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August 4, 2008

U.S. Bureau of Land Management
U.S. Department of Energy
Solar Energy PEIS Scoping
Argonne National Laboratory
9700 S. Cass Avenue – EVS/900
Argonne, IL 60439

Re: Comments for Solar PEIS

To whom it may concern:

Please accept for consideration the attached comments, which are submitted as part of the scoping process for the Solar Energy Programmatic Environmental Impact Statement ("PEIS") being jointly prepared by the U.S. Bureau of Land Management ("BLM") and the U.S. Department of Energy ("DOE").

It is our understanding that although the comment period deadline has passed, additional written comments submitted for consideration may still be accepted and given consideration in the scoping process. We appreciate this opportunity and look forward to involvement with the BLM and DOE as the PEIS is developed.

Sincerely,

A handwritten signature in cursive script that reads "Kathy Weiss".

Kathleen Weiss
Vice President, Government Affairs

enclosure

cc: Ray Brady, BLM, ray_brady@blm.gov
Linda Resseguie, BLM, linda_resseguie@blm.gov

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
and
UNITED STATES DEPARTMENT OF ENERGY**

PROPOSAL TO CONDUCT PROGRAMMATIC :
ENVIRONMENTAL IMPACT STATEMENT :
ON SOLAR ENERGY DEVELOPMENT : FIRST SOLAR, INC.
ON BLM LAND IN SIX WESTERN STATES : COMMENTS ON SCOPING
: OF PROPOSED PEIS

COMMENTS ON BEHALF OF FIRST SOLAR, INC.

I. INTRODUCTION

First Solar, Inc. (“FS”) appreciates this opportunity to submit comments on the United States Department of Interior, Bureau of Land Management (“BLM”) and Department of Energy (“DOE”) Proposal to Prepare a Programmatic Environmental Impact Statement (“PEIS”) to Evaluate Solar Energy Development on BLM Land in Six Western States (Arizona, California, Colorado, Nevada, New Mexico and Utah). FS supports the decision by BLM and DOE to initiate steps to increase the efficiency of the current process for reviewing and approving right-of-ways (“ROW”) for the development of utility scale solar projects on BLM land. Consistent with Executive Order 13212, *Actions to Expedite Energy-Related Projects*, May 18, 2001, and Title II of the Energy Policy Act, Section 211, it is vitally important that the process for approving utility scale solar projects on BLM land be made more efficient and streamlined.

First Solar, Inc. (Nasdaq:FSLR) manufactures solar modules with an advanced thin film semiconductor process and provides comprehensive system solutions that significantly reduce solar electricity costs. By enabling clean renewable electricity at affordable prices, First Solar provides an economic alternative to peak conventional electricity and the related fossil fuel dependence, greenhouse gas emissions and peak time grid constraints.

First Solar has set the benchmark for environmentally responsible product life-cycle management by introducing the industry’s first comprehensive collection and recycling program for solar modules. From raw material sourcing through end of life collection and recycling, First Solar is focused on creating cost-effective renewable energy solutions that protect and enhance the environment. First Solar modules have the lowest life cycle environmental impact of current PV technologies. In addition, PV power plants generate electricity with no air emissions, no waste stream and no water use.

First Solar is the cost leader in the solar PV industry, driven by an advanced thin film semiconductor manufacturing process. At the end of 2007, over 300 megawatts of First Solar

PV modules had been installed worldwide, with an additional 400 megawatts scheduled for installation in 2008. With its project partners, First Solar has supplied several of the largest ground and rooftop PV power plants in the world.

FS's comments are focused on ensuring that the PEIS recognize and account for the material differences in environmental impacts associated with different solar technologies used in utility-scale solar energy projects ("SEPs"), including photovoltaic ("PV") systems and concentrating solar power ("CSP") systems. In the interests of streamlining the process for reviewing and approving ROWs for the development of utility solar projects, FS recommends that the PEIS establish an abbreviated review process for certain projects considered to have relatively minimal impacts based on their smaller size, lack of resource demands, and minimal secondary impacts. FS also recommends that the BLM consider designating in the various Resource Management Plans ("RMPs") certain areas presumed to be acceptable for smaller scale SEPs without the necessity of an EIS, including projects that are less than 100 MWs in size, require no large water diversions, and require no transmission upgrades.

In addition, FS recommends that the PEIS contain detailed technology specific analysis and criteria to determine whether a specific SEP requires an environmental assessment ("EA")—leading either to a finding of no significant impact ("FONSI") or to an individual Environmental Impact Statement ("EIS")—or can be handled through the minimal requirements of a Determination of NEPA Adequacy ("DNA"). Detailed analysis of different categories of solar generation methods in the PEIS can later be used to evaluate the environmental impacts of different solar electric generation methods on a site specific basis depending on the scale and location of a proposed project. The PEIS should reflect that otherwise comparable projects in terms of nameplate MW capacity can have vastly different impacts on water and other resources and therefore should be viewed differently. For example, unlike some systems, PV SEPs do not require significant water resources and do not utilize fluids, pumps, steam turbines, water treatment facilities, or natural gas infrastructure for the daily operation and maintenance of a PV solar field. The PEIS therefore should contain an analysis of each solar generation method to enable tiering during site-specific reviews which should result in streamlined review and expedited project analysis.

FS recommends that the principal goal of the PEIS should be to facilitate the efficient analysis of individual projects seeking a ROW, by taking into consideration:

- relative generic environmental siting impacts, including impacts on existing infrastructure and requirements to construct additional infrastructure, such as transmission capacity and roadways;
- capacity of various technologies to connect power generation capacity from smaller acreage non-contiguous properties;
- total lifecycle impacts;

- impacts on available local resources, including water resources; and
- indirect and cumulative impacts of different solar generation methods.

Finally, FS suggests that the BLM incorporate the concept of a project realization trigger in each issued ROW to prevent “squatting” by SEP developers who fail to make reasonable progress toward project realization. This will ensure that BLM land with prime solar resources is most quickly utilized in the interests of solar energy development.

II. SUBSTANTIVE COMMENTS

A. THE PEIS SHOULD MAKE CLEAR THAT CONSTRUCTION OF UTILITY SCALE SOLAR ON BLM LAND IS A PREFERRED ALTERNATIVE FOR BLM

Executive Order 13212, dated May 18, 2001, outlines actions that should be taken to expedite energy related projects by federal agencies. Specifically, Section 2 states that governmental agencies must expedite the review of energy-related projects to accelerate completion of the projects, consistent with public health and environmental protections. Title 2 of the Energy Policy Act of 2005 (“EP Act”), 42 U.S.C. §15851, *et. seq.*, expresses the intent to increase renewable energy projects located on public lands.¹ Consistent with EO 13212 and the EP Act, the PEIS should clearly indicate the preference for construction of utility scale solar on BLM land.

B. THE PEIS SHOULD ESTABLISH STANDARDS FOR DISTINGUISHING NON-CONTROVERSIAL PROJECTS HAVING MINIMAL-IMPACT THAT WOULD BE SUBJECT TO ABBREVIATED REVIEW

In the interest of expediting the review of solar energy-related projects, the PEIS should establish a separate category for smaller non-controversial projects having minimal direct and cumulative environmental impacts based on specified attributes and criteria. Under this approach, SEPs meeting the following criteria would be presumed to qualify for a DNA or an EA leading to a FONSI, thereby reducing review time:

1. located on no more than one section of contiguous land (640 acres), which would not disrupt wildlife movements;
2. disturbs less than a certain percentage of vegetation on the land;
3. requires no significant water diversion; and
4. requires no transmission system upgrade other than interconnection of the facility to the existing network.

SEPs meeting these criteria would be subject to an abbreviated review process similar to the protocol used by the California Energy Commission for Applications for Certification

(“AFC”) of energy projects qualifying for a negative declaration under the California Environmental Quality Act (CEQA).² FS further recommends that BLM consider amending its Resource Management Plans to identify areas thought to be acceptable for SEPs meeting these criteria for abbreviated review. By establishing an abbreviated review process for SEPs having a smaller footprint and environmental impact, the PEIS would serve the public interest in maximizing the development of solar energy on BLM lands, as directed by Executive Order 13212 and EP Act 2005.

C. THE PEIS SHOULD ESTABLISH APPLICATION SCREENING CRITERIA TO PREVENT SPECULATION AND ABUSE

Recent information suggests that some SEP developers are submitting ROW applications for massive swaths of contiguous lands without serious intention of proceeding in earnest with development of a project.³ Land speculation poses a serious risk to the integrity of BLM’s solar development process by tying-up large contiguous tracks of land for indeterminate time periods with no solar energy development proceeding. Accordingly, BLM should consider establishing a neutral and fair mechanism to eliminate speculators and to assure that only pre-qualified developers can submit ROW applications. One way to discourage such speculation is to require applicants to post substantial upfront earnest lease payment based upon the acreage and environmental impacts of the proposed project. In addition, as discussed in Section D, below, such speculation will also be discouraged by imposing project realization triggers requiring ROW recipients to proceed with due diligence to construct their projects or be at risk to lose the ROW.

D. THE PEIS SHOULD ESTABLISH DISTINCT STANDARDS FOR EVALUATING DIFFERENT SOLAR GENERATION METHODS SUFFICIENT TO ELIMINATE UNNECESSARY OR DUPLICATIVE SITE SPECIFIC ANALYSIS

The goal of BLM’s National Solar Program (the “BLM NSP”) should be to promote solar development and establish a streamlined, efficient, and cost-effective process for project-specific SEP review and approval. This goal will be achieved if the PEIS contains sufficient and detailed analysis of different utility-scale solar generation methods and their likely impacts so that such analysis does not need to be duplicated at the project specific stage. For most site specific SEP applications proposing PV, either a DNA or an EA supporting a FONSI, should be the outcome, due to the minimal impacts associated with this technology. A DNA determination means that a separate NEPA analysis is not necessary for a particular project because a previous NEPA analysis, either an EIS or EA, adequately fulfills NEPA obligations. A FONSI means that a preliminary NEPA analysis was conducted and no additional NEPA analysis is required.

In this regard, BLM and DOE should be guided by the BLM National Environmental Policy Act Handbook (“NEPA Handbook”), Chapter 5, which provides guidance on how BLM

staff can use existing environmental analysis to support environmental decision making under NEPA. First, the PEIS must be sufficiently robust and descriptive to ensure that the site specific SEP, including among other projects, “is a feature of, or essentially similar to” an alternative analyzed in the PEIS.⁴ The PEIS should distinguish its analysis by technology, site conditions, and impacts in each region and similar resource and geographic conditions to allow for possible DNA determinations.

FS believes that sufficient information exists to allow the BLM’s PEIS to fully analyze the environmental impacts of each of the solar generation methods. The geographic conditions of the study region are sufficiently known to allow the PEIS to discuss how each technology would uniquely function in each geographic region, including an analysis of the resource availability in each region. The PEIS should discuss the different impacts that various solar generation methods will have on rangeland health, competing beneficial uses of BLM land, and the species that inhabit BLM land. Some solar technologies will be more compatible with competing beneficial uses, such as grazing and vegetative growth, will use less water, and will present fewer impacts on federal lands, whether through facility maintenance or material leakage. While it is likely that not all site specific criteria can be captured in the PEIS, if the analysis is technology specific and detailed enough, it is more likely that new, site specific information will not substantially change the analysis of any site specific proposal.

Finally, the PEIS should include an analysis of the “direct, indirect, and cumulative effects that would result from implementation” of various site specific proposals sufficiently similar to the analysis that would be required for a site specific proposal.⁵ FS believes that the PEIS can “sufficiently analyz[e] site-specific effects” of different technologies such that a “DNA will be more appropriate than a subsequent, tiered NEPA document.”⁶ To the extent that a DNA is not appropriate for a specific site, the PEIS should provide sufficient technology specific analysis to support a subsequent tiered analysis supporting an EA leading to a FONSI, whenever appropriate. The purpose of tiering is to provide a streamlined process that avoids unnecessary duplication once an environmental analysis already has been performed. The NEPA Handbook indicates that “[t]iering to the programmatic EIS would allow the preparation of an EA and FONSI for the individual action, so long as the remaining effects of the individual action are not significant.”⁷

E. ENVIRONMENTAL IMPACTS OF VARIOUS SOLAR GENERATION METHODS ARE DIFFERENT AND DISTINCT, AND SHOULD BE SEPARATELY CONSIDERED

The PEIS should differentiate the environmental impacts of the commercially available utility-scale solar generation methods to streamline subsequent project-specific analyses. These include the dimensions and topography needed, energy demands, natural resource demands, and life-cycle environmental impacts.

Solar technologies have different site selection impacts based on the amount of land required to support a utility scale installation and the supporting infrastructure. PV systems can be located in almost any location and configured to fit any size.⁸ According to DOE, PV installations require less total acreage per MW than some other generation methods and require less ancillary infrastructure. Secondary infrastructure impacts of PV are also less, as PV requires no power plant apparatus, extensive roads to deliver heavy construction equipment and components, or natural gas pipeline infrastructure. PV SEPs also do not necessarily have to be fenced, although security demands may require it. PV SEPs can be adapted to local conditions to permit native vegetation to establish beneath solar modules installed on fixed poles which minimize impacts. This flexibility allows PV installations to operate consistent with the multiple use goals of BLM's Resource Management Plans. In addition, large scale PV facilities do not require water for electricity generation and only require small amounts of water to clean the PV modules.⁹

F. PROJECT REALIZATION TRIGGERS ARE IMPORTANT TOOLS TO ENSURE SOLAR PROJECTS ARE IMPLEMENTED QUICKLY

As part of the PEIS, BLM and DOE should consider the effects of “project realization triggers” (“PRT”) to ensure that an applicant to construct a SEP proceeds expeditiously with construction and operation of the SEP. The BLM's California Desert District (“CDD”) had received about 100 applications for SEPs since November 2006, the majority of which were for solar trough technology. Collectively, the proposals represent 38,000 MW of solar energy, an amount that exceeds the entire requirement of California's Renewable Portfolio Standard. However, according to the CDD, most of the proposals are merely “expressions of interest” and lack full development details.¹⁰ Only 59 of the projects have entered the interconnection queue. Only one project—the Ivanpah Solar project—has progressed to the point of submitting an Application for Certification to the California Energy Commission (“CEC”), a requirement for any new power plant construction in California. The sheer number of SEP proposals received by the CDD suggests that some developers may be engaged in mere “prospecting” and have no serious intention of proceeding with active project development in the near term. The massive footprint (up to 10,000 acres in some cases) of some of the SEP proposals further suggests that some applicants are overstating the magnitude of land needed realistically to construct a project so that they can tie-up large swaths of BLM lands.

A PRT approach would impose certain requirements and milestones on recipients of BLM SEP ROWs, which would have to be met to maintain the ROW approval to proceed with the SEP. Failure to proceed diligently with required milestones would lead to revocation of the ROW so that other project developers can submit proposals to construct a SEP on the land. PRTs will prevent solar “squatting” on BLM lands which has the potential to impede development of prime solar resources. One possible model for the PRT approach is the State of California's Water Resources Control Board regulations governing the appropriation of water

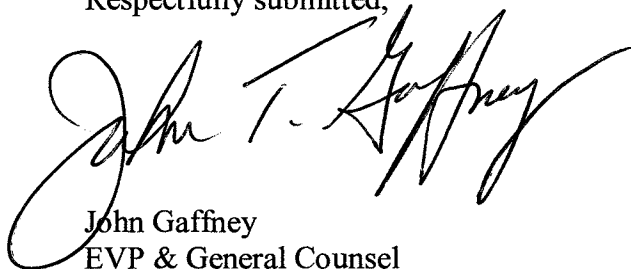
which imposes a diligence requirement on applicants (the “WRCB Regulations”).¹¹ Applicants are subject to a time period within which they must build diversion works and apply the water to full beneficial use, depending on the particular conditions considering the size of the project and the obstacles to be overcome. In addition, applicants must show that they are proceeding with construction of the project or a substantial financial commitment for construction or for land acquisition. If such due diligence is not demonstrated other interested parties can petition the Water Resources Control Board to have the authorization terminated. Under the WRCB Regulations, a lack of finances or preoccupation with other projects is not sufficient to extend the permit.

A PRT approach would serve the public interest in maximizing the development of solar energy on BLM lands, as directed by Executive Order 13212 and EP Act 2005.

CONCLUSION

For the foregoing reasons, in the interests of streamlining the NEPA process and in facilitating rapid development of solar energy projects on BLM lands, FS recommends that the PEIS establish an abbreviated review process for minimally invasive projects and screening criteria to prevent speculative applications that undermine the integrity of the solar development process. Finally, the PEIS should establish project realization triggers to prevent abuse following receipt of the ROW.

Respectfully submitted,



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Date: August 4, 2008

¹ See EP Act §211.

² The CEC uses an expedited AFC process if the project: (1) meets or exceeds all local, state, and federal air quality rules, including Best Available Control Technology requirements, and have contracts for all required air emission offsets; (2) Does not cause adverse water impacts or does not require new appropriations of water; (3) Is in full compliance with all land use requirements, including General Plans and zoning requirements; (4) Avoids significant natural resources, including rare, threatened, and

endangered species; and (5) Avoids significant adverse impacts and electricity system reliability problems. See *Energy Facility Licensing Process, Developers Guide of Practices & Procedures*, p. available at http://www.energy.ca.gov/siting/documents/2000-12-07_700-00-007.PDF

³ See Fortune Magazine, “The Southwest desert's real estate boom,” July 11, 2008, available at http://money.cnn.com/2008/07/07/technology/woody_solar.fortune/index.htm

⁴ See U.S. Bureau of Land Management, *National Environmental Policy Act Handbook*, H-1790-1 § 5.1.2 (January 2008).

⁵ *Id.*

⁶ *Id.* at § 5.2.2.

⁷ *Id.*

⁸ See *Renewable Energy Transmission Initiative (REIT) Phase 1A Final Report* (“*REIT Phase 1A Report*”), p. 1-11, May 2008, Black & Veatch Corporation, (stating that PV “is unique among renewable technologies, as it can be located almost anywhere, and scaled to virtually any size.”).

⁹ See *id.*; see also *REIT Phase 1A Report* at 5-28 (stating that PV “power systems are silent, unobtrusive, and require minimal water for washing.”)

¹⁰ U.S. Bureau of Land Management, California Desert District, *Communication Plan Renewable Energy Development In the California Desert District* (February 2008), available at http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/cdd/energy.Par.48479.File.dat/CommPlan_FINAL_May07.pdf

¹¹ See Cal. Admin. Code tit. 23, §§ 841 – 848.