Thank you for your comment, Thomas Mulvihill.

The comment tracking number that has been assigned to your comment is SolarS50021.

Comment Date: June 18, 2008 14:40:04PM
Solar Energy Development PEIS
Comment ID: SolarS50021

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Attachment: Tom's Remarks-Barstow PEIS.doc

Comment Submitted:

See Attachment.

June 17, 2008

Department of Energy/Bureau of Land Management
Solar Energy Development Programmatic EIS
Public Scoping Meeting: Barstow, California

Good Evening:

On behalf of Indian Wells Water District, I wish to express our appreciation to you and your staff for hosting the scoping meeting for the Programmatic Environmental Impact Statement to Evaluate Proposed Solar Energy Development (PEIS). This gives local agencies the opportunity to raise their concerns early in the process.

Solar thermal power plants generate electricity by the focus of sunlight, usually with mirrors, to heat a fluid to high temperatures and drive a steam turbine. (This is in contrast to photovoltaic solar power systems, in which light interacts with special materials directly to generate electricity.) Solar thermal power plants have the option of using either wet cooling technology or dry cooling technology.

Solar thermal power plants with wet cooling towers use substantial amounts of water. While an exact figure for solar thermal water consumption using wet cooling varies from plant to plant because of technical details, the extent of thermal storage in the project, the location and degree of conservatism being exercised by the project proponent, it is necessarily a very significant use of water. Wet cooled solar thermal power plants may use as much as 1,000 acre feet of water per year per 100 megawatt capacity. For many communities, the amount of water consumed may be critical, especially for small communities that have a limited supply, are in a basin experiencing overdraft, or are in arid desert environments.

Dry cooling technology uses air for cooling and consumes up to 95 percent less water than wet cooling. Some water is still consumed in the wash down and maintenance of the plant. The success and economic feasibility of dry cooling for solar thermal power (or any other power plant technology) has already been demonstrated by the 598 megawatt Bighorn Generating Station near Primm, Nevada. One may also point to the Kimberlina Power Facility 17 miles north of Bakersfield, California with a dry cooling plant unit under construction at this time. This particular plant is being constructed by Ausra under its power purchase agreement with PG&E. The proposed 177 megawatt Carrizo Energy Solar Farm to be located in eastern San Luis Obispo County on California State Route 58 near Simmler, California will also utilize dry cooling technology.

Water is our most vital natural resource. It is the position of Indian Wells Valley Water District that development of one natural resource, solar power, should not come at the expense of another, water.

Dry cooling should be used unless those local agencies responsible for water supply determine that there are environmentally reasonable sources of water available for wet cooling. In some cases, the use of waste water treatment effluent may be acceptable, while in other cases it may be needed for higher beneficial uses. For example, in Orange County, effluent is being used to recharge the groundwater supply for eventual potable use. This must be a decision made in consultation with the local agency or agencies whose mission is to develop, manage, and supply water.

Therefore, the use of water must be identified as a significant environmental issue that must be included in the scope of this PEIS. Specifically, the PEIS must require an analysis on the part of proposal applicants as to whether proposed projects substantially deplete ground water supplies or interfere substantially with ground water recharge such that a net deficit in aquifer volume or a lowering of the local ground water table level result. The PEIS must require an analysis on the part of proposal applicants as to whether proposed projects substantially degrade water quality. Specialists with expertise in hydro-geology must be part of the agencies' interdisciplinary approaches which was alluded to in the notice of intent for this PEIS.

As an example, the community of the Indian Wells Valley, which is in Kern County and located between Mojave to the south and Lone Pine to the north, is unique and there are concerns that would not necessarily be readily apparent either to the Department of Energy or the Bureau of Land Management.

In Indian Wells Valley, the supply of groundwater is being withdrawn faster than it is being recharged. We understand from recent studies that we are currently using the best water available in the Valley and that in the not-too-distant future we will be dependent on the use of brackish water, which is also a finite supply. It is not responsible to think of this Valley's brackish water or even its waste water treatment effluent as being expendable. At this time, the Valley has not secured any outside source of supply.

Indian Wells Valley Water District considers the use of water for wet cooling to be an issue of serious concern. Further, the District Board of Directors, at its most recent meeting, adopted the position that it supports solar power methodology with a "zero net effect" on Valley water resources, including potable water, brackish water, and waste water treatment effluent. Even the use of effluent affects the Valley water supply. Effluent is a potential source of ground water recharge. Also, diversion of effluent from its current use for golf course irrigation must be made up from other water sources.

For investors who will profit from solar thermal power, for residents of Southern California cities who will enjoy the power generated in our valley, and for you as stewards of public lands, solar projects do have alternatives that can address your responsibility to the people of Indian Wells Valley.

Respectfully,

Tom Mulvihill
General Manager