

SONORAN SOLAR ENERGY PROJECT UPDATE: PROJECT FOCUSED ON REDUCED WATER USE: PV TECHNOLOGY

May 2011

This is an update from the Bureau of Land Management (BLM) on the status of the Sonoran Solar Energy Project, which is proposed to be built in Rainbow Valley east of State Route 85, south of Buckeye, Arizona.

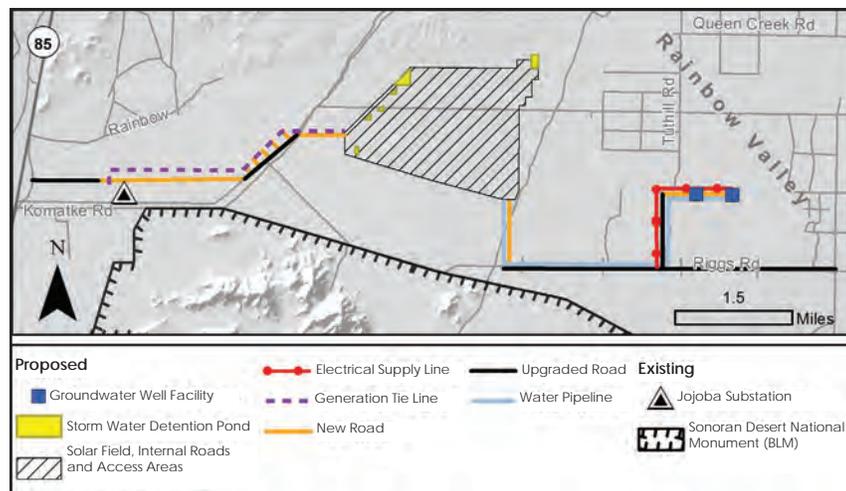
The news is that the BLM will be adding analysis of a project design that would use photovoltaic (PV) technology and thus far less water than originally proposed for the project. PV is a viable option because of recent technology advancements and changes in market conditions.

BACKGROUND

Boulevard Associates LLC, a subsidiary of NextEra Energy Resources LLC, proposed building a 375-megawatt power generating facility using concentrated solar thermal (CST) technology on 3,700 acres of BLM-managed land. The company said it planned to use a wet-cooling process that required a cooling tower, a natural gas backup system, and a 500-kilovolt electrical transmission line.

CST technology uses the sun's energy to heat water or heat transfer fluid. Steam created is used to power a conventional turbine that generates electricity.

The BLM, as the lead agency, will decide whether to grant a right-of-way and the terms and conditions of such a right-of-way. Cooperating agencies who also have a voice in the decision are the Arizona Game and Fish Department, the Arizona Department of Water Resources, the Town of Buckeye, and the City of Goodyear.



Project Area Map



CST Technology Panels

In April 2010, the BLM released a draft environmental impact statement (EIS), a document required by the National Environmental Policy Act. The BLM held a series of public meetings on the draft EIS and gathered comments from agencies, organizations, and individuals.

During the public comment period, a major issue raised was the amount of water required for the CST technology. After the draft EIS meetings, Boulevard Associates asked the BLM to place the Sonoran Solar Energy Project on hold, while it made internal business decisions.



NEPA PROCESS

Right-of-Way
Application Triggers
NEPA Review



Internal Scoping
and Planning



Notice of Intent



Public Scoping



Data Gathering /
Resource Investigations



Alternate Development
and Evaluation



Draft EIS



Newsletter

We Are
Here



Final EIS

30-Day
Public Comment
Period



Record of Decision

NEW INFORMATION

While a low-water use alternative was included in the draft EIS, PV technology was not the focus. Arizona utilities were not actively seeking power from large PV projects. Also, no PV project worldwide generated the amount of electricity that Sonoran Solar proposed to produce.

However, changes in technology and market trends now make PV more feasible. Boulevard Associates determined that, given the changes, it may be able to provide power at a lower cost using PV. Utilities, too, are reconsidering the viability of getting power from large-scale PV projects.

As a result, the BLM will be adding analysis related to PV technology in the final EIS in direct response to agency and public comment calling for reduced water usage.

The proposed action and Alternative A, both sub actions, are outlined in the accompanying table. The No Action alternative and Alternative B, which calls for a reduced footprint, have not changed from the draft EIS. The table does not show the reduced footprint.

NEXT STEPS

The BLM is reviewing the alternatives, including a PV alternative. The agency will select a preferred alternative and publish its findings in a final EIS. The final EIS is scheduled for release in October 2011.

The public will have 30 days to review the final EIS. At the end of that period, the BLM will issue a record of decision, which will describe the findings, the conclusion and any mitigation measures it is requiring. If an action alternative is selected, the right-of-way grant will be issued for 30 years. The record of decision is anticipated in November 2011.

PV Thin Film component



PV Crystalline Silicon Panels



PV Thin Film Panels



PV Crystalline Silicon Component

	<u>Proposed Action</u> <u>(wet-cooled CST)</u>	<u>Alternative A</u> <u>Reduced Water</u> <u>(dry cooled CST)</u>	<u>Alternative A</u> <u>PV Technology</u>
1. Overall Footprint	Approximately 3,700 acres Linear trough, less flexible layout	Approximately 3,700 acres Linear trough, less flexible layout	Approximately 2,000 acres Panels allow for modular layout
2. Evaporation Ponds	90 acres	18 acres	1 acre or less Elimination alleviates migratory bird attraction
3. Electrical Generation	375 MW (two phases)	375 MW (two phases)	300 MW (in 2MW arrays)
4. Water Use	Up to 3,000 ac-ft/year for wet-cooling	Up to 139 ac-ft/year for	33 ac-ft/year for panel washing and other operational uses
5. Visual Resources	Linear troughs, 50 ft. tall cooling towers, visible emission plumes	Linear troughs, 50 ft. tall cooling towers, visible emission plumes	PV panels, 7.5 ft. tall, no towers, no emission plumes, smaller footprint
6. Air Quality	Requires natural gas co-firing; cooling tower emissions	Requires natural gas co-firing; no cooling emissions	No natural gas used; no cooling emissions
7. Noise	Noise associated with power block and cooling tower	Noise associated with power block and cooling tower	No power block or cooling tower
8. Gas Pipeline Disturbance	1 mile	1 mile	0
9. HAZMAT/ Solid Waste	Potential leaks of Heat Transfer Fluid (HTF) Brine removal from evaporation ponds	Potential leaks of Heat Transfer Fluid (HTF) Brine removal from evaporation ponds	No HTF used Brine removal from small evaporation pond
10. Socio-Economic	1,500 peak construction workforce 1,000 vehicle trips per hour peak 200 permanent workforce	1,500 peak construction workforce 1,000 vehicle trips per hour peak 200 permanent workforce	378 peak construction workforce 340 vehicle trips per hour peak 16 permanent workforce

OPPORTUNITIES TO LEARN MORE

Website: A downloadable copy of the draft EIS and other documents can be viewed at
http://www.blm.gov/az/st/en/prog/energy/solar/sonoran_solar.html

Mailing List: Watch for further project updates, including notice of the publication on the final EIS, in your mailbox.

You can get more information about the Sonoran Solar Energy Project by writing to:

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Or by e-mail to: sonoransolar@blm.gov*

You also can use either of those methods to ask that your name be removed from the mailing list.

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so. Please note that any comments submitted will be considered informal comments and may or may not receive a response from the BLM.

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http://www.blm.gov/az/st/en/prog/energy/solar/sonoran_solar.html