

**Sonoran Solar Energy Project  
Maricopa County, Arizona  
Final Environmental Impact Statement**

**Lead Agency:** U. S. Department of the Interior, Bureau of Land Management

**Type of Action:**      Draft            ( )                      Final            (X)  
                                 Administrative ( )                      Legislative    ( )

**Jurisdiction:** Phoenix District Office, Lower Sonoran Field Office, Arizona

**Abstract:** This final environmental impact statement (EIS) analyzes the environmental effects of constructing and operating a 375-megawatt (MW) concentrated solar thermal electrical generating facility on approximately 3,620 acres of BLM-administered public lands in Maricopa County, Arizona. The final EIS was prepared by the BLM in response to Boulevard Associates, LLC's right-of-way grant application to the BLM.

The Proposed Action would include two independent, concentrated solar electric generating facilities with expected outputs of 125 MW and 250 MW. Both facilities would use parabolic trough solar thermal technology to produce electrical power using steam turbine generators fed from solar steam generators. The generators would connect to a new 500-kilovolt (kV) on-site switchyard. Electricity from the switchyard would be transmitted through a generation-tie line to connect to the existing Jojoba Switchyard. The proposed facility would use a wet-cooled tower for power plant cooling and up to 3,003 acre-feet of water per year supplied from an on-site well field. Three natural gas co-fired boilers would be constructed to supplement solar heating when less than optimal solar conditions exist (i.e., nighttime and cloud cover) and would be used for up to 25% of annual electrical production. A thermal energy storage system may also be installed to supplement electrical output during reduced solar activity or to extend electrical output into the evening hours.

The proposed Sonoran Solar Energy Project would include a number of ancillary facilities and infrastructure, including power blocks and solar trough arrays, evaporation ponds, access roads, administration buildings, a land treatment unit, drainage collection and discharge facilities, and open areas on approximately 3,620 acres.

The final EIS also analyzes a No Action alternative (as required by the National Environmental Policy Act) that would not authorize construction and operation of the facility, two action alternatives to the Proposed Action, and one sub-alternative. Action alternatives consist of the following:

- Alternative A: Reduced Water Use would use dry-cooling technology
- Sub-alternative A1: Photovoltaic would use photovoltaic technology instead of solar thermal technology to reduce water use and would occupy approximately 2,013 acres
- Alternative B: Reduced Footprint would be a 250-MW wet-cooled facility on 2,394 acres.

These alternatives were developed in response to issues and concerns raised during scoping and in comments on the draft EIS. BLM's preferred alternative is Sub-alternative A1: Photovoltaic.

Two options are analyzed in the final EIS. A Brine Concentrator Option is analyzed to consider further reduction in water use under the Proposed Action and Alternative B. A Generation Tie (gen-tie) Line Option is analyzed to consider an alternate gen-tie line route under all action alternatives.

Notices of availability (NOA) of the draft EIS were published in the *Federal Register* by the Environmental Protection Agency (EPA) on April 9, 2010, and by the BLM on April 19, 2010. Publication of the EPA NOA initiated a 45-day, formal public and agency comment period, during which the BLM solicited comments regarding the project, the alternatives analyzed, and potential environmental impacts. Three open houses were held in Phoenix, Buckeye, and Gila Bend, Arizona, on April 27, 28, and 29, 2010, respectively. The purpose of these meetings was to provide information on the project and to collect public comment on the adequacy and accuracy of the analysis in the draft EIS. Comments were accepted until 5:00 PM on Thursday, May 24, 2010, for use in development of the final EIS. Comments were submitted to Joe Incardine, National Project Manager, BLM Phoenix District Office, Lower Sonoran Field Office, 21605 North 7<sup>th</sup> Avenue, Phoenix, Arizona, 85027-2929, or sent to [sonoransolar@blm.gov](mailto:sonoransolar@blm.gov).

Appendix G of this final EIS provides the comments received on the draft EIS, BLM's prepared responses to those comments, revisions that were made in response to the comments, changes that were made to the action alternatives between the preparation of the draft EIS and the preparation of the final EIS, and the addition of Sub-alternative A1 and the Generation Tie Line Option. Vertical lines in the left margin of a page indicate where text in the draft EIS has been deleted, revised, or supplemented for this final EIS, except for Appendix G, H, and I, which are entirely new documents. With the same exceptions, new text that was not in the draft EIS is underlined in the final EIS.

For information about the project or to view the final EIS, visit [http://www.blm.gov/az/st/en/prog/energy/solar/sonoran\\_solar.html](http://www.blm.gov/az/st/en/prog/energy/solar/sonoran_solar.html)