



Public Lands Foundation

Impacts of Solar and Wind Energy Development and Production on the National System of Public Lands

Executive Summary

Development of large-scale renewable energy projects on the National System of Public Lands administered by the Bureau of Land Management (BLM) is relatively new. There is broad support for pursuing alternative energy sources both to reduce carbon emissions and to reduce the reliance on foreign oil, but development must be done smart from the start. This means early coordination and involvement among all interested parties, and seeking ways to minimize impacts. Public lands administered by the BLM that have less-significant natural/cultural resource values or are located close to urban areas or existing transmission line corridors are more suitable for renewable energy development than are public lands in remote areas or those with wilderness or other high natural/cultural resource values. Proposed renewable energy developments on public lands must also be viewed from a regional or even national perspective.

Background

At the Annual Meeting of the Public Lands Foundation (PLF) in September 2010, PLF invited representatives of government agencies, conservation organizations, and renewable energy industries to Reno, Nevada to discuss the impacts of solar and wind energy development and production on BLM-managed public lands. Speakers and panelists presented information on wind and solar technology, potential impacts, the permitting process and potential strategies for development.

From these presentations, several themes emerged. There was broad agreement that a need exists to develop renewable energy sources both as a way to reduce CO₂ emissions and as a way to reduce the United States' dependence on foreign oil. The importance of early and frequent participation and involvement of all interested parties was universally recognized. This included early agency notification of plans, early inventories, early involvement of regulatory agencies such as the State Historic Preservation Offices (SHPO) and state and federal wildlife agencies, and early identification of public land areas that have significant natural and cultural resources that should not be disturbed by solar and wind energy developments.

Solar energy production and water uses are, in many cases, closely connected. For example, the BLM is working to find ways of minimizing impacts by looking for opportunities to use previously disturbed sites, as well as exploring the potential to use waste water rather than groundwater in solar energy facilities. Speakers expressed concern about the impacts of the additional transmission line corridors that will be

needed to transport the energy from wind and solar sites to urban areas, particularly since many of the wind and solar sites on public lands are in remote areas, far removed from existing transmission line corridors. Speakers also suggested there is a need to look at the big picture through the use of regional assessments, programmatic Environmental Impact Statements (EISs), etc. Finally, speakers expressed concern over the adequacy of the EISs related to the newness of analyzing potential wind and solar developments.

Discussion

Oil, gas and coal will continue to be the mainstay of the United States energy portfolio for some time, even though they are producing greenhouse gases that are contributing to climate changes. Renewable energy sources—solar, wind and hydropower—are seen by some as the answer to the impacts caused by non-renewable energy development. It has been estimated that every 1,000-megawatt-hours of wind generated power would reduce CO₂ emissions by 2 to 2.5 million tons. In addition, high gasoline prices are adding to the desire to pursue alternative energy sources in order to reduce our dependence on foreign oil. These two factors are driving speculative applications and fueling fears of a land rush on public lands.

In order to deal with mounting pressures for renewable energy development, early and frequent interaction is needed among all interested parties. State and Federal permitting and regulatory agencies are often very busy and reluctant to invest much time until many of the project details are known. Industry, on the other hand, is often reluctant to invest a lot of money in project design and planning until they know what the likelihood of approval is. Many times a full year of inventory information is needed prior to even beginning the National Environmental Policy Act (NEPA) documentation process.

Siting is the key to doing renewable energy development right. Some public lands are simply not appropriate for renewable energy development, while others are much more suitable. Disturbed lands, lands with low resource values, and lands close to urban areas or close to existing transmission line corridors are more suitable for renewable energy development than lands in remote areas, lands with wilderness or other high natural resource values, or lands far from existing transmission line corridors. Siting in suitable areas will help minimize controversy, maximize public support, and lead to timely approval of developments. Projects proposed on unique and sensitive lands will surely generate controversy and result in delays.

A series of BLM maps showing “avoidance areas” of sensitive public lands would aid developers in finding suitable locations, and may cut down on agency workload by reducing the number of speculative applications. Such maps could be developed based on existing information and updated as new information becomes available. Areas not shown as “sensitive” would still have to undergo the NEPA process and there would be no guarantees for approval, but at least the known sensitive areas could be avoided.

Environmental groups want to be involved in the process. The Nevada Wilderness Project is advocating a “Smart from the Start” approach to dealing with renewable energy development in Nevada. This approach recognizes that to gain the benefits of renewable energy sources and to reduce climate change impacts, there is no way around the fact that renewable energy generation and transmission impacts will occur. This acceptance allows for an acknowledgement that there will be some land-disturbing activities that are necessary to achieve the greater-good benefits associated with

renewable energy development. This proactive approach moves the organization from saying “no” to development to being able to say “yes” to some projects. With this common sense approach, conservation groups can assist the agencies and developers in choosing the right locations that are economically viable for the developer, and at the same time, be conservation minded.

Because large scale solar and wind developments on public lands are relatively new, many of the impacts are not widely understood. Federal land managers must look for ways to better understand and minimize potential impacts. Identifying “avoidance areas” in advance would also provide for increased efficiency in conducting inventories and evaluating impacts by focusing efforts on areas with higher potential for development.

In many places, State and private lands are available to meet the need for renewable energy development. The BLM in Arizona has embarked on a Restoration Design Project, which is looking at disturbed/damaged lands as sites for renewable energy projects. Examples include former mining sites, abandoned agricultural fields, and closed sanitary landfills, most of which are on non-federal lands. The advantages include reduced impact to undisturbed public lands, placement of energy projects near where the energy loads are located, and increased use of private and state lands for generating jobs and tax revenues.

Renewable energy developments can be large-scale, and almost certainly will eventually be widespread. In addition to large-scale commercial developments, there is potential for and interest in smaller scale distributed generation projects to benefit local communities. In either case, it is critical to be smart and deliberative in developing solar and wind energy resources. Regional Assessments of the public lands best suited for renewable energy development have the potential to provide a big picture view, and improve coordination between interested parties. However, in order for regional assessments to be successful, high-level policy agreements need to be developed and adhered to at all levels. Programmatic EISs are also a potential tool in looking at broader landscapes. In order to be successful, however, they need to be done very carefully.

While many current activities would be able to continue on the National System of Public Lands in wind energy development areas, large-scale solar developments represent a long term, possibly permanent disturbance of large areas of land. Many of these developments will be located in the desert. Some developments may eventually be abandoned as technology changes. Reclamation of desert environments is an extremely long process, particularly when left to nature. Bonding for development and application of restoration techniques would provide some recourse for abandoned developments. A reclamation bond fund should be established and payments made during operation of the project to assure an adequate bond at the time of the anticipated reclamation date. Clustering developments near high demand areas would help reduce the impacts in less developed areas.

The BLM has many years of experience doing EISs. But, renewable energy development is a relatively new area. Many of the specific impacts are not as well understood as impacts encountered in historic agency programs such as livestock grazing and water resource protection. In addition, many of the employees, particularly at the field level, may be new to preparing EISs and may not have the experience to

fully understand some of the legal requirements. Clear Purpose and Need Statements and cumulative impact discussions are critical. Using experienced regional EIS teams is one way to improve the quality and consistency of EISs.

PLF Position

1. Public lands with low natural/cultural resources, or located close to urban areas or existing transmission line corridors, are more suitable for renewable energy development than are public lands in remote areas or with wilderness or other high natural/cultural resource values.
2. Regional “avoidance area” maps showing sensitive public lands that are considered unsuitable for renewable energy development should be compiled, based on existing data, current land use plan decisions and current policy.
3. Early coordination among the BLM, the proponents of renewable energy projects and other interested parties is vital.
4. Policies should be developed to encourage and even provide incentives for developing solar and wind energy projects on previously disturbed sites, and on private and state lands to avoid or minimize impacts on public lands.
5. Renewable energy developments should be clustered in areas that make sense in order to avoid large-scale projects scattered throughout the BLM-administered public lands in the West.
6. Smaller scale distributed generation projects should be considered in rural communities without access to transmission facilities.
7. A Memorandum of Understanding providing a framework and guidelines for eco-regional assessments of the public lands best suited for renewable energy developments should be developed and agreed on by the Secretary of the Interior, the Secretary of Commerce, and the Secretary of Agriculture.
8. Regional EIS teams should be developed to provide for the preparation of consistent, high quality environmental documents.
9. Reclamation bonds should be required for all renewable energy development projects on public lands.

Position Statement: 2010-20, December 3, 2010