CALIFORNIA ENERGY COMMISSION 1516 NINTH STREET SACRAMENTO, CA 95814-5512 www.energy.ca.gov

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Dear Librarian:

# DOCUMENT HANDLING FOR THE BEACON SOLAR ENERGY PROJECT, APPLICATION FOR CERTIFICATION (08-AFC-2)

March 27, 2008

On March 14, 2008, the California Energy Commission received an Application for Certification (AFC) from Beacon Solar, LLC (Beacon Solar), a subsidiary of Florida Power & Light Energy, LLC. The proposed project is a concentrated solar electric generating facility proposed on an approximately 2,012-acre site in eastern Kern County, California. The project is located approximately four miles north-northwest of the northern boundary of California City. The project would use established parabolic trough solar thermal technology to produce electrical power using a steam turbine generator fed from a solar steam generator. The solar steam generator receives heated heat transfer fluid from solar thermal equipment comprised of arrays of parabolic mirrors that collect energy from the sun.

This power plant project is under the Energy Commission's siting authority. The power plant certification process examines engineering, environmental, public health, and safety aspects of power plant proposals and provides analyses required by the California Environmental Quality Act (CEQA). When issuing a license, the Energy Commission is the lead state agency under CEQA, and the documents it prepares are functionally equivalent to an Environmental Impact Report.

The Energy Commission's siting process is open to the public and incorporates the input of the public as well as local, state, and federal agencies. To facilitate public participation in our process, the Energy Commission has sent copies of the AFC to libraries in the project area, and to libraries in Los Angeles, Sacramento, San Francisco, San Diego, Fresno, and Eureka.

Please make the enclosed AFC available for those who may wish to be informed about the proposed project. We request that you not allow the AFC or any of its contents be removed from the library. To increase accessibility of the document, we ask, if possible, that you cross reference it as a general reference work under the title and author categories, as well as under such subjects as "Energy Commission," "electricity," "energy/generation," "power plant siting," or any other relevant subject.

Thank you for your cooperation. If you have any questions, please contact Bill Pfanner, Energy Commission Project Manager, at (916) 654-4206, or by email at <u>bpfanner@energy.state.ca.us</u>.

Sincerely. Eileen Allen, Manager

Energy Facilities Siting and Compliance Office

Enclosure

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www.energy.ca.gov

CALIFORNIA ENERGY COMMISSION

March 27, 2008

### To: MEMBERS OF THE PUBLIC

## PUBLIC PARTICIPATION IN THE REVIEW OF THE BEACON SOLAR ENERGY PROJECT, APPLICATION FOR CERTIFICATION (08-AFC-2)

On March 14, 2008, the California Energy Commission received an Application for Certification (AFC) from Beacon Solar, LLC (Beacon Solar), a subsidiary of Florida Power & Light Energy, LLC (FPL). The proposed project is a concentrated solar electric generating facility proposed on an approximately 2,012-acre site in eastern Kern County, California. The project would use established parabolic trough solar thermal technology to produce electrical power using a steam turbine generator fed from a solar steam generator. The solar steam generator receives heated heat transfer fluid from solar thermal equipment comprised of arrays of parabolic mirrors that collect energy from the sun. The project would have a nominal electrical output of 250 megawatts (MW).

Beacon Solar's primary objective for the proposed project is to construct, operate and maintain an efficient, economic, reliable, safe and environmentally-sound solar powered generating facility. This facility is intended to help meet the State of California objectives mandated by SB 1078 (California Renewable Portfolio Standard Program); AB 32 (California Global Warming Solutions Act of 2006); and other local mandates adopted by the State's municipal electric utilities for the long term wholesale purchase of renewable electric energy for distribution to their customers.

The project site is located in eastern Kern County at the western edge of the Mojave Desert. The project site is located along the California State Route (SR)-14 corridor, approximately four miles north-northwest of the northern boundary of California City, approximately 15 miles north of the Town of Mojave, approximately 17 miles north of Edwards Air Force Base, and approximately 24 miles northeast of the City of Tehachapi. Koehn Lake (usually dry) is located approximately five miles to the east-northeast, and Red Rock Canyon State Park is located approximately four miles to the north.

The project would use a wet cooling tower for power plant cooling. Water for cooling tower makeup, process water makeup, and other industrial uses such as mirror washing, would be supplied from onsite groundwater wells, which also would be used to supply water for employee use (e.g., drinking, showers, sinks, and toilets). A package water treatment system would be used to treat the groundwater to meet potable standards for employee use and a septic system and onsite leach field would be used to dispose of sanitary wastewater.

March 27, 2008 Page 2

It is estimated that the project would use approximately 1,600 acre feet per year of groundwater. According to pumping test data provided in the AFC, groundwater supply wells on the plant site have sufficient capacity (at least 2,000 gallons per minute) to meet the project's water supply requirements. According to the AFC, the project's groundwater usage would slow down (by less than 20 percent) the rate of groundwater level recovery in the area over recent years that has resulted from the cessation of agricultural activities on and around the project site.

The project's solar thermal technology would provide 100 percent of the power generated by the plant; no supplementary energy source (e.g., natural gas combustion to generate electricity) is proposed. The project would utilize two auxiliary boilers fueled by natural gas to reduce startup time and to keep the temperature of the heat transfer fluid above its relatively high freezing point (54 degrees Fahrenheit (°F). To provide fuel the boilers, a new 17.6-mile, eight-inch gas pipeline would be constructed (entirely within already-disturbed rights of way) to connect the project to an existing Southern California Gas Company pipeline west of California City.

Beacon Solar has filed an electrical interconnection request for the project with the Los Angeles Department of Water and Power (LADWP). LADWP's 230 kilovolt (kV) Barren Ridge Switching Station is located across California State Route 14 (SR-14) approximately 1.5 miles southwest of the project site. Beacon Solar is seeking approval of the following two similar options for interconnecting the project to LADWP's transmission system, only one of which would eventually be built:

**Option 1:** Construction of a new, approximately 3.5-mile 230 kV transmission line (approximately 1.6 miles within the 2,012-acre plant site boundary), that would run west from the power block across SR-14 and south across private property to the Barren Ridge Switching Station.

**Option 2:** Construction of a new, approximately 2.3-mile 230 kV transmission line (approximately 1.6 miles within the plant site boundary), that would run west across SR-14 to a new project switching station to be constructed at the location where the project's transmission line first meets LADWP's existing transmission right-of-way (ROW). A second, 230 kV transmission line slightly over one mile long would then be constructed east of and adjacent to the existing Los Angeles Department of Water and Power ROW from the new project switching station down to the Barren Ridge Switching Station.

Both options are being pursued at this time because a final route cannot be selected until the System Impact Study and Facilities Study are completed by LADWP, a more detailed design is completed, and the associated transmission line route easements are secured for the option selected. March 27, 2008 Page 3

# **Energy Commission's Facility Certification Process**

The Energy Commission is responsible for reviewing and ultimately approving or denying applications for all thermal electric power plants, 50 MW and greater, proposed for construction in California. The Energy Commission's facility certification process carefully examines public health and safety, environmental impacts and engineering aspects of proposed power plants and all related facilities such as electric transmission lines and natural gas and water pipelines. The Energy Commission is the lead agency under the California Environmental Quality Act (CEQA), but it produces several environmental and decision documents rather than an Environmental Irripact Report.

As part of our review process, the staff of the Energy Commission works closely with local, state and federal agencies to ensure that all laws, ordinances, regulations and standards are addressed in the final decision of the California Energy Commission. The first step in the review process is for Energy Commission staff to determine whether or not the AFC contains all the information required by our regulations. When the AFC is deemed data adequate, we will begin the data discovery and issue analysis phases. At that time, a detailed examination of the issues will occur.

## **Public Participation**

Over the coming months, the Energy Commission will conduct a number of public workshops and hearings on the proposal to determine whether the proposed project should be approved for construction and operation and under what set of conditions. These workshops will provide the public as well as local, state and federal agencies the opportunity to ask questions about, and provide input on, the proposed project. The Energy Commission will issue notices for these workshops and hearings at least 10 days prior to the meeting. If you are not currently receiving these notices and want to be placed on the mailing list, please contact April Esau, Project Secretary, at (916) 653-1640, or by e-mail at aesau@energy.state.ca.us.

If you desire information on participating in the Energy Commission's review of the proposed project, please contact the Energy Commission's Public Adviser's Office at (916) 654-4489 or toll free in California, at (800) 822-6228. Technical or project schedule questions should be directed to Bill Pfanner, Energy Commission Project Manager, at (916) 654-4206, or by email at <u>bpfanner@energy.state.ca.us</u>. The status of the proposed project, copies of notices, and other relevant documents are also available on the Energy Commission's Internet web site at http://www.energy.ca.gov/sitingcases/beacon.

### Note: Please retain this letter behind the front cover of the AFC. Thank You.