Exhibit A

SES Solar One

Application for Certification

Volume 1

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California Energy Commission
1516 9th Street, MS 15
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Bureau of Land Management
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1.2 APPROVAL PROCESS

This Application for Certification (AFC) has been prepared according to the current California Energy Commission (CEC) power plant siting regulations including requirements of the California Environmental Quality Act (CEQA). Because the majority of the Project is located on public land administered by the Bureau of Land Management (BLM) California Desert District (CDD) and federal approval of the Project is required, this document is also being submitted to the BLM for review. Consequently, the AFC also contains information required by the BLM to make their decision in compliance with the National Environmental Policy Act of 1969 (NEPA).

This AFC contains:

- a discussion of the purpose and need for the Project,
- a detailed description of the Project,
- an assessment of the anticipated Project effects on the existing environment,
- a discussion of the Project's compliance with applicable laws, ordinances, regulations, and standards (LORS), and
- a discussion of Project alternatives including alternative sites and their associated environmental concerns.

This AFC was prepared based on the Memorandum of Understanding (MOU) developed between the CEC and the BLM (see Appendix A, Memorandum of Understanding). The MOU sets out the relative roles, responsibilities, and procedures CEC and BLM staff will follow when conducting their respective environmental reviews of the Project. The Applicant will conduct the construction and operation of the Project in accordance with all applicable LORS.

1.3 PROJECT DESCRIPTION

The Project will utilize the SunCatcher technology, a proprietary solar dish Stirling system developed by SES. This technology is innovative, technically proven, non-polluting, and cost-effective in large utility-scale deployment. Each SunCatcher consists of an approximate 38-foot high by 40-foot wide solar concentrator dish that supports an array of curved glass mirror facets (see Photographs 1-1, Suncatcher System, and 1-2, Power Conversion Unit). The mirrors collect and focus solar energy onto the heat exchanger of a Power Conversion Unit (PCU). The PCU converts the solar thermal energy into 25 kilowatts of electricity. Each SunCatcher operates independently, tracks the sun automatically, and generates grid-quality electricity. The SunCatcher holds one of the world's records for its efficiency (31.25 percent) in commercial conversion of sunlight into grid-quality electricity. SES has been developing and operating the technology since 1996, most recently at the National Solar Thermal Test Facility, located at Sandia National Laboratories in Albuquerque, New Mexico. (See Appendix B, Solar Stirling Engine, for more information on the SunCatcher's Stirling Engine.)

Construction of the Project is expected to begin in mid to late 2010 and will take approximately four years for completion of the full 850 megawatts. However, renewable power from the Project will come online much earlier. As groups of SunCatchers are constructed, their renewable power will immediately be supplied to the grid. After completion, the Project will operate approximately 3,500 hours per year and is expected to have an overall availability of approximately 99 percent.

The Applicant intends to develop the nominal 850MW project in two phases. The 500MW Phase I of the Project will consist of approximately 20,000 SunCatcher dishes located on approximately 5,838 acres. The 350MW Phase II of the Project will consist of approximately 14,000 SunCatcher dishes located on approximately 2,392 acres. All of the power will be transmitted to the SCE Pisgah Substation located near the southeastern corner of the site.

In order for the full 850MW project to be completed, SCE will have to expand the SCE Pisgah Substation to accommodate a 500kV switchyard, two initial 500/230kV transformers (ultimate design for four) and other ancillary facilities and to provide additional transmission capacity to the SCE Pisgah Substation. The additional transmission capacity is to be provided by removing and replacing the existing 65-mile Lugo-Pisgah 220kV No. 2 Transmission Line with a new 500 kV transmission line and looping the existing Eldorado-Lugo 500kV in and out of the new Pisgah 500kV Switchyard. New right-of-way into the Lugo Substation will be required west of the Mojave River because the existing right-of-way is constrained on both sides (home development) and insufficient room exists to support both the new Lugo-Pisgah 500kV transmission line and the remaining Lugo-Pisgah 220kV No. 1 Transmission Line.

Optional studies performed by SCE and California Independent System Operator (CAISO) indicate that some initial electrical generation (up to approximately 275MW) can be handled by the remaining Lugo-Pisgah No.1 220kV transmission line while the upgrades are being completed provided that the Pisgah Substation is expanded and that redundant telecommunication is provided to support a Special Protection System (SPS). According to SCE, construction of these upgrades may not be fully completed until 2015 based on longer than expected permitting timelines. Consequently, the two phases of the Project will allow a portion of power to be generated and transmitted during the interim period assuming permits for the Pisgah Substation expansion and required telecommunication facilities (combination of microwave, fiber-optic cable, and possible replacement of overhead ground wire on existing facilities) are provided as there is no physical space at the existing substation to connect the new Solar One generation tie-line and reliability problems exist that need to be mitigated by tripping the Project with an SPS.

A number of large scale renewable power producers are pursuing projects within the region and the associated upgrades to the existing SCE Pisgah Substation and transmission lines will benefit these projects. Completion of detailed environmental analysis in a timely manner is of critical concern to meet not only Solar One's development schedule, but also for SCE to meet its mandated RPS goals. Therefore SES has begun environmental analysis of potentially required investigations and has included the completed analysis within this AFC. See Appendix EE, Summary Environmental Report for the Proposed Lugo-Pisgah 500kV Transmission and Substation Upgrades.

Temporary access for construction of the Project will be provided from an existing road that comes off Interstate 40 (I-40) east of the SCE Pisgah Substation. The road transects a BLM Area of Critical Environmental Concern (ACEC) and will require some level of improvement. Long-term permanent access would be developed in the form of a bridge via the Hector Road interchange north of I-40 spanning the Burlington Northern Santa Fe (BNSF) railway. Equipment may be transported to the Project Site during construction by road and by rail (on the north side of the BNSF railway and east of Hector Road).

1.3 PROJECT BOUNDARY MODIFICATIONS

At the request of agency representatives and interested parties and to help lessen potential impacts to biological resources, the Applicant is proposing a modification to the current Project boundary as shown in Figure 1-1. The northern boundary has been moved south approximately 0.55 miles, allowing an approximate 0.65 mile corridor between the revised northern project boundary and the toe of slope of the Cady Mountains. The intent of the boundary modification is to reduce the environmental impacts associated with bighorn sheep and desert tortoise movement corridor and use of this area and to help avoid potential impacts to occurrences of two known sensitive plant species (three crucifixion thorn locations and four undescribed lupine species locations).

The Project boundary modification results in a reduction of the Project area from approximately 8,230 acres to approximately 7,130 acres. Other details of the Project layout remain the same as those evaluated in the SA/DEIS (Figure 1-1). It should be noted that the original project area of 8,230 acres was more than enough acreage to build the 850 mega watts (MW) project. Additional acreage was maintained to accommodate for the need to adjust or build around areas due to slope, flood areas or avoidance of sensitive resources, if necessary. The elimination of the 1,103 acres will not change the number of SunCatchers, spacing between SunCatchers or location of major project facilities (e.g., Main Services Complex, staging area (other than slight lessening of roads and fencing).

1.4 HYDROGEN SYSTEM MODIFICATIONS

1.4.1 Background

The Applicant described the hydrogen use, supply and storage in the AFC, filed in December 2008. In the original design, it was proposed that hydrogen would be supplied to the SunCatchers through a distributed system. Each of the Stirling Cycle Engine (SCE), within the SunCatcher unit, would contain 14 cubic feet of hydrogen gas, and each SunCatcher unit would be equipped with a 196-standard cubic feet (scf) k-bottle to replenish hydrogen gas lost within the gas circuit. K-bottles would be provided by a commercial hydrogen supplier. Section 4, Alternatives in the AFC described an alternative centralized hydrogen system.

The Applicant responded to CEC and BLM Data Requests 57-60 in July 2009, updating the hydrogen system to include a centralized hydrogen gas supply, storage and distribution system. The system included onsite generation of hydrogen through electrolysis and the storage of that hydrogen in a 36,400 scf steel storage tank. From the storage tank, the hydrogen would be piped to 95 individual compressor groups that include a compressor, a high pressure supply tank and a low pressure dump tank used to recover hydrogen from non operational Power Conversion Units (PCUs) through a return line. This centralized hydrogen distribution system was the system analyzed in the SA/DEIS.

At this time, the Applicant is evaluating the relative economic and efficiency advantages between the centralized hydrogen distribution system and a distributed system that utilizes k-bottles on the PCUs of all SunCatchers. This supplement describes both systems and provides an environmental assessment of each. The details of both the centralized hydrogen system and the distributed system have evolved over time, and this supplement to the AFC presents modifications to each system.

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 SCE under which SCE will buy all the energy produced from the first 500MW phase of the Project and has an option to purchase all the energy from the 350MW 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, there were 47 proposals submitted for renewable power and seven contracts were awarded. 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 potentially minimal effect of the Project on environmental resources, and the availability of transmission capacity from nearby 220kV and 500kV transmission lines and the nearby SCE Pisgah Substation.

2.2 POWER PURCHASE AGREEMENT

Specific provisions of the PPA between SCE and the Applicant are described below.

- The initial contract term is 20 years.
- SCE commits to purchase all the output of the 850MW capacity solar power Project; the Project will consist of approximately 34,000 solar dish Stirling systems, also referred to as SunCatchers.
- The Project will be situated on approximately 8,230 acres of land in San Bernardino County, California, and will be constructed in two separate phases.

Under Phase I, Solar One will construct a solar power project with a total capacity of 500MW that will connect to the SCE Pisgah Substation via a new 230-kilovolt (kV) interconnect transmission line that the Applicant will construct. Under Phase II, SCE has the option to purchase an additional 350MW of electrical power. Transmission studies indicate that the addition of this volume of electricity (850MW) to the existing electrical grid will require upgrades to the SCE Lugo-Pisgah No. 2 220kV Transmission Line (approximately 65 miles) and the SCE Pisgah Substation, as discussed in Appendix EE. The total Project capacity, when complete in 2014, will be 850MW (gross).

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. As of November 17, 2008 Governor Schwarzenegger signed Executive Order S-14-08 to streamline California's renewable energy project approval process and increase the state's Renewable Energy Standard to 33 percent renewable power by 2020.

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 850MW of additional generating capacity and produce virtually no greenhouse gas emissions. The Project could also assist SCE 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 1.5MW group (60 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 SCE's customers shortly after installations begin.

2.4 PURPOSE AND NEED

2.4.1 Purpose of the Proposed Action

The primary purpose and need for the Project is to assist the state of California and SCE 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.

The purpose of the Project is to:

- provide up to 850MW of renewable electric capacity under a 20-year PPA to SCE,
- contribute to the 20 percent (up to 33 percent by 2020) 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

Exhibit B

CALICO SOLAR

Applicant's Supplement to the Calico Solar (formerly Solar One) Application for Certification

Application for Certification (08-AFC-13)

May 2010

Submitted to:
Bureau of Land Management
2601 Barstow Road
Barstow, CA 92311

Submitted to:
California Energy Commission
1516 9th Street, MS 15
Sacramento, CA 95814-5504

Submitted by:
SES Solar Three, LLC
SES Solar Six, LLC

Stirling Energy Systems
4800 N. Scottsdale Road, Suite 5500
Scottsdale, AZ 85251

Tessera Solar
power from stirling energy systems

May 14, 2010

Mr. Christopher Meyer
CEC Project Manager
Attn: Docket No. 08-AFC-13
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Mr. Jim Stobaugh
BLM Project Manager
Attn: Docket No. 08-AFC-13
Bureau of Land Management
P.O. Box 12000
Reno, NV 89520

RE: Calico Solar (formerly Solar One) Project (08-AFC-13)
Applicant's Submittal of Supplement to the Calico Solar (formerly Solar One) Application for Certification

Dear Mr. Meyer and Mr. Stobaugh,

Tessera Solar hereby submits the Applicant's Supplement to the Calico Solar (formerly Solar One) Application for Certification. This Supplement provides a description and environmental assessment of Project updates, including modifications to the Project water supply, Project boundary, and hydrogen supply system. I certify under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge.

Sincerely,

Felicia L. Bellows
Vice President of Development

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Table 1-1
Potential Hydrogen Supply Systems

Feature	Centralized Hydrogen System	Distributed Hydrogen System
Storing hydrogen in main service complex	36,400 scf x 1 tank	36,400 scf x 1 tank
High-pressure supply tank	29,333 scf x 95 compressor groups	82 scf x 34,000 SunCatchers
Low-pressure supply tank	9,900 scf x 95 compressor groups	28 scf x 34,000 SunCatchers
Local Storage Tank	--	489 scf x 34,000 SunCatchers
Single SunCatcher	11 scf	11 scf
Total amount onsite	4,140,000 scf (23,000 lbs)	20,800,000 scf (116,000 lbs)

located at the Main Services Complex as described in the centralized system. However, the system would not deliver hydrogen through pipelines. In lieu of the distribution equipment, hydrogen will be filled from the hydrogen storage tank to each individual SunCatcher through trucks. Each SunCatcher will include an 82-scf high pressure supply tank, 28-scf low pressure dump tank, and a 489-scf local storage tank. In addition, each SunCatcher unit will contain a minimum of 11-scf of hydrogen at 580 psi at all times, resulting in a total of around 610-scf of hydrogen in each SunCatcher.

The k-bottles will be delivered back to each SunCatcher, utilizing the mirror-washing truck trips included in the SA/DEIS analysis. Hydrogen refilling and replacement trips are expected occur approximately three times per year. Table 2.15-1 presents a summary of differences between each hydrogen supply system.

Table 2.15-1
Potential Hydrogen Supply Systems

Feature	Centralized Hydrogen System	Distributed Hydrogen System
Storing hydrogen in main service complex	36,400 scf x 1 tank	36,400 scf x 1 tank
High-pressure supply tank	29,333 scf x 95 compressor groups	82 scf x 34,000 SunCatchers
Low-pressure supply tank	9,900 scf x 95 compressor groups	28 scf x 34,000 SunCatchers
Local Storage Tank	--	489 scf x 34,000 SunCatchers
Single SunCatcher	11 scf	11 scf
Total amount onsite	4,140,000 scf (23,000 lbs)	20,800,000 scf (116,000 lbs)

Offsite Consequence Analysis

The Project consists of up to 34,000 SunCatchers and will use hydrogen gas as the working fluid in the PCU. Because of the hazardous nature of hydrogen there is a risk that it may cause an offsite consequence upon uncontrolled release. That aspect of the project is presented in this section, and the Project conducted an offsite consequence analysis (OCA) based on Federal and State Risk Management Programs regulatory criteria. The criteria for an OCA require a worst-case release scenario be estimated to evaluate the potential hazard posed by hydrogen stored at the proposed Project site.

Accidental Release Process

The OCA conducted for the Project evaluated uncontrolled worst-case release scenarios, based on the conditions recommended in state and federal Risk Management Plan (RMP). The accidental release scenarios from the centralized system evaluated consist of the following:

- The release and ignition of the entire contents of the hydrogen storage tank;

SECTION 1 INTRODUCTION

This report summarizes the results of a groundwater exploration program conducted by Tessera Solar North America, Inc. (Tessera Solar, Applicant) through drilling test borings and installing two test wells on private land and land owned by the Applicant surrounded by the Calico Solar site in San Bernardino County, California. The Calico Solar site (Project) is located about 16 miles west of Ludlow, California north of Interstate Highway 40 (I-40; see Figure 1). Tessera Solar is currently permitting the site for development as a solar-powered electrical generation station. The investigation was performed to evaluate the potential for groundwater to serve as a water supply for construction and operation of the facility.

1.1 PROJECT DESCRIPTION

The Calico Solar Project includes the construction, operation, maintenance, and decommissioning of up to 850 megawatts (MW) of capacity by a solar power generating facility and its ancillary systems in two phases (the first phase would be developed for 275MW and the second for 575MW). The Project will consist of approximately 34,000 SunCatchers. The project layout is shown on Figure 2. Construction is tentatively scheduled to occur over an approximate three-year period beginning in 2010 through 2012 for Phase 1 and a two-year period between 2013 and 2015 for Phase 2, assuming Southern California Edison (SCE) completes the full transmission build-out necessary for Phase 2 by December 31, 2013.

Approval of the Project ROW Grant Application (Form 299, Applications CACA 49539 and 49537) will result in the issuance of a ROW Grant Permit for use of federal lands administered by the BLM. The Project would require an amendment to the 1980 California Desert Conservation Area (CDCA) Plan.

An on-site substation (*i.e.,* Calico Solar Substation [approximately 15 acres]) will be constructed to deliver the electrical power generated by the Project to the SCE Pisgah Substation (Figure 2). Approximately twelve to fifteen 220-kilovolt (kV) transmission line structures (90 to 110 feet tall) will be required to make the interconnection from the Calico Solar to the SCE Pisgah Substation. Each of these structures will be constructed within the Project site.

The Project will include a centrally located Main Services Complex (37.6 acres) that includes three SunCatcher assembly buildings, administrative offices, operations control room, maintenance facilities, and a water treatment complex including a water treatment structure, raw water storage tank, demineralized water storage tank, basins, and potable water tank. A 15-acre temporary construction laydown area will be developed adjacent to the Main Services Complex.

Tessera Solar's Supplemental Filing dated January 2010 had proposed that water for the Project would be supplied by groundwater from a well located within the Cadiz basin and brought onsite by rail. However, the favorable results of the groundwater exploratory program demonstrate that groundwater is a viable water source for the Project, and water supplied by the well in the Cadiz basin will not be needed as a primary supply. The well that has been installed and tested as part of this investigation (Well #3) will serve as primary water supply.

The expected average water consumption for the Project during construction is approximately 136 acre-feet per year (afy), and the maximum expected extraction during construction is 12.4 acre-feet (af) per month (93 gallons per minute [gpm]). Estimated monthly groundwater extraction required during the