United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Washington, D.C. 20240
http://www.blm.gov

TAKE PRIDE IN AMERICA

DEC 20 2010

DECISION MEMORANDUM FOR THE SECRETARY

FROM: Robert V. Abbey
Director, Bureau of Land Management

SUBJECT: Record of Decision – Crescent Dunes Solar Energy Project (NV)

INTRODUCTION

Tonopah Solar Energy, LLC, originally submitted a right-of-way (ROW) application for 7,680 acres of public land for development of the proposed Crescent Dunes Solar Energy Project (N-86292), located 13 miles northwest of Tonopah, in Nye County, Nevada. The ROW application was later reduced to 2,250.27 acres of public lands. If approved, development would occur on approximately 1,776 acres within the project area and would include the facility, transmission infrastructure, and ancillary structures. Tonopah Solar Energy, LLC proposes a concentrated solar thermal power plant capable of generating 110 megawatts (MW) of electricity that is expected to operate approximately 30 years.

BACKGROUND

The Crescent Dunes Solar Energy Project would utilize concentrated solar power technology where a field of heliosats (mirrors) focus sunlight on a central receiver/power tower erected in the center of the solar field. A transfer fluid is heated as it passes through the receiver and circulates through a series of heat exchangers to generate steam. The steam is used to power a conventional steam turbine to produce electricity. The exhaust steam from the turbine will be condensed by both wet and dry cooling to reduce water consumption. The project is expected to power approximately 75,000 homes during peak electricity periods. The thermal storage capability of this technology allows renewable electricity to be produced even when peak demand period extends into the late evening hours. The facility is expected to produce approximately 110 MW of power and contribute 485,000 MW hours (MWh) of cost effective renewable energy annually to the Nevada electricity grid.

Energy produced from the facility would interconnect to the electrical grid through a new transmission line extending to the existing Sierra Pacific Power Company (NV Energy) Anaconda Moly Substation, approximately 6 miles north of the site. The applicant has acquired a Power Purchase Agreement with NV Energy for the sale of electricity produced from the facility, which will provide power to approximately 75,000 households in Nevada.

POSITION OF INTERESTED PARTIES

The BLM received 24 public comment letters during the 60-day public scoping period after release of the Notice of Intent to prepare the Environmental Impact Statement (EIS) for the project, and 23 public comment letters during the 45-day public review of the Draft EIS. Comment letters were received from the following: Department of the Air Force, Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), Nevada Department of Wildlife (NDOW), Nevada State Clearinghouse, and several members of the public.

1. Department of the Air Force: The Director for Public Partnerships (DPP) at Nellis Testing and Training Range was not satisfied with the BLM response to the Nellis' comments in the Final EIS. As a result, the BLM Tonopah Field Office worked directly with the Nellis/Air Force Command throughout development of the Record of Decision (ROD) for the proposed project. The BLM and the Air Force were able to resolve the military's concerns.

2. Cultural Resources: No tribal lands are affected by this project. However, the BLM has invited and involved the following tribes to participate in this project because they have expressed interest in the project: Timbisha Shoshone Tribe, Duckwater Shoshone Tribe, and the Yomba Shoshone Tribe. Nine prehistoric archaeological sites located in the areas identified as Alternates 1and 2 have been determined to be significant and will be adversely affected by this project. A treatment plan has been developed for those sites and is going through a review process. Treatment, consisting of further recordation and excavation, will begin after the review process is completed.

3. Impacts to Water Resources: The proposed project would use dry and wet (hybrid) cooling processes to minimize water use within the hydrologic basin while continuing to maintain efficient power generation during times of high electricity demand. The consumptive use of water would be about 600 acre-feet per year, which could be purchased from existing water users in the basin, so there would not be a net increase in consumptive use of water.

4. Biological Resources - Special Status Species (Wildlife): The project area has no federally listed threatened or endangered species. However, there are BLM special status wildlife species in the area, including dark and pale kangaroo mice and golden eagles. Special status sensitive species surveys were conducted in 2009 and 2010. Based on results of field surveys, it was determined that suitable kangaroo mouse habitat was closely associated with two soil types including Dune Land (DU), and Tipperary fine sand (TGE). On June 24, 2010, BLM wildlife biologists conducted aerial helicopter surveys for golden eagle nests in a 10-mile radius buffer of the proposed solar project area. One active nest was found 8 miles southeast of Crescent Dunes and one inactive nest was found. Two incidental sightings of golden eagles were made during the survey.

5. Special Status Species (Plants): BLM Nevada special status plants found in the area include Nevada oryctes (*Oryctes nevadensis*), Wiggins' cholla (*Cylindropuntia echinocarpa*), and grizzly bear prickly pear (*Opuntia polycantha var. erinacae*). The mitigation measures have been detailed in the Final EIS.

6. Minerals: Placer mining claims (lithium) were located in February 2010 and filed 90 days later with Nye County and the BLM, by Nevada Alaska Mining Company Inc. These claims overlap the proposed project site. Under current law, these claims could conflict with the proposed use of the public land and could potentially create a problem with the development of the project.

7. Visual impacts: The public has expressed concerns regarding the "Dark Sky" Initiative. The Tonopah area has the unique distinction of having one of the darkest nighttime skies in the Country and is using that distinction for tourism and economic development. Tonopah is rated as the number one stargazing destination in America by *USA Today* and the Nevada Commission on Tourism has provided grant funding to promote the "Tonopah Star Trails" as part of its tourist attractions. In the Draft EIS and the Final EIS, mitigation measures have been outlined to minimize unnecessary light pollution from the plant.

DECISION OPTIONS

The EIS considered four alternatives, the no action alternative and three action alternatives, including the Agency preferred alternative:

1. No Action Alternative: This alternative assumes the ROW application would be denied and the proposed project would not be built.

2. Proposed Action: This proposed site is located to the south of the Crescent Dunes Special Recreation Area (SRMA) and would disturb a total of 1,673 acres. This site would eliminate 1,374 acres of Nevada oryctes habitat (a State protected plant) and 1,466 acres of pale kangaroo mouse habitat. This alternative would have potential conflicts for the Air Force radar testing mission.

3. Alternative 1: This alternative site encroaches on the Crescent Dunes SRMA and would disturb a total of 1,640 acres, including 803 acres of suitable habitat for Nevada oryctes, and create the need for a land use plan amendment to the Tonopah Resource Management Plan (RMP). This alternative would also eliminate approximately 1,191 acres of habitat for pale kangaroo mouse and 7 acres of habitat for several endemic species of scarab beetles (BLM sensitive species). This alternative minimizes potential conflicts with military operations for the Air Force radar testing mission.

4. Alternative 2 (BLM preferred alternative): In this alternative, the proposed project facility would encompass approximately 2,094.27 acres, of which 1,620 acres would be disturbed within the project footprint. The alternative is located west of the

Crescent Dunes SRMA and eliminates or reduces environmental impacts overall, including visual impacts to recreational users of the Dunes Area and impacts to unique habitat for the Nevada oryctes plants, a State protected plant. The site is located near an existing road and transmission line, reducing the length of additional transmission line and access road and amount of surface disturbance. The site would disturb 434 acres of pale kangaroo mouse habitat. There would be no impacts to habitat for the endemic species of scarab beetles. This site also minimizes potential conflicts with military operations for the Air Force radar testing mission.

The BLM has decided to approve the preferred alternative (Alternative 2) which would include a project footprint disturbance of 1,620 acres in order to construct a concentrated solar thermal power plant facility approximately 13 miles northwest of Tonopah, Nye County, Nevada, capable of generating 110 MW of electricity.

RECOMMENDATION

I recommend you approve the decision regarding the Crescent Dunes Solar Energy Project. Your approval of this decision constitutes the final decision of the Department of the Interior and, in accordance with the regulations at 43 CFR 4.410(a)(3), is not subject to appeal under Departmental regulations at 43 CFR Part 4. Any challenge to this decision, including the BLM Authorized Officer's issuance of the right-of-way as approved by this decision, must be brought in Federal district court.

DECISION BY THE SECRETARY:

APPROVE: X

DISAPPROVE: ____

COMMENTS:

Ken Salazar

Ken Salazar