply, a need based on the steadily growing annual demand of the California energy market. As described in CAISO's Five-Year Strategic Plan for 2008–2012, California load growth is expected to average 1,000 MW per year over the next 5 years.

2.4.3 Requested Federal Action

Federal law and the policy of the Bureau of Land Management (BLM) California Desert District allow the use of public lands for renewable energy. Specifically, Section 211 of the Energy Policy Act of 2005 (119 Stat. 594, 660) and BLM's Solar Energy Development Policy, which was issued on 4 April 2007, establishes a framework to process applications for rights-of-way and directs the BLM to be responsive to solar energy project applicants while protecting the environment. The California Desert Conservation Area (CDCA) Plan and the Federal Land Policy Management Act of 1976 both recognize that the CDCA will be managed for multiple uses.

Under federal law, the BLM is responsible for processing requests for rights-of-way to construct power projects, their associated transmission lines, and other appurtenant facilities on the public land it administers. The Applicant has submitted Standard Form 299, Application for Transportation and Utility Systems and Facilities on Federal Lands, requesting that the BLM grant a right-of-way for access to the approximately 6,140 acres of BLM-administered public land needed to construct the Project and related facilities. The approval of the Applicant's Standard Form 299 application is expected to require a land use plan amendment to the 1980 CDCA Plan, as amended. The Applicant's request for right-of-way will also include the right to maintain access to the Project for the duration of the 20-year PPA. Separate consultation requirements and associated documentation are required for Section 106 of the National Historic Preservation Act and the Endangered Species Act Section 7 consultations associated with the Project. The BLM will complete these consultations during the process outlined in the Memorandum of Understanding developed between the BLM and CEC staff (see Appendix A, Memorandum of Understanding). The BLM is also responsible for Native American consultation, including government-to-government consultation. The result of this cooperative effort between the BLM and the CEC will be a public participation process and environmental documents that fully meet the BLM's requirements.

In processing the application, the BLM will comply with the requirements of NEPA, which requires that federal agencies reviewing projects under their jurisdiction consider the environmental impacts associated with their construction and operation. Under the Memorandum of Understanding developed between the BLM and CEC staff on the review of proposed solar electric generating projects (see Appendix A, Memorandum of Understanding), these NEPA requirements will be accomplished in part for the Project through preparation and filing of a joint Environmental Impact Statement/Final Staff Assessment (EIS/FSA) document (i.e., the CEC's preliminary and final Staff Assessment will be prepared in conjunction with the BLM's draft and final Environmental Impact Statement). In compliance with NEPA, the EIS/FSA document will address the impacts of the Solar Two Project, and the proposed land use plan amendment to the 1980 CDCA Plan, as amended.

2.5 REFERENCES

CAISO (California Independent System Operator). 2007. Five-Year Strategic Plan for 2008-2012.