

PLANNING DEPARTMENT

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RESOURCE MANAGEMENT AGENCY

Ted James, AICP, Interim, RMA DIRECTOR

Community & Economic Development Department

Engineering & Survey Services Department

Environmental Health Services Department

Planning Department

Roads Department

DOCKET	
08-AFC-2	
DATE	<u>DEC 01 2009</u>
RECD.	<u>DEC 31 2009</u>

December 1, 2009

Board of Supervisors
Kern County Administrative Center
1115 Truxtun Avenue
Bakersfield, CA 93301

**Request for Position of Support on Proposed Beacon Solar Energy Project
(California Energy Commission Project Docket 08-AFC-2)
(Fiscal Impact: None) S.D. #2**

Dear Members of the Board of Supervisors:

Beacon Solar, LLC, a wholly owned subsidiary of FPL Energy, LLC, filed an Application for Certification with the California Energy Commission (CEC) on March 14, 2008, to construct and operate a 250 megawatt solar thermal power plant. The proposed 2,012-acre project site is located in eastern Kern County, in Cantil, approximately four miles northwest of California City, west of Neuralia Road, north of Anne Road. The site has historically been farmed but has been vacant since the mid-1980's. While on private property, Kern County is preempted from land use control on power plants over 50 MW, including solar thermal plants by the California Energy Commission (CEC). The power will be distributed through interconnection with the Los Angeles Department of Water and Power (LADWP) owned Barren Ridge Switching Station.

The process used by the CEC has been certified by the California Resources Agency as meeting all requirements of a certified regulatory program. The CEC is the CEQA lead agency for all thermal electric power plants 50MW or larger. Once an application for certification is submitted, the CEC prepares a Preliminary Staff Assessment (PSA) and presents it to the applicant, interveners, organizations, agencies and other interested parties. Comments from these groups are incorporated into the PSA. Once all issues identified in the PSA are resolved, the CEC prepares a Final Staff Assessment (FSA). The FSA is passed along to the CEC Commissioners assigned to this project who use the information to reach a recommended decision. The full Energy Commission then considers the recommendation. The CEC staff has worked closely with the Kern County Planning Department, with costs reimbursed by the applicant to address citizen and agency concerns and ensure that mitigation measures are responsive to local issues.

The project proposes to construct a 1,266-acre rectangular arrangement of parabolic trough solar collectors surrounding a centrally located power block. The power block facility houses the majority of electrical generation equipment and related systems, with the exception of the solar field. The solar collectors would be constructed in long rows (troughs) across the project site and aligned side by side in a north-south orientation to allow the troughs to slowly rotate from east to

December 1, 2009

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west, tracking the movement of the sun. Adjoining the solar field, immediately to the west, are various support facilities, including administration and storage buildings, and evaporation ponds.

The basic solar electric power generation would be to utilize parabolic through solar collectors to concentrate solar energy onto heat collection elements (HCE) that contain a fluid, referred to as heat transfer fluid (HTF). After being heated in the solar troughs, the HTF is run through a heat exchanger where it heats water into steam. After the steam is cycled through the turbine to generate electricity, it is processed through a cooling tower where it is condensed back into water and recycled through the system again to drive the steam turbine generator. The solar heat used in the boiler process would be supplemented by two natural gas-fired auxiliary boilers that would provide steam to supplement plant start-up and also preheat the HTF whenever its temperature drops below 76 degrees Fahrenheit.

The project applicant is proposing to use groundwater for cooling and the project would consume approximately 1,400 acre-feet of potable water per year. There are 12 existing water supply wells that were previously used to support alfalfa farming on the site. The applicant proposes that four of these wells be used to supply the project's water needs. In addition to being used for steam generation, water would also be required for washing of solar reflectors and collectors, potable water needs, and fire protection. The water is expected to be treated on site using a package water treatment system. The treatment system would be comprised of equipment for filtering, softening, de-mineralizing, and sanitizing the raw water. Alternative water sources now proposed include reclaimed water from Rosamond Community Services District (40 mile pipeline) California City (16 mile pipeline) and Koehn Lake brackish water (10 mile pipeline).

Recommendation:

Staff has reviewed the Final Staff Assessment (FSA) dated August 2009, which includes proposed conditions of certification which address environmental mitigation and permitting requirements. Staff has reviewed the document and submitted comments (attached) on language changes for conditions that require support and implementation by Kern County.

A primary issue of concern for Kern County residents is the use of the groundwater by the project over the 30- year life of the project. The CEC has a policy that only non-potable water should be used for power plants. A condition of certification (Soil & Water 1) does provide extensive mitigation if the commission approves the use of site groundwater including limitations to 1,388 AF, monitoring and compensation to any impacted well owners. Staff has recommended an additional mitigation to require funding of tamarisk removal in the desert basin to offset the groundwater removal.

The FSA includes extensive information regarding the use of the alternative water sources and concludes that the use of reclaimed water from Rosamond and California City would allow for the project to continue utilizing wet cooling to produce electricity. The determination of the economic

December 1, 2009

Page 3

cost of building the total of 56 miles of pipeline and related facility expansions, as well as the cost for the water from the RCSD and California City is under consideration by the project applicant. Staff concludes that the use of reclaimed water is the best solution to ensure that groundwater is not impacted for residents in the Koehn Lake basin.

An additional matter is the need for a public entity to maintain the relocated drainage channel that impacts the facility design. In consultation with County Counsel staff has determined that the Kern County Water Agency can legally provide such an entity and has included this suggestion in the comments submitted on the project.

The CEC has included in the FSA a socioeconomic benefits analysis. A summary table is attached. The project will generate an average of 477 jobs during the 24-month construction phase and 66 permanent jobs. The estimated state and local sales tax for construction is \$90 million and during operation \$435,000 per year. The estimated annual property taxes with the solar tax credit is \$440,000. Staff notes that without the solar tax credit the estimated annual property taxes would be \$4.24 million.

Staff concludes that this project, as conditioned, would be an appropriate use of the vacant private land and provide an economic benefit for the County through job creation. On December 7 through 9, 2009, the Energy Commission Committee is holding Evidentiary Hearings in California City to take public testimony and develop a recommended decision. Staff requests that your Board support the project as recommended by CEC staff with the recommended revisions and authorize testimony by a Board representative at the Evidentiary hearings.

IT IS RECOMMENDED that a member of the Board be authorized to speak in support of the project at the California Energy Commission Evidentially hearing on December 7, 2009.

Sincerely,



TED JAMES, AICP, Director
Planning Department

TJ:LHO:jb

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Attachments

cc County Administrative Office
County Counsel
California Energy Commission
Kern County Water Agency
Beacon Solar, LLC
Resource Management Agency
Grand Jury

PLANNING DEPARTMENT

TED JAMES, AICP, Director

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RESOURCE MANAGEMENT AGENCY

Ted James, Interim RMA DIRECTOR
Community & Economic Development Department
Engineering & Survey Services Department
Environmental Health Services Department
Planning Department
Roads Department

November 17, 2009

File: Beacon Solar Energy
FPL

California Energy Commission
Attn: Eric Solorio
1516 Ninth Street MS-15
Sacramento, California 95814

**RE: Kern County Planning Department Comments
Final Staff Assessment for the Proposed Beacon Solar Energy Project (08-AFC-2)**

Dear Mr. Solorio,

The Kern County Planning Department appreciates the opportunity to participate in the permitting process and to provide comments and request changes to the recommended conditions of certification on the application for certification by Beacon Solar, LLC for a proposed 250 MW solar electric generating facility in unincorporated eastern Kern County. The following are staff comments and requests for changes based on our review of the Final Staff Assessment:

Land Use The process of adjusting the boundaries of the project to create one legal lot is can be accomplished in Kern County through the Land Division Ordinance (Title 18, Division 1, Chapter 1) either through the processing of a Lot Line Adjustment (Chapter 18.35 – Title 18) or a Parcel Map (Chapter 18.25 and 18.45 – Title 18). The terms used in the proposed condition are inaccurate. Staff recommends the following changes (page 4.5-11):

LAND -3

The project owner shall adjust the boundaries of all parcels or portions of parcels that constitute the BSEP site as necessary to merge all properties into a single parcel, under a single ownership, within the jurisdiction of the Kern County Planning Department, and Kern County Engineering and Survey Services Department -in accordance with provisions and procedures set forth in the County's Municipal Code , Title 17-8 (Subdivison Ordinance).

Verification: At least 30 days prior to site mobilization, the project owner shall submit evidence to the CPM, indicating approval of the merger of the parcels by Kern County Planning Department and/or Kern County Engineering and Survey Services Department. The submittal the CPM shall include evidence of compliance with all conditions and requirements associated with the approval of the Certificate of Merger and recordation of a Parcel Map and/or Notice of Certificate of Compliance for a Lot Line Adjustment by the city County. If all parcels or portions of parcels are not owned by the project owner at the time of the merger, and a Lot Line adjustment is utilized for the merger, appropriate deeds shall be recorded in conjunction with the Certificate of Compliance as a separate deed shall be executed and recorded by the County recorder, required by the Kern County Land Division Ordinance Chapter 18.35). A copy of the recorded deed shall be submitted to the CPM, as part of the compliance package.

Soil and Water Resources – Water As noted in our September 16, 2008 letter recommending conditions for the project to mitigate the use of groundwater for the project, the applicant should be required to fund a Tamarisk Removal Program in the same basin that will provide for increased water recovery. Tamarisk or saltcedar is an invasive exotic bush that is widespread in floodplains throughout the desert. A mature tamarisk consumes a minimum of 200 gallons a year. It has been estimated that a single acre of tamarisk can transpire 2.8 million gallons of water a year. The Bureau of Land Management, Forest Service and State Parks, as well as other non-profit conservation groups, have ongoing Tamarisk Removal Programs. An annual fixed amount for funding should be determined and made a condition of approval for the life of the project. By removing Tamarisk the project will release water for beneficial use in the basin as well as contribute to riparian habitat restoration. Staff recommends the following changes (page 4.9-78):

SOIL&WATER – 1

If the Energy Commission approves the use of site groundwater for power plant construction and/or operation, the project owner shall be limited to using no more than 1, 388 AFY. The project owner shall also develop and implement a groundwater impact monitoring and mitigation program, including a Tamarisk Removal Program. The monitoring and mitigation program shall be consistent with the intent of Soil and Water APPENDIX I, attached to the FSA. The primary objective for the monitoring is to establish pre-construction and project related water level trends that can be quantitatively compared against observed and simulated trends near the project pumping wells, at the property boundary, and near potentially impacts existing wells. Specifically, the project owner shall do all of the following:

C. During Operation:

8. Prepare a Tamarisk Removal Program that will identify areas for removal, execute agreements for funding appropriate agencies for the removal, quantify and provide a deposit for the funding required on an annual basis to offset one and half times the 1,388 AFY of groundwater used each year.

Verification:

CEC Staff should amend the verification to include the Tamarisk Removal Program .

Soil and Water Resources – Drainage Channel The requirement for channel design references compliance with Kern County Division Four Standards or a written variance. Staff recommends clarification of this language to conform to ordinance requirements.

Staff recommends the following changes (page 4.9-92):

SOIL&WATER – 13

The project owner shall complete the hydraulic analyses and final basis of design for the diversion channel, upstream-and downstream- transitions, bank protection, levees (if applicable) and grade control structures using hydraulic criteria for flood velocity, depth, Froude Number and shear stress appropriate for the anticipate channel stability thresholds. These thresholds are based on the Division Four Standards for Drainage, Chapter X - Constructed Channel Design Criteria (Development Standards), where applicable. The value of the Froude Number between grade control structures shall be less than 0.8. Channel design elements not in compliance with Kern County Division Four standards will require a written ~~variance~~ exception from the County as allowed in the Development Standards under Exceptions (page 1). All grade control structure stilling basins shall be designed with weep drains to prevent perched groundwater conditions and promote groundwater recharge. The project owner shall also be responsible for a geotechnical investigation to test the soils as necessary for final design of the grade control structures and bank stabilization measures. The results of the hydraulic analyses and the geotechnical investigations shall be presented in an Engineer's Report that accompanies each iterative stage of final design (30-percent, 60-percent and 90-percent) as required in the Conditions of Certification. (SOIL&WATER -9).

Verification:

At each iterative stage of final design (30-percent, 60-percent and 90-percent) the project owner shall submit an Engineer's Report that includes the hydraulic analyses and geotechnical investigation results for the diversion channel to the CPM for review and approval. All design exceptions ~~variances~~ approved by Kern County shall be provided to the CPM.

Kern County supports all forms of renewable energy if appropriately sited with mitigation that provides protection for existing property owners and Kern County interests. Thank you for your partnership on this opportunity for Kern County to contribute to energy solutions through commercial solar development in California.

Sincerely,



Lorelei H. Oviatt, AICP
Special Projects Division Chief

cc: Ted James, Planning Director
Supervisor Maben
Beacon Solar. LLC

For purposes of this analysis, direct impacts were said to exist if the project resulted in permanent jobs and wages; indirect impacts, if jobs, wages, and sales resulted from constructing the project; induced impacts, from the spending of wages and salaries on food, housing, and other consumer goods. See **Socioeconomics Table 5**, "Noteworthy Public Benefits Related to Beacon Solar Energy Project," which follows. Information in this table is based on a 30-year project life.

SOCIOECONOMICS Table 5
Noteworthy Public Benefits
Related to Beacon Solar Energy Project
(2008 dollars)

Fiscal Benefits	
Estimated annual property taxes (with solar tax credit)	\$440,000
Estimated annual property taxes (without solar tax credit)	\$4.24—\$4.90 million
State and local sales taxes: Construction	\$90,145,000
State and local sales taxes: Operation	\$435,000 per year
School Impact Fee	\$10,400
Gas franchise fees	\$345,090
Gas franchise fees surcharge	\$336,330
Non-Fiscal Benefits	
Total capital costs	\$180 million
Construction payroll	\$165.5 million
Operations payroll	\$7 million to \$8 million
Construction materials and supplies	\$14.5 million
Operations and maintenance supplies	\$6 million per year
Direct, Indirect, and Induced Benefits	
<i>Estimated Direct Employment</i>	
Construction and commissioning (average)	477 jobs
Operation	66 jobs
Estimated Secondary Employment	
Construction and Commissioning	298 jobs
Operation	98 jobs
Estimated Secondary Income	
Construction and Commissioning	\$124 million
Operation	\$1.6 million

RESPONSE TO COMMENTS

No comments were received on this project.

PROPOSED CONDITIONS OF CERTIFICATION

No conditions of certification are proposed for this project.



BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 - WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION FOR THE
BEACON SOLAR ENERGY PROJECT
BY **BEACON SOLAR, LLC**

DOCKET No. 08-AFC-2

**RE REVISED NOTICE OF PREHEARING CONFERENCE
AND EVIDENTIARY HEARING**

The Committee assigned to the above proceeding previously scheduled the Evidentiary Hearings by Notice, dated October 8, 2009. Please take official Notice of the additional hearing dates below.

The Evidentiary Hearings will be held as follows:

MONDAY, DECEMBER 7, 2009
and
TUESDAY, DECEMBER 8, 2009
and
WEDNESDAY, DECEMBER 9, 2009
Beginning at 10:00 a.m.

**California City Council Chambers
21000 Hacienda Blvd
California City, CA 93505**

Information

The Energy Commission's Public Adviser, is available to assist the public in participating in the application review process. Contact the Public Adviser's Office at 916-654-4489 or 800-822-6228 or e-mail: [\[publicadviser@energy.state.ca.us\]](mailto:publicadviser@energy.state.ca.us).

If you have a disability and need assistance to participate in this event, contact Lourdes Quiroz at least five days in advance of the hearing at 916-654-5146 or e-mail: [\[lquiroz@energy.state.ca.us\]](mailto:lquiroz@energy.state.ca.us).

Questions of a legal or procedural nature should be directed to Kenneth Celli, the Hearing Officer, at (916) 651-8893 or e-mail: [\[kcelli@energy.state.ca.us\]](mailto:kcelli@energy.state.ca.us).

Technical questions concerning the project should be addressed to Eric Solorio, Staff Project Manager, at (916) 651-0966, or e-mail: [\[esolorio@energy.state.ca.us\]](mailto:esolorio@energy.state.ca.us).

Media inquiries should be directed to the Office of Media and Public Communications at (916) 654-4989 or e-mail: [\[mediaoffice@energy.state.ca.us\]](mailto:mediaoffice@energy.state.ca.us).

Information concerning the status of the project, as well as notices and other relevant documents, may be viewed on the Energy Commission's Internet web page at: [\[www.energy.ca.gov/sitingcases/beacon\]](http://www.energy.ca.gov/sitingcases/beacon).

Dated: October 29, 2009, at Sacramento, California



KENNETH CELLI
Hearing Officer

RECEIVED
2009 NOV -3 PM 3:24
KERN COUNTY DEPT. OF
PLANNING AND DEV. SERV.

CALIFORNIA ENERGY COMMISSION

516 NINTH STREET
 CRAMENTO, CA 95814-5512
 www.energy.ca.gov

DOCKET**08-AFC-2**DATE OCT 23 2009RECD. OCT 26 2009

October 23, 2009

**NOTICE OF AVAILABILITY
 FINAL STAFF ASSESSMENT FOR THE PROPOSED BEACON SOLAR ENERGY
 PROJECT (08-AFC-2)**

TO: MEMBERS OF THE PUBLIC

This notice is to inform you of the availability of the Final Staff Assessment (FSA) for the Beacon Solar Energy Project (BSEP) Application for Certification (08-AFC-2). The FSA was published on October 22, 2009. The FSA contains the California Energy Commission staff's final engineering, public health, and environmental evaluation of the proposed BSEP.

The FSA will serve as staff's testimony during evidentiary hearings. The Energy Commission Committee assigned to the BSEP proceedings will consider and weigh the testimony or comments or recommendations of all interested parties, including Energy Commission staff, the applicant, intervenors, public, and other local, state, and federal agencies, before issuing the Presiding Member's Proposed Decision (PMPD) for consideration by the full Energy Commission. The public, intervenors, local, state and federal agencies are encouraged to participate in these hearings. The Energy Commission will issue notices at least ten days prior to any scheduled hearings.

The California Energy Commission encourages public participation in the review of the BSEP Application for Certification and staff's FSA. Written comments on the FSA should be provided to Eric Solorio, Siting Project Manager, no later than 5:00 p.m., November 22, 2009 at the address on this letterhead or by email to esolorio@energy.state.ca.us. Technical or project schedule questions should also be directed to Eric Solorio at (916) 651-0966 or by email.

Summary of the Proposed Beacon Solar Energy Project (BSEP)

On March 14, 2008, Beacon Solar LLC filed an Application for Certification (AFC) with the California Energy Commission seeking permission to develop the BSEP which is a proposed 250 megawatt (MW) solar thermal, electric generating facility. The applicant proposes to locate BSEP on 2,012 acres within the Mojave Desert, in Kern County, California. The project site arrangement would generally consist of a 1,266-acre, rectangular arrangement of parabolic trough solar collectors surrounding a centrally located power block. The power block facility would house the majority of electrical generation equipment and related systems, with exception of the solar field. The solar collectors would be constructed in long rows across the project site and aligned side by side in a north-south orientation to allow the parabolic troughs to slowly rotate from east to west, tracking the movement of the sun.

The proposed BSEP's primary point of interconnection would be the Los Angeles Department of Water and Power (LADWP) owned Barren Ridge Switching Station. The

new connection would be made by installing a new 230 kilovolt transmission generation tie line (gen-tie line) from the project site to the switching station.

Energy Commission Licensing Authority

The Energy Commission is responsible for reviewing and ultimately approving or denying all applications for construction and operation of 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), and because the regulatory program has been certified by the Natural Resources Agency pursuant to Public Resources Code section 21080.5, produces several environmental and decision documents rather than an Environmental Impact Report.

Summary of the California Energy Commission Staff's Conclusions

The California Energy Commission staff concludes that the proposed 250-megawatt Beacon Solar Energy Project (BSEP) in Eastern Kern County can be permitted and constructed in a manner that would allow it to comply with environmental laws and state policies – with the adoption of staff's recommended mitigation measures and the BSEP's incorporation of one of several feasible, project alternatives.

Additionally, if the Commission agrees with staff's conclusions about the project's potentially immitigable impacts to visual resources then the project will require an "override" by the Commission, in order to comply with environmental laws. In the FSA, staff has identified an adverse significant impact to visual resources with no feasible mitigation. Staff also identified specific benefits of the project that could support a statement of overriding considerations by the Commission and potential approval.

Public Resources, Contact Information and Additional Sources for Information

If you desire information on how to participate in the Energy Commission's review of the proposed project, please contact the Energy Commission's Public Adviser, at (916) 654-4489 or toll free in California at (800) 822-6228, or by email at: publicadviser@energy.state.ca.us.

To request special accommodations for those persons with disabilities, please contact Lourdes Quiroz, the Energy Commission's Equal Employment Opportunity Officer at lquiroz@energy.state.ca.us or by telephone (916) 654-5146. For those persons with limited English knowledge, request interpreter services by contacting the Project Manager, Eric Solorio, at (916) 651-0966.

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The status of the project, an electronic copy of the FSA, copies of notices, and other relevant documents are also available on the Energy Commission's web site at: <http://www.energy.ca.gov/sitingcases/beacon/index.html>

News media inquiries should be directed to Assistant Director, Susanne Garfield, at (916) 654-4989, or by email at: mediaoffice@energy.state.ca.us.

The FSA is available for review at the following local libraries:

Mojave Branch Library
16916 1/2 HWY 14
Mojave, CA 93501-1226

California City Library
9507 California City Blvd.
California City, CA 93505

Ridgecrest Branch Library
131 E. Las Flores Avenue
Ridgecrest, CA 93555

Rosamond Branch Library
3611 Rosamond Blvd.
Rosamond, CA 93560

Tehachapi Branch Library
1001 W. Tehachapi Blvd., Suite A-400
Tehachapi, CA 93561

Copies will also be available at the Energy Commission's Library in Sacramento, the California State Library in Sacramento, and at California public libraries in Eureka, Fresno, San Francisco, Los Angeles, and San Diego. In addition, copies will be distributed to those public agencies that would normally have jurisdiction except for the Energy Commission's exclusive authority to certify sites and related facilities.

If you would like a paper copy or CD of the FSA, please fill out the enclosed form and return it to California Energy Commission, Attention: Maria Santourdjian, Siting Project Assistant, at (916) 651-9410, or by e-mail at msergoyan@energy.state.ca.us

Sincerely,

Date:

10/23/09


EILEEN ALLEN, Office Manager
Siting, Transmission and Environmental
Protection Division

Enclosure

Mailed to lists:
7285 - General
7286 - Property Owners

Please send me a paper copy / CD (circle one) of the California Energy Commission Final Staff Assessment for the Beacon Solar Energy Project (BSEP) Project Application for Certification (08-AFC-2).

Name:

Address:

City/State/Zip:

FOLD HERE

California Energy Commission
Attention: Maria Santourdjian
1516 Ninth Street, MS-15
Sacramento, CA 95814-5512

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Staple or Tape closed.