

NEEDLES FIELD OFFICE NEEDLES, CA

April 27, 2007

Kathleen O'Connell - Realty Specialist Bureau of Land Management 1303 South U.S. Highway 95 Needles, CA 92363

Dear Ms O'Connell:

DOCKET 07-AFC-5

DATE APR 27 2007

RECD. JUL 03 2008

Enclosed is our application for a solar power station requiring approximately 15,000 acres. After an exhaustive search we identified an area north of the 29 Palms Marine Corps Base that met the various requirements. The selection of this site was based on several criteria, including, among other things, high levels of solar radiation, proximity to gas distribution and electric transmission lines. We have discussed our technology as well as the location of this potential site with the Department of Defense (DOD). We believe that the height of the solar towers and their radar cross section are acceptable to the DOD. This will be confirmed over the next several months. Bright Source Energy (BSE) is using our proprietary Distributed Power Tower (DPT) technology for this project. We are submitting the application without certain proprietary technical information. We can provide this single page of Confidential Information under separate cover at a later date if required. To minimize water needs we have selected dry cooling. This requires approximately 1,000 acre-feet per year of water which is about 10% of that required for conventional cooling.

In addition to the NEPA environmental review, this solar project will require a license from the California Energy Commission, the lead agency for CEQA review. This application covers the environmental subject areas as detailed on the 299 Form. BrightSource is committed to working with BLM and environmental authorities in the state of California to ensure that all appropriate public review of this proposed project is completed.

We understand that you will estimate a budget for the required realty and environmental work, which BSE will fund by an escrow account. BSE has personnel with extensive experience with the permitting process and joint NEPA-CEQA reviews who will support this project.

If you have any questions regarding the application we will endeavor to answer them as quickly as possible. We appreciate the assistance you have given us already, and we expect to further refine the project definition with your guidance. We look forward to an open and productive relationship with the Needles office and thank you for guiding us through this process. Please do not hesitate to call if you have any questions.

Sincerely yours,

5 M CO J. Douglas Divine

Vice President, Project Development

Attachment: BLM SF-299

STANDARD FORM 299 (1/2006) Prescribed by DOL/USDA/DOT P.L. 96487 and Federal Register Notice 5-22-95

FORM APPROVED

| UTILITY SYSTE | MS AND FACILITIES | Expires: Nov | ember 30, 20 | 908 |
|---|---|-----------------------------------|----------------|-----------|
| ON FED | ERAL LANDS | FOR AGENC | Y USE ONL | <u>v</u> |
| preapplication meeting with representatives of the | applicant should completely review this package and schedule a eagency responsible for processing the application. Each agency met in preparing and processing the application. Many times, with on can be completed at the preapplication meeting. | Application Number | | |
| uie neip of the agency representative, the approach | on can be completed at the preapplication meeting. | | | |
| Name and address of applicant (include zip code) | Name, title, and address of authorized agent if different from Item 1 (include zip code) | 3. TELEPHO | NE (area code, |) |
| Doug Divine Solar Partners V, LLC | Scott Debenham, Project Developer | Applicant (510)550-8161 | | |
| 1999 Harrison Street, Suite 500 Oakland,CA 94612 | 11317 Valle Vista Road Lakeside, CA 92040 | Authorized Agent (619)334-9541 | | |
| 4. As applicant are you? (check one) | 5. Specify what application is for: (check one) | W | 797 | |
| a. Individual | a. New authorization | | × E | 201 |
| b. Corporation* | b. Renewing existing authorization No. | | | 2007 APR |
| c. Partnership/Association* | c. Amend existing authorization No. | | | A |
| d. State Government/State Agency | d. Assign existing authorization No. | | ЩS | 20 |
| e. Local Government | e. Existing use for which no authorization has been rece | ived* | 二二 | 30 |
| f. Federal Agency | f Other* | | | |
| * If checked, complete supplemental page | *If checked provide details under Item 7 | | <u></u> | 9 |
| 6. If an individual, or partnership are you a citizen(s) of t | he United States? Yes No | | ₽₽ | 72 |
| 7. Project description [describe in detail]: (a) Type of | system or facility, (e.g., canal, pipeline, road); (b) related structured; (e) time of year of use or operation; (f) Volume or amount of needed for construction (Attach additional sheets, if additional space | res and facilities: (c) | ohysical-speci | fications |
| | | | | |
| 8. Attach a map covering area and show location of proje | ect proposal | | | |
| 9. State or local government approval: Attached | Applied for Vot required | | | |
| 10. Nonreturnable application fee. Attached | Not required | | | |
| 11. Does project cross international boundary or affect int | ernational waterways? 🔲 Yes 🏑 No (If "yes," indicate o | on map) | | |
| 12. Give statement of your technical and financial capabil | ity to construct, operate, maintain, and terminate system for which at | uthorization is being re | quested. | |
| Please Refer to Attachment A | | _ | - | |
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| 13a. | Describe other reasonable alternative routes and modes considered. |
|----------------|---|
| | Please refer to Attachment A. |
| h. | Why were these alternatives not selected? |
| | Please refer to Attachment A |
| С. | Give explanation as to why it is necessary to cross Federal Lands |
| | Please refer to Attachment A. |
| 14. | List authorizations and pending applications filed for similar projects which may provide information to the authorizing agency. (Specify number, date, code, or name) |
| | Please refer to Attachment A. |
| 15. | Provide statement of need for project, including the economic feasibility and items such as: (a) cost of proposal (construction, operation, and maintenance); (b) estimated cost of next best alternative; and (c) expected public benefits. |
| | a. To be discussed with the Bureau of Land Management. b. To be discussed with the Bureau of Land Management. c. Please refer to Attachment A. |
| 16. | Describe probable effects on the population in the area, including the social and economic aspects, and the rural lifestyles. |
| | Please refer to Attachment A |
| 17. | Describe likely environmental effects that the proposed project will have on: (a) air quality; (b) visual impact; (c) surface and ground water quality and quantity; (d) the control or structural change on any stream or other body of water; (e) existing noise levels; and (f) the surface of the land, including vegetation, permafrost, soil, and soil stability. Please refer to Attachment A. |
| 18. | Describe the probable effects that the proposed project will have on (a) populations of fish, plantlife, wildlife, and marine life, including threatened and endangered species; and (b) marine mammals, including hunting, capturing, collecting, or killing these animals. |
| | Please refer to Attachment A. |
| 19. | State whether any hazardous material, as defined in this paragraph, will be used, produced, transported or stored on or within the right-of-way or any of the right-of-way facilities, or used in the construction, operation, maintenance or termination of the right-of-way or any of its facilities. "Hazardous material" means any substance, pollutant or contaminant that is listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601 et seq., and its regulations. The definition of hazardous substances under CERCLA includes any "hazardous waste" as defined in the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, 42 U.S.C. 9001 et seq., and its regulations. The term hazardous materials also includes any nuclear or byproduct material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. The term does not include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or designated as a hazardous substance under CERCLA Section 101(14), 42 U.S.C. 9601(14), nor does the term include natural gas. |
| | Please refer to Attachment A. |
| | |
| 20. | Name all the Department(s)/Agency(ies) where this application is being filed. Needles BLM Office only. |
| | REBY CERTIFY, That I am of legal age and authorized to do business in the State and that I have personally examined the information contained in the application and we that the information submitted is correct to the best of my knowledgen |
| _ | ature of Applicant Date 4/27/2007 |
| Title State | 18, U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United as any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction. |
| (Co | ntinued on page 3) (SE 299 page 2) |

Note: Page 3 of SF-299 (instructions) has been deleted from this submittal.

| SUPPLEMENTAL | | | |
|---|----------------------------|--------|--|
| NOTE: The responsible agency(ies) will provide additional instructions | CHECK APPROPRIATE BLOCK | | |
| I - PRIVATE CORPORATIONS | ATTACHED | FILED* | |
| a. Articles of Incorporation | Ø | | |
| b. Corporation Bylaws | Ø | | |
| c. A certification from the State showing the corporation is in good standing and is entitled to operate within the State. | Ø | | |
| d. Copy of resolution authorizing filing | Ø | | |
| e. The name and address of each shareholder owning 3 percent or more of the shares, together with the number and percentage of any class of voting shares of the entity which such shareholder is authorized to vote and the name and address of each affiliate of the entity together with, in the case of an affiliate controlled by the entity, the number of shares and the percentage of any class of voting stock of that affiliate owned, directly or indirectly, by that entity, and in the case of an affiliate which controls that entity, the number of shares and the percentage of any class of voting stock of that entity owned, directly or indirectly, by the affiliate. | | | |
| f. If application is for an oil or gas pipeline, describe any related right-of-way or temporary use permit applications, and identify previous applications | | | |
| g If application is for an oil and gas pipeline, identify all Federal lands by agency impacted by proposal. | | | |
| II - PUBLIC CORPORATIONS | | | |
| a. Copy of law forming corporation | | | |
| b. Proof of organization | | | |
| c. Copy of Bylaws | | | |
| d. Copy of resolution authorizing filing | | | |
| e. If application is for an oil or gas pipeline, provide information required by Item "I-f" and "I-g" above. | | | |
| III - PARTNERSHIP OR OTHER UNINCORPORATED ENTITY | | | |
| a. Articles of association, if any | | | |
| b. If one partner is authorized to sign, resolution authorizing action is | | | |
| c. Name and address of each participant, partner, association, or other | | | |
| d. If application is for an oil or gas pipeline, provide information required by Item "I-f" and "I-g" above. | | | |

* If the required information is already filed with the agency processing this application and is current, check block entitled "Filed." Provide the file identification information (e.g., number, date, code, name). If not on file or current, attach the requested information.

Attachment A to BLM SF-299

Solar Project- Siberia

| 7. | Project Description | 3 |
|--------------|--|--------------|
| A. | Type of System or Facility | 5 |
| В. | Related Structures and Facilities | 6 |
| C. | Physical Specifications | 9 |
| D. | Term of Years Needed | 11 |
| E. | Time of Year of Use or Operation | 11 |
| F. | Volume or Amount of Product to be Transported | 12 |
| G. | Duration and Timing of Construction | |
| H. | Temporary Work Areas Needed for Construction | 12 |
| 8. | Map Covering Area and Show Location of Project Proposal | 13 |
| | Give Statement of Your Technical and Financial Capability to Construct, rate, Maintain, and Terminate System for Which Authorization is Being rested | 16 |
| 13. | Alternate Routes | 17 |
| A. | Describe Other Reasonable Alternative Routes and Modes Considered | 17 |
| B. | Why Were These Alternatives not Selected? | 17 |
| C. | Give Explanation as to Why it is Necessary to Cross Federal Lands | 17 |
| 14. Whic | List Authorizations and Pending Applications Filed for Similar Projects th May Provide Information to the Authorizing Agency | 18 |
| 15. Feasi | Provide Statement of Need for Project, Including the Economic bility and Items Such as | 19 |
| A. | Cost of proposal (construction, operation, and maintenance) | , 19 |
| В. | Estimated Cost of Next Best Alternative | |
| C. | Expected Public Benefits | 19 |
| 16. Socia | Describe Probable Effects on the Population in the Area, Including the land Economic Aspects, and the Rural Lifestyles | 20 |
| 17. have | Describe likely environmental effects that the proposed project will on: | 21 |
| | | |
| A. | Air Quality | |
| B. | Visual Impact | |
| C. | Surface and Ground Water Quality | |
| D. | The Control or Structural Change on any Stream or Other Body of Water | 21 |

| 18. Describe the Probable Effects That the Proposed Project Will Have on: | E. | Existing Noise Levels | 22 |
|--|---------------|--|----|
| A. Populations of Fish, Plantlife, Wildlife, and Marine Life, Including Threatened and Endangered Species | F. | The Surface of the Land, Including Vegetation, Permafrost, Soil, and Soil | |
| A. Populations of Fish, Plantlife, Wildlife, and Marine Life, Including Threatened and Endangered Species | Sta | ıbility | 22 |
| Threatened and Endangered Species | 18. | Describe the Probable Effects That the Proposed Project Will Have on: | 23 |
| B. Marine Mammals, Including Hunting, Capturing, Collecting, or Killing These Animals | A. | Populations of Fish, Plantlife, Wildlife, and Marine Life, Including | |
| These Animals | Th | reatened and Endangered Species | 23 |
| 19. State Whether any Hazardous Material, as Defined in this Paragraph, will be Used, Produced, Transported or Stored on or Within the Right-of-way or any of the Right-of-way Facilities, or Used in the Construction, Operation, Maintenance or Termination of the Right-of-way or any of its Facilities | В. | Marine Mammals, Including Hunting, Capturing, Collecting, or Killing | |
| will be Used, Produced, Transported or Stored on or Within the Right-of-way or any of the Right-of-way Facilities, or Used in the Construction, Operation, Maintenance or Termination of the Right-of-way or any of its Facilities24 20. Name all the Department(s)/Agency(ies) Where this Application is Being | The | ese Animals | 23 |
| Filed | will or an | be Used, Produced, Transported or Stored on or Within the Right-of-way ny of the Right-of-way Facilities, or Used in the Construction, Operation, | 24 |
| | | | 25 |

04/26/2007 2

7. Project Description

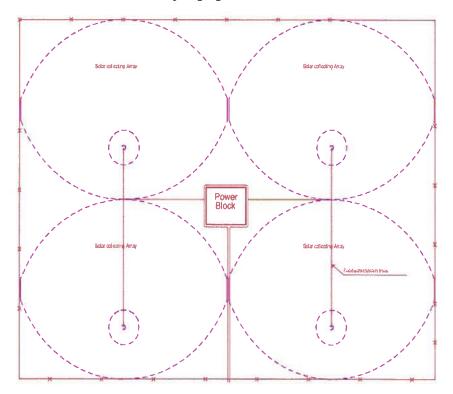
The proposed project will consist of up to eight interconnected plants, each capable of generating 200 megawatts of electricity. Each power plant includes two main elements:

- Solar field with power towers
- Power block, with power generation equipment, boiler and auxiliary equipment

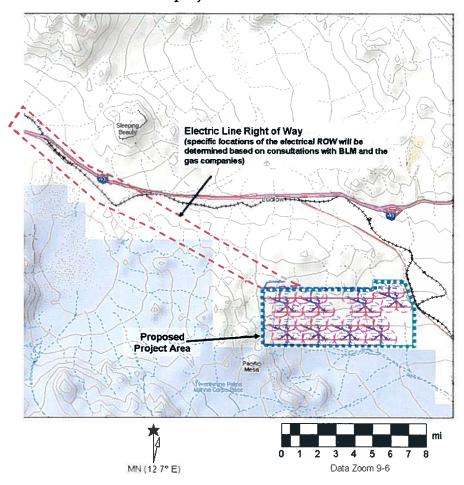
The solar field consists of four identical circular heliostat (mirror) arrays, each focusing light on its dedicated power tower. Within each array are heliostats located on rows arranged in arcs with progressively larger radii.

Each plant requires a rectangular operational area of 2600 meters by 2600 meters (1700 acres) that will encompass five solar arrays and the power block. Each array consists of multiple heliostats (mirrors) that focus solar energy on a receiver mounted on top of a power tower. This array and receiver arrangement is called a Distributed Power Tower (DPT).

A power block of approximately 450×600 feet is located near the center of the project. The power block contains the power generation equipment including a steam turbine, boiler and auxiliary equipment.



The project includes an electrical substation that will connect via overhead power lines to third party transmission lines about 19 miles to the northwest of the project site at or near the Pisgah substation. The proposed transmission path is between the northernmost and southernmost gas lines. Exact locations of the electrical transmission Right of Way will be determined based on consultations with BLM and the gas companies. The plants will connect to one of four gas transmission lines that cross the project site.

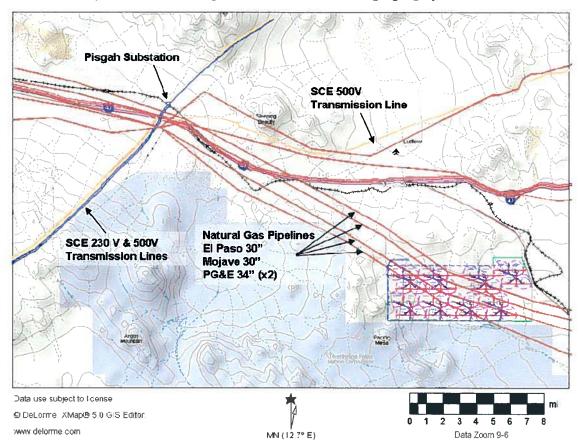


The plant uses dry cooling and Zero Liquid Discharge (ZLD). It will require approximately 1,000 acre-feet per year of makeup water to maintain the plant chemistry within acceptable limits. Water will come from well(s) within the boundary of the station or be piped in pending the results of an in-basin hydro geological study. Zero Liquid Discharge will be accomplished by mechanical dewatering of the feedwater blowdown and the backwash brine. Alternatively, water treatment services may be leased from qualified service providers, who will periodically replace equipment skids and remove them from site, for recharging of de-ionization columns off site.

04/26/2007 4

BrightSource will maintain and operate the plant's solar field during all periods of threshold solar energy availability, when a minimum turbine output of 60 MW can be obtained in each plant.

The proposed location was selected due to its good solar resource, its proximity to electrical power lines and gas, and its favorable topography.

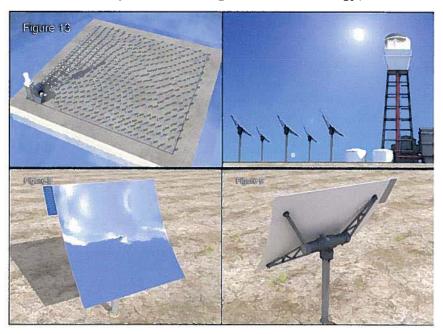


A. Type of System or Facility

The system consists of four identical heliostat arrays focused on receiver-boilers at the top of Distributed Power Towers (DPT's), and one solar array surrounding the power block focused on a reheater at the top of its Power Tower. The receivers generate steam or reheat steam extracted from the turbine using the solar energy focused on it by the collecting array.

During short periods of intermittent cloud cover, the system uses thermal input from a natural gas auxiliary boiler to maintain the turbine on-line at minimum load. Solar production resumes immediately when the sky clears. Natural gas use will be limited by regulatory and licensing conditions.

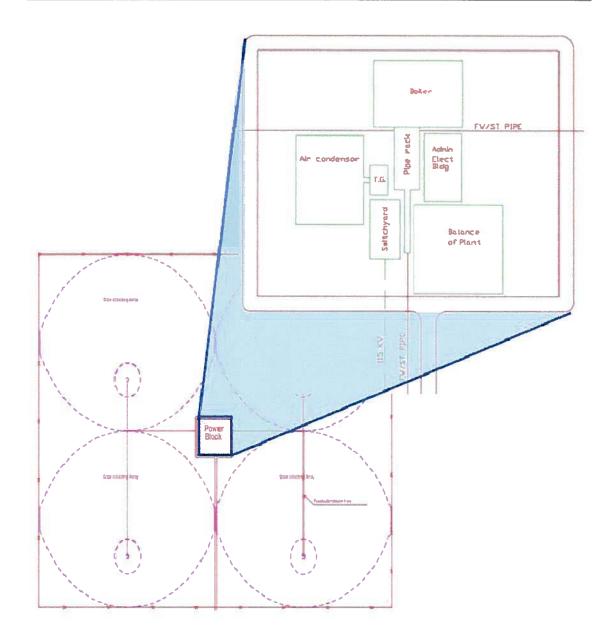
Whenever sun is available at threshold levels, the solar field tracks and focuses on the tower mounted receiver-boiler, which begins to generate steam. If partial load solar radiation is available, the plant can be operated in hybrid mode (generation of steam using both natural gas and solar energy).



B. Related Structures and Facilities

One 200 MW plant requires a rectangular operational area of 2600 meters by 2600 meters. The field perimeter will include a chain link fence and a weatherized dirt road. Outside the field perimeters, corridors 150 meters wide have been included, to allow space for drainage and flood control works, if these are eventually required.

The estimated power block dimensions are 450' X 600'. These dimensions could vary by, +150' in either dimension, but probably not both, pending final design. The entire area will be cleared and local elevation deviations smoothed, with perimeter drainage protection berms, ditches, and culverts created to protect major equipment and access roads. The main plant access roads will be with 20' asphalt, with 2 X 6' shoulders.



Pending a geotechnical study and detailed design, our best estimate of the foundation details are:

Power Block:

- Turbine: 2 slabs connected by columns bottom foundation slab 70' X 40' X 4', Top of Concrete is 15' below grade; top slab on grade, table surface 3' above grade
- **Boiler**: 20 cast-in-place 24" X 15' piles, in 50' X 75' rectangle
- **Pipe rack**: eighty (80) 18" X 15' piles, in a 60' X 150' rectangle shape between boiler and turbine.

- Control room-maintenance-electrical building: 80' X 150' slab on grade that is 30" deep at perimeter beam.
- Miscellaneous slab-on-grade foundations for feedwater pumps, condensate pumps, chemical injection & vacuum equipment, etc.
- Miscellaneous pile foundations for deaerator and others.

Balance of Plant:

- Water treatment and storage is undetermined at this point. We assume brackish ground water is available, needing reverse osmosis (RO) for potable use and deionized (DI) water for boiler feed water make-up.
- We estimate about 200' X 300' area for water treatment and storage units. The largest item is the RO water storage which doubles as the water for fire fighting. The RO water storage foundation is estimated to be 40 feet in diameter requiring a 3 foot slab on grade foundation. The final size will be determined by the Fire Marshall.
- Other foundation slabs on grade are required for:
 - RO equipment train
 - DI equipment
 - DI product water storage
 - Chemical storage
 - Compressed air system
 - Switchyard electrical equipment

Power Tower

- For each power tower, we estimate 24 3′ X 70′ cast in place piles
- Each tower is connected to the power block by four pipes feedwater, live steam, blowdown, and drain. Pipes sit on support beams on cast in place piles (18" X 12"), spaced every 25'. Total support piles in one plant's solar field = 200.

Solar Field Array (Heliostats)

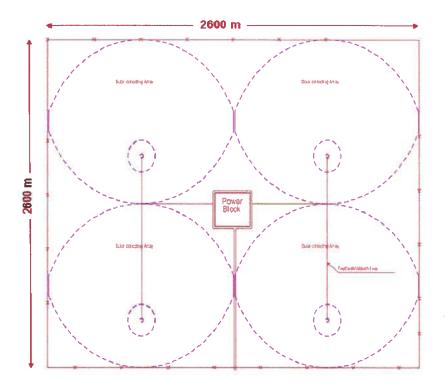
The heliostat field erection will require minimal foundation work, if any. Heliostat pylons will be 4-6 inch mild steel pipe, driven into the ground to a depth of 2.0 to 2.5 meters. The below-ground portion of the pylon may be placed with a minimal concrete jacket. Alternatively, a heliostat foundation may consist of a precast concrete block placed slightly below finish grade. Geotechnical (boring sample) analysis will confirm the method and final dimensions.

- We expect that the solar field will require clearing with minor leveling of local projections/depressions only, and that the non-critical status of heliostats and absence of any hazardous materials in the field eliminate requirements for flood protection.
- During field decommissioning, heliostat pylons and foundations can be withdrawn mechanically with relative ease.

C. Physical Specifications

Dimensions of the major components are:

- <u>Project</u>: 15,000 acres north of 29 Palms Marine Corps Base and south of I-40.
- Plant: Each power plant within the project consists of a Solar Field and Power Block and is capable of generating 200 MW. Each Plant is approximately 2600 meters X 2600 Meters (8530' X 8530').
- Power Block: 450' X 600' (in center of 4 solar arrays)
- <u>Solar Field</u>: Consists of four elliptical arrays; each surrounds one power tower.



Utilities

- Roads. Asphalt access road
- Natural Gas. Connection will be to one of the existing natural pipelines located within the perimeter of the project site. The pipe diameter will be determined based on final project electrical size (megawatts).
- Water. Water will be provided from well(s) within the boundary of station or piped in from local well(s). Alternatives for transporting water will be evaluated if required. Storage tanks for plant make-up water (DI) and to meet the fire code requirement will be located in the Power Block.
- Electricity Grid. Overhead lines will connect the Power Block to a substation within the project perimeter. The substation will be connected at 230kV or 500 kV at or near the Pisgah substation to the northwest.

Power Block

The boiler at the focal point of each power tower is connected by a carbon steel feedwater pipe and a stainless steel steam pipe to one central Power Block located in the central quadrangular area enclosed by the heliostat arrays. The Power Block area accommodates power generation equipment including steam turbine, natural gas boiler, electrical equipment and balance of plant equipment in a rectangular area measuring 450 X 600 feet. It also includes one power tower with a reheater at its top, located adjacent to the turbine.

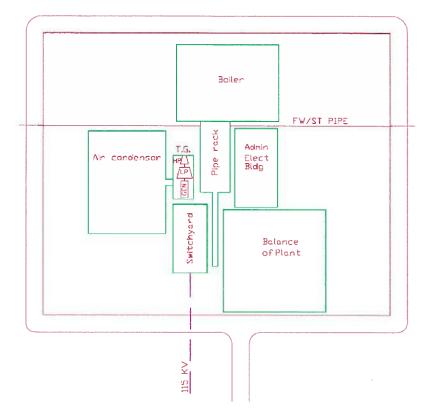
Natural Gas Boiler. A small natural gas boiler will be used for pre-heating the turbine and for keeping it on line at minimum load during intermittent cloud cover, until solar production can be resumed.

Power Distribution. A 13,800 volt electrical switchgear station provides plant power taken from the plant generator and raises it to the power line voltage.

Balance of Plant. Water treatment and make-up is required for potable water and feedwater make-up. The balance of plant system occupies a rectangular area (approximately 200 X 200 foot) adjacent to the power block.

Water Treatment. Feedwater make-up is obtained by ion exchange. Depending on the quality of raw water available on site, RO treatment for raw water may be required before use for feedstock to the feedwater ion exchangers.

Chemical Treatment. The plant will include standard chemical injection to feedwater, to maintain its quality in accordance with turbine manufacturer specifications.



Electrical. A cable grid distributes 480 VAC power from the power block to the heliostat array, which is divided into approximately 150 power distribution subsectors of approximately 300 heliostats. Each sub-sector is served by a 480 VAC/24 VDC, 7.5 kW transformer-rectifier, which distributes 24 VDC to individual heliostats.

Controls. A central control system calculates the required reflecting angle for each heliostat and operates its dual-axis drive system at fixed intervals to maintain the heliostat in the desired reflecting attitude. A wireless network sends operating commands intermittently to individual heliostat drives. A feedback loop between the power tower and each individual heliostat re-calibrates each heliostat daily.

The heliostats and the array as a unit can focus on the receiver-boiler in wind speeds of up to 30 mph. When wind speeds reach 30 mph or more, the heliostats go to stow position, which is the horizontal position.

D. Term of Years Needed

Fifty years is needed to match the potential life of the installed equipment.

E. Time of Year of Use or Operation

The equipment must be able to operate at all times.

F. Volume or Amount of Product to be Transported

The solar plant will produce electricity and will be connected to the electrical lines north of the selected area. The connection to the existing power lines will be by above ground power lines.

The amount of natural gas used on an annual basis will depend on the solar radiation levels and the utility requirements for electricity.

Water requirements are approximately 400-500 acre-feet per year.

G. Duration and Timing of Construction

Construction is anticipated to commence in 2012 and be completed in 2013.

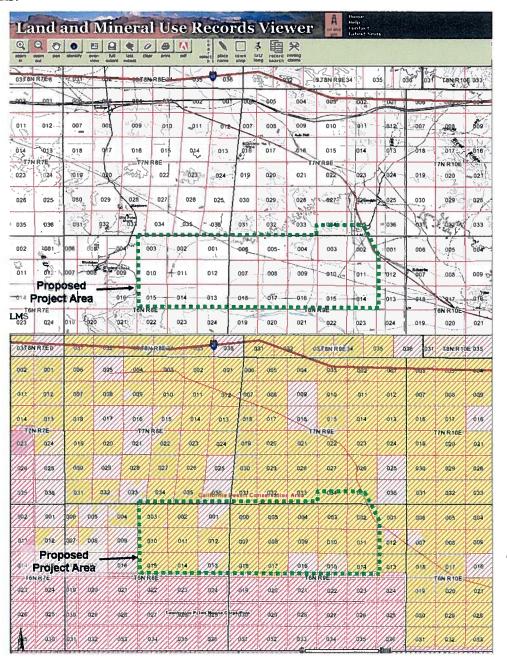
H. Temporary Work Areas Needed for Construction

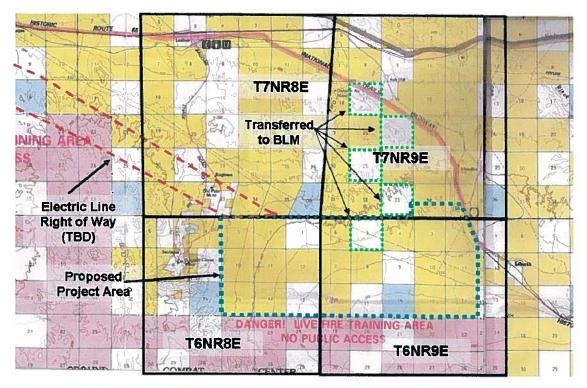
Temporary work areas within the property and just outside the Power Block will be required. The following fenced areas will be used during construction:

- Construction offices: 400' X 600' complex of office and tool storage trailers
 (1)
- Car parking: 400' X 600' (1)
- Construction equipment park: 300' X 500' (1)
- Power Block material/equipment laydown: 400' X 600' (5-8)
- Solar field material laydown: 500' X 800' (5-8)
- Heliostat pre-assembly shed: 100' X 150' (5-8)

8. Map Covering Area and Show Location of Project Proposal

The location shown below was selected due to proximity to the two electrical transmission lines. This available transmission capacity and the solar resource are the primary reasons for selecting the general area. Private property owners within the area identified in this application will be contacted to determine options or the final field layouts relative to existing gas lines and property claims.



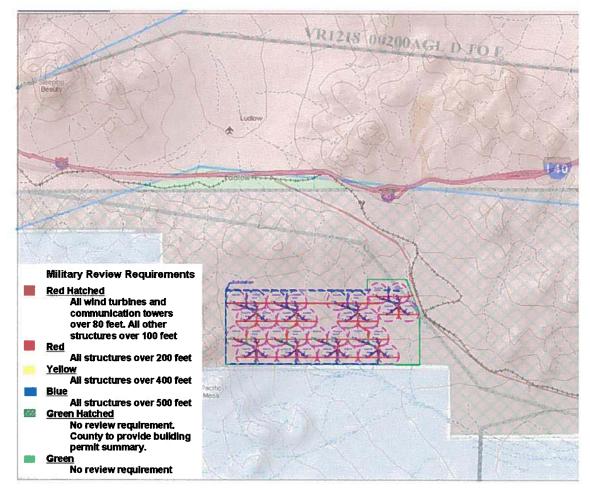


| Township/ Range | Section | Subdivision | Township/ Range | Section | Subdivision |
|--------------------|------------|--|--------------------|-------------|--|
| T6NR9E | 2 | SW of Rt. 66 | T6NR8E | 10, 11 & 12 | All |
| T6NR9E | 3 thru 11 | All | T6NR8E | 13, 14 & 15 | North of 29 Palms Marine Corps Base |
| T6NR9E | 14 thru 18 | North of 29 Palms Marine Corps Base | T7NR9E | 34 & 35 | Southern Half West of Rt. 66 |
| T6NR8E | 1, 2 & 3 | All | T7NR8E | TBD | ROW for power lines Route TBD with consultation with BLM |

The specific area was selected based on several requirements:

- 1. Relatively level land.
- 2. Proximity to 230,000 and 500,000 volt transmission lines to the northwest of the proposed location
- 3. Proximity to gas line
- 4. Proximity to rail and roads for construction and operations access
- 5. Remoteness for potential aesthetic concerns (10 miles from highway)

BSE has discussed the potential issues related to a solar field in this area with DOD. Consultations on specific flight paths have commenced and should be resolved in a matter of months. The DOD maps provided below are the starting point for discussions with DOD on areas of potential concern. These maps are designed primarily for wind turbines where radar interference (Doppler) due to the rotating blades is the primary issue. The areas designated as red do not necessarily apply for solar projects using this technology.



Military Review Areas

12. Give Statement of Your Technical and Financial Capability to Construct, Operate, Maintain, and Terminate System for Which Authorization is Being Requested.

The project and technology developer is BrightSource Energy, Inc. ("BrightSource"), based on the same business and engineering team that originally designed, financed, constructed, and operated the Luz parabolic trough solar electric generating stations in the 1980's and developed the DPT 550 system. The Luz plants included 354 MW of capacity in nine different plants that continue to operate profitably more than twenty years after their erection.

- BrightSource is the most experienced solar thermal project development and engineering team in the world
- We have collective experience of more than 300 years
- Out track record is unmatched for the past 20 years
- Our multi-disciplinary engineering and management team includes:
 - Project Development and Finance
 - Project Engineering and Project Management
 - Optics, Mechanical, Electrical, Thermal, Material Engineers
 - Economic Modelers, Regulatory Experts, Project Managers
 - Experts in evaluating Solar Thermal Technologies
- BrightSource is a Project Developer and also a Technology Developer

13. Alternate Routes

A. Describe Other Reasonable Alternative Routes and Modes Considered.

In siting a solar electric generating plant several factors come into play. These factors include distance to a supply of natural gas and distance to electric transmission lines (i.e., project linears). The proposed project site was selected based on the relatively short distance to both natural gas and transmission lines.

B. Why Were These Alternatives not Selected?

The proposed project linears were selected because they are the shortest and most direct access to natural gas and transmission. It is anticipated that alternatives to the proposed location of the natural gas and transmission lines will be discussed with BLM during the NEPA review of the project.

C. Give Explanation as to Why it is Necessary to Cross Federal Lands

The proposed project site and linears (i.e., natural gas supply and transmission line corridor) are located on federal lands, making the crossing of federal lands a necessity.

14. List Authorizations and Pending Applications Filed for Similar Projects Which May Provide Information to the Authorizing Agency

A BrightSource solar project filed with the BLM Needles Field Office (CACA – 48668) may provide help with evaluating this application. In addition, BrightSource has pending application with the BLM Barstow Field Office.

15. Provide Statement of Need for Project, Including the Economic Feasibility and Items Such as

A. Cost of proposal (construction, operation, and maintenance)

To be discussed with the Bureau of Land Management.

B. Estimated Cost of Next Best Alternative

To be discussed with the Bureau of Land Management.

C. Expected Public Benefits

The major expected public benefit of the project will be an environmentally clean source of renewable power.

16. Describe Probable Effects on the Population in the Area, Including the Social and Economic Aspects, and the Rural Lifestyles.

The proposed solar power plant project is not anticipated to have any significant long-term effect on the population or the rural lifestyle in the area. It is anticipated that the construction workforce will be drawn from the local area. The operations workforce is anticipated to be fewer than 20 people and will also likely be drawn from the local area. Given the temporary nature of the construction workforce and the limited operations workforce, effects to the population in the area are anticipated to be negligible.

17. Describe likely environmental effects that the proposed project will have on:

A. Air Quality

The San Bernardino County Air Quality Management District will be responsible for evaluating potential air quality impacts associated with the project. During short periods of intermittent cloud cover, the system uses natural gas thermal input from an auxiliary boiler, to maintain the turbine on-line at minimum load, allowing immediate resumption of solar production when the sky clears. Since natural gas usage will be limited and best available control technology will be used to control boiler emissions, potential environmental effects on air quality are expected to be less than significant. During the permitting of the project air quality impact modeling will be performed to ensure impacts are minimal.

B. Visual Impact

The proposed project is southwest of the Historic Route 66. Adjustments to the location of the northeast 200 MW field can likely be made pending Right-of-Way and siting consultations with the gas companies. While some portions of the project might be visible from Route 66, visual impacts are anticipated to be less than significant. A detailed visual impacts assessment of the project will be conducted during the review of the project by BLM, San Bernardino County and the California Energy Commission .

C. Surface and Ground Water Quality

Up to 500 acre feet of groundwater per year will be used during operation of the power plant. A detailed site-specific hydrogeological assessment will be performed during the permitting of the project. It is anticipated that this assessment will demonstrate impacts that are less than significant.

D. The Control or Structural Change on any Stream or Other Body of Water

During the permitting of the project a detailed wetlands delineation will be performed. This wetlands delineation will be used in the design of stormwater controls to be used at the project site.

E. Existing Noise Levels

Some of the equipment used in the generation of electricity creates noise during facility operations. Noise modeling will be performed during the permitting phase of the project to ensure that specific noise control measures are implemented during detailed design of the project such that noise impacts are less than significant.

F. The Surface of the Land, Including Vegetation, Permafrost, Soil, and Soil Stability.

Surface vegetation will be removed and the project site will be graded. A detailed grading and drainage control plan will be prepared during the permitting of the project to ensure that impacts to soil and soil stability will be less than significant.

18. Describe the Probable Effects That the Proposed Project Will Have on:

A. Populations of Fish, Plantlife, Wildlife, and Marine Life, Including Threatened and Endangered Species

During the permitting of the project biological surveys will be conducted following protocols established by the U.S. Fish and Wildlife Service. These surveys will identify the presence or potential presence of plantlife and wildlife including threatened and endangered species at the project site. The survey results will be used during the permitting of the project to develop permit conditions that ensure potential impacts to plants and wildlife are less than significant.

B. Marine Mammals, Including Hunting, Capturing, Collecting, or Killing These Animals.

Given the desert location of the proposed project, no impacts to marine mammals are anticipated.

19. State Whether any Hazardous Material, as Defined in this Paragraph, will be Used, Produced, Transported or Stored on or Within the Right-of-way or any of the Right-of-way Facilities, or Used in the Construction, Operation, Maintenance or Termination of the Right-of-way or any of its Facilities.

"Hazardous material" means any substance, pollutant or contaminant that is listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601 et seq., and its regulations. The definition of hazardous substances under CERCLA includes any "hazardous waste" as defined in the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, 42 U.S.C. 6901 et seq., and its regulations. The term hazardous materials also includes any nuclear or byproduct material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. The term does not include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or designated as a hazardous substance under CERCIA Section 101(14), 42 U.S.C. 9601(14), nor does the term include natural gas.

Hazardous materials, in the form of chemicals used in the treatment of process water used in facility operations, will be present at the site. Control measures (e.g., berms, secondary containment) will be identified during the permitting of the project to ensure that these chemicals are properly managed during operations of the facility. In addition, hazardous materials to be used during the construction phase of the project, as well as measures to be used to ensure proper use and management of these materials, will be identified during permitting of the project.

04/26/2007 24

20. Name all the Department(s)/Agency(ies) Where this Application is Being Filed.

Needles BLM Office only.

04/26/2007 25

Appendix 1 Typical Responsibilities for Power Plant Projects with Shared Federal and State Jurisdiction

In instances where a state agency and a federal agency share jurisdiction for environmental review of a project (in this case construction of a power plant greater than 50 megawatts proposed to be constructed on federal BLM land), these agencies will work together to satisfy each of their respective statutory responsibilities. The following discussion provides an overview of the typical responsibilities for the lead federal (BLM) and state (California Energy Commission) agencies that will be undertaken during the review of the Bright Source Energy project.

The Bureau of Land Management (BLM) have responsibilities as a Federal agency pursuant to the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 et seq.) and the regulations of the Council on Environmental Quality (40 C.F.R. 1500-1508), regarding the need to consider the potential environmental impacts associated with the construction, operation and maintenance of the project, including any modification of existing transmission facilities needed for the interconnection. The requirements of NEPA are procedural, requiring the lead Federal agency to take into account the potential for direct, indirect, and cumulative impacts on the human environment by the project.

The California Energy Commission (Commission) is the agency of the State of California authorized with the responsibility for siting all thermal power facilities 50 megawatts (MW) or greater, and the preparation of documentation to satisfy the requirements of the California Environmental Quality Act. (CEQA; Public Resources Code 21000 et seq.) The Commission's responsibility includes the review of all aspects of the project (see Table 1) and all related facilities such as water, gas, and electric transmission lines. (Public Resources Code 25500 et seq.) The requirements of CEQA are substantive and procedural, requiring the lead state agency to identify potentially significant environmental impacts associated with the project, and mandating mitigation or alternatives that reduce identified adverse environmental impacts to less than significant.

The Commission's process starts with the filing of an Application for Certification (AFC) by the Applicant, Bright Source Energy Inc. The AFC requires substantive research on the existing locale and project impacts in all the subject areas listed in Table 1. The AFC will detail alternative routes, socioeconomic impacts (including need, economic impacts and public benefits), air quality and mitigation, visual impacts, effect on water quality, existing noise levels, soils, animal and plant biology, and cultural resources. Additional subjects are listed in Table 1.

Appendix 1

Each subject area will have its own 20-100 page chapter. Bright Source Energy is starting the process of interviewing and hiring an environmental firm to prepare this document now and expects to start the preparation in 2008. This document will also be filed with the BLM in addition to the 299 form as it will provide the basis for the joint agency environmental review.

The Commission staff is an independent party in the Commission's application proceeding. The Commission staff will be responsible for preparing an independent analysis of the potential environmental impacts of the project.

The Commission review of the project will include review of the plant site and all related facilities such as water, wastewater, and gas lines, access roads built for the project, and electric transmission lines from the plant site to the first point of interconnection with electric transmission system.

As has been the case on other power projects in California with shared federal and state jurisdiction, BLM will be responsible for reviewing and commenting on the analysis of environmental impacts by the Commission staff and will provide comments on all draft sections of the preliminary and final Commission staff assessments and any other documents for which staff requests comments.

BLM will also be the lead Federal agency for the purposes of Section 106 of the National Historic Preservation Act, as amended (16 U.S.C. 470(f)), and the regulations at 36 C.F.R. 800. This means that BLM will have the responsibility to consult directly with the California State Historic Preservation Officer, Native American Communities and, if necessary, with the Advisory Council on Historic Preservation, pursuant to the regulations at 36 C.F.R. 800. BLM and Commission staff will normally confer to make determinations on the significance of any and all cultural resources that may be affected by the project.

BLM will also be the lead Federal agency for the purposes of the Endangered Species Act (ESA) (16 U.S.C. 1531-1544). BLM will have the responsibility, in accordance with Section 7 of the ESA, to obtain a list of endangered/threatened species from the U.S. Fish and Wildlife Service (FWS), prepare the necessary Biological Assessment, make a timely application to the FWS for a Biological opinion, and negotiate any mitigation measures between the FWS, the applicant, and the Commission staff.

Appendix 1