

**Responses of Ms. Nada Culver, Esq.  
to Written Questions for the Record  
Following Committee Hearing  
“Solar Heats Up: Accelerating Widespread Deployment”  
Held on September 24, 2009**

**Submitted to  
Select Committee on Energy Independence and Global Warming  
U.S. House of Representatives  
December 31, 2009**

**1) The permitting process for solar is burdensome and restrictive. Do you support streamlining the permitting process or are you willing to forego certain solar installations altogether?**

The permitting process currently being used for solar development on public lands is the same process used for other types of development such as transmission lines, pipelines and cell towers. It is not clear that it is either burdensome or restrictive. The Wilderness Society does not believe that there is a cognizable risk of having to forego solar installations in order to ensure sufficient environmental analysis and considerations prior to permitting solar energy development.

The best way to speed construction of environmentally responsible solar projects is by guiding projects to the most appropriate locations – those with limited conflicts with other resources, values and uses. Projects in these areas will face the least amount of controversy and permitting challenges, and will have the best chance of rapid permitting and construction.

As discussed in more detail in my testimony, the BLM is currently conducting a Programmatic Environmental Impact Statement (PEIS) for Solar Energy Development and is also analyzing Solar Energy Study Areas (SESAs) for designation of Solar Energy Zones, where future applications will be focused. At the same time, the agency is devoting substantial resources to evaluating specific projects. Through these ongoing efforts, the agency is moving to ensure that proposed solar projects will be in the most suitable places and most likely to be approved.

The BLM should finalize appropriately sited SESAs as Solar Energy Zones with enough acreage to meet reasonable construction demand for the next 10 years, and restrict development to these areas. Prohibiting development in inappropriate areas outside of the zones will avoid unacceptable impacts and prevent serious conflict and controversy that could be damaging to solar energy development. Dedicating additional resources to projects that are likely to succeed, such as those in Solar Energy Zones, would also improve the time needed for permitting decisions.

Another area for improving the efficiency of the permitting process is in inter-agency coordination. Multiple permits (often a dozen or more for things like transmission interconnection, Endangered Species Act compliance, water use and stormwater management, local zoning, and dust abatement and air quality) are required for most solar projects; early and ongoing coordination among agencies and permitting bodies is critical to avoid bottlenecks. BLM, the California Energy Commission, U.S. Fish and Wildlife Service and the California Department of Fish and Game have already entered into agreements to ensure successful integration of the multiple federal and state permitting laws and regulations. (See [Renewable Energy Action Team, Milestones to Permit California Renewable Portfolio Standard Energy Projects by December, 2010](http://www.energy.ca.gov/33by2020/documents/2009-10-15_Milestones_REAT.PDF), [http://www.energy.ca.gov/33by2020/documents/2009-10-15\\_Milestones\\_REAT.PDF](http://www.energy.ca.gov/33by2020/documents/2009-10-15_Milestones_REAT.PDF))

**2) The Wilderness Society proposes a number of high demands and hurdles for project developers to overcome, specifically because of the footprint and quantity of land required. Due to the smaller footprint per unit of energy output for nuclear, is nuclear energy a more environmentally friendly source of energy to pursue?**

The expectations we have for solar energy project developers are consistent with what we would expect from any large-scale commercial energy development activity. Even with the enormous benefits in terms of avoiding air pollution and not contributing to climate change—which are not easily captured in current land planning practices by the agency—solar generation facilities entail adverse ecological impacts. Any commitment of federal resources to development must fully account for and disclose the full range of benefits, impacts, and risks, take steps to avoid or minimize impacts wherever possible, and fully mitigate unavoidable impacts. This includes evaluating the cumulative impact individual projects have in connection with other related and reasonably foreseeable development in the area. This is what federal law requires, and solar projects should not be excepted from compliance.

Solar technologies currently under consideration for deployment on the public lands do, in fact, require significant acreage. Accordingly, the land use requirements for technologies should be evaluated as part of a hard look at the appropriateness of this form of energy development through land management planning processes. In addition, the acreage used for solar technologies underscores the necessity of siting projects in suitable places to minimize conflicts with other resources.

The amount of land needed for large-scale solar technologies should also push federal agencies to evaluate the need for any given project when other, potentially superior clean energy alternatives could meet the same demand. Time and again, our nation's most advanced analytic institutions reaffirm what the environmental community has known since the 1970s: energy efficiency is the first, best option. The National Academy of Sciences noted that “the deployment of existing energy-efficiency technologies is the nearest-term and lowest-cost option for moderating our nation’s demand for energy, especially over the next decade.”<sup>1</sup> Consulting firm McKinsey & Co. concluded that “energy efficiency offers a vast, low-cost energy resource for the U.S. — but only if the nation can craft a comprehensive and innovative approach to unlock it.”<sup>2</sup>

Land use is but one of many impacts from energy development, albeit an often underappreciated one. Looking to land use requirements alone does not begin to address the full lifecycle impacts of these energy sources, which is critical to our nation’s energy policy decisions. Nuclear energy, while requiring a relatively small footprint of land in relation to the energy output from facilities, has a number of impacts that must also be accounted for, including mining and refining fuel, storing and securing waste, and the significant impacts that could result from an operational failure.

Looking to the land use requirements for energy sources is an important factor to consider in making broad national policy decisions and largely dictates project-level siting and mitigation decisions. It underscores the need to safeguard our wildlands during the transition to clean energy. However, it is not the only element to be considered in developing national energy policy.

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<sup>1</sup> See [http://image.newsletters.nas.edu/lib/feed1279776d0c/d/1/AEF\\_ExecSum.pdf](http://image.newsletters.nas.edu/lib/feed1279776d0c/d/1/AEF_ExecSum.pdf)

<sup>2</sup> See [http://www.mckinsey.com/client-service/electric-power-natural-gas/US\\_energy\\_efficiency/](http://www.mckinsey.com/client-service/electric-power-natural-gas/US_energy_efficiency/)

- 3) Your testimony notes that if land is used for solar development that you support “additions of lands and resources should equal or exceed the value of any resources or values which are lost.” Who would be the final arbiter in appraising the value of such property?**

We would expect that the applicable land management agency would make final determinations of the value for its land. In making these determinations and evaluating other required measures to compensate for the loss of resources and uses associated with solar energy development (due to the manner in which solar energy precludes other uses), it is vital that federal agencies thoroughly evaluate the affected resources, values and uses of the public lands, such as recreation, scenic vistas, wildlife migration corridors and habitat for other plants and animals.

- 4) Media reports have indicated that California Sen. Dianne Feinstein is expected to introduce a bill that will place a large part of the Mojave Desert off limits to solar and wind construction. Does your organization support such legislation? How would this affect the Department of Interior’s (DOI) plans to identify lands for solar and wind construction?**

On Monday, December 21, 2009, Senator Dianne Feinstein (D-CA) introduced legislation to preserve the spectacular heritage of the California desert by creating two new National Monuments and expanding Joshua Tree and Death Valley National Parks and the Mojave National Preserve. The bill would establish new wilderness areas in Death Valley National Park and on lands managed by the Bureau of Land Management (BLM) and the US Forest Service. Finally, the legislation would also establish a permitting process for all renewable energy projects on BLM land. The Wilderness Society supports the introduction of this important legislation.

The legislation will not adversely affect the DOI’s plans to site wind and solar projects. The BLM is currently assessing the suitability of 351,000 acres in the California desert for potential renewable energy development. This acreage is significantly more than experts estimate is needed to meet the state renewable energy goal. Also, the BLM is moving forward with key projects across the West that propose 5,300 megawatts of new wind, solar, and geothermal power. Neither the BLM study areas nor any of the projects in process are precluded by the land designations in Senator Feinstein’s proposal. Further, no designated corridor for electric transmission would be adversely affected.

- 5) Can you further detail your recommendation that “mitigation for impacts to water resources could be addressed by purchase and retirement of water rights to offset groundwater pumping by the project?” How much of a factor is that in the DOI’s consideration of land for solar construction?**

Because use of water for solar energy development will involve long-term commitments, often in places where the availability of water is constrained, it is important that the water use is offset. This approach would be similar to the concepts underlying off-site mitigation for loss of habitat by protecting additional habitat to ensure that there is no net loss. We would expect that this type of program will need to be developed in coordination with affected states.

In terms of the agency's consideration of water use, the BLM states that it will be analyzing the potential impacts to water resources for various types of solar development in the Solar PEIS. Several states, including California, have policies that strongly discourage the use of groundwater for power plant cooling. Most solar projects in California are proposing dry cooling, and some projects proposed in arid areas around the southwest are moving to dry cooling. However, there are some projects which still propose wet cooling and may face challenges and controversy surrounding their water use. We would expect the BLM to take the state's policies into account, in accordance with the agency's obligation (under the Federal Land, Policy and Management Act, 43 U.S. C. § 1712(c)) to seek consistency with state plans, programs and policies. We continue to recommend that the BLM analyze impacts to water resources thoroughly in evaluating proposed solar energy development and developing conditions for approval. Further, BLM should discourage use of wet cooling in water-constrained areas and thoroughly evaluate the availability of water and potential impacts from its use for all solar projects, including those proposing dry cooling (which still require the use of water for washing mirrors).

**6) Thus far, how much land has DOI designated as Solar Energy Study Areas (SESAs)? How long before DOI makes a determination on what will be designated as Solar Energy Zones (SEZ)? Can the process be expedited?**

The maps issued by Secretary Salazar on June 29, 2009, identified 24 SESAs encompassing 676,048 acres of BLM land within the six southwestern states of California, Nevada, Arizona, Utah, New Mexico and Colorado. The SESAs will be analyzed and incorporated into the Draft Solar PEIS, expected to be issued in summer 2010.

As noted above and in my testimony, analyzing SESAs and designating Solar Energy Zones based on both energy potential and avoiding sensitive resources, then limiting development to those zones, is the best way to achieve successful, efficient development of solar energy projects on the public lands. While dedication of additional resources to the Solar PEIS could conceivably assist the BLM, it is critical that the analysis in the PEIS be thorough in order to assure that solar energy development proceeds correctly on the public lands.

**7) If, as you testify, already disturbed lands such as abandoned mines, developed oil and gas fields, fallow agricultural lands, etc provide opportunities for solar energy development, then why don't developers look at such pieces of land to begin with?**

As I noted in my testimony, siting clean renewable energy on idle brownfields and other disturbed sites provides excellent opportunities to reduce urban blight, bring tax-generating businesses into local communities, and to ease the development pressure on greenfields and pristine areas.

Our experience has shown that many developers are simply unaware of the scope of the opportunities or the additional advantages of seeking to site facilities on cleaned-up lands. For example, many developers were not aware that the Environmental Protection Agency (EPA) and National Renewable Energy Laboratory have identified over 9,000 contaminated sites that have renewable energy potential and have produced a map-based tool displaying essential information about these sites. This barrier is being broken down as stakeholder-driven processes such as the

Western Governors Association's Western Renewable Energy Zone (WREZ) process and California's Renewable Energy Transmission Initiative (RETI) incorporate these sites into their generation resource modeling. And state-based initiatives within the federal government, such as Arizona Bureau of Land Management's Restoration Energy Design Project, continue to urge consideration of disturbed lands for renewable energy development in order to minimize siting conflicts. We are also working with the U.S. Conference of Mayors and other groups to raise awareness of the opportunities presented by using disturbed lands, and to support passage of legislation that would incentivize developers to look at such lands.

Some developers point to the potential liability risks of redeveloping these sites. However, EPA has developed information and materials for prospective clean-ups that address landowner liability concerns.<sup>3</sup> For example, EPA can provide comfort/status letters, help to broker prospective purchaser agreements or prospective lessee agreements in which liability relief is provided in exchange for payment and/or cleanup work, or can grant a windfall lien on a property. At a recent listening session convened by EPA in New Orleans, it was clear that the cost and additional time required to clean-up contaminated lands before generation facilities can be built also present unfamiliar challenges to renewable energy developers.

We are confident that by working closely with the EPA's RE-Powering America's Lands Initiative, developers that clean up contaminated sites for renewable energy development will not be saddled with inappropriate financial or liability burdens. Indeed, there are many successful cases of renewable energy already being sited on contaminated sites, including a wind farm on a former steel plant in New York and solar panels on a former landfill in Colorado, among dozens of others. Nonetheless, more needs to be done to account for the multiple additional benefits promised by moving away from business-as-usual toward opportunities to redevelop contaminated lands for renewable energy generation.

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<sup>3</sup> [http://www.epa.gov/oswercpa/faq\\_info.htm#liability](http://www.epa.gov/oswercpa/faq_info.htm#liability)