UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

April 18, 2012

Gregory Helseth
Bureau of Land Management/Las Vegas Field Office
4701 North Torrey Pines Drive
Las Vegas, NV 89130-2301

Subject: Draft Environmental Impact Statement for the Searchlight Wind Energy Project, Clark County, Nevada (CEQ #20120010)

Dear Mr. Helseth:

The U.S. Environmental Protection Agency (EPA) has reviewed the January 2012 Draft Environmental Impact Statement for the proposed Searchlight Wind Energy Project in Clark County, Nevada. Our review and comments are provided pursuant to the National Environmental Policy Act, the Council on Environmental Quality Regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

EPA supports increasing the development of renewable energy resources, as recommended in the National Energy Policy Act of 2005, in an expeditious and well planned manner. Using renewable energy resources such as wind power can help the nation meet its energy requirements while reducing greenhouse gas emissions. We encourage BLM to apply its land management and regulatory authorities in a manner that will promote a long-term sustainable balance between available energy supplies, energy demand, and protection of ecosystems and human health.

According to the subject DEIS, Searchlight Wind Energy, LLC, a subsidiary of Duke Energy, has filed an application for a right-of-way authorization with the Bureau of Land Management to construct, operate, maintain, and decommission a wind energy facility that would generate up to 200 MW of energy and be located on approximately 18,949-acres of both private and BLM-administered land. The proposed Project would include wind turbine generators, an operations and maintenance facility, transmission line, four meteorological masts, laydown areas, a temporary rock crusher and concrete batch plant, two substations, and access roads. In addition, the Western Area Power Administration has submitted a ROW application to the BLM to construct, operate and maintain a new switching station to interconnect the Searchlight Wind Energy Project (SWEP).

On December 17, 2008, EPA provided formal scoping comments for the proposed Project. We identified several issues, including potential impacts to water resources, air quality, habitat, vegetation, and wildlife, as well as the cumulative impacts to these resources.

Based on our review of the subject DEIS, we have rated the project and the document as *Environmental Concerns – Insufficient Information* (EC-2). Please see the enclosed "Summary of Rating Definitions." An "EC" signifies that EPA's review of the DEIS has identified environmental impacts that should be avoided in order to provide adequate protection for the environment. A "2" rating signifies that the DEIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment. EPA is concerned with the impacts to air quality, water resources, biological resources, and cultural resources; as well as with the scope of the cumulative impact analysis. In the enclosed detailed comments, we provide specific recommendations regarding analyses and documentation needed to assist in assessing potential significant impacts from the proposed Project.

We appreciate the opportunity to review this DEIS and are available to discuss our comments. Please send one hard copy and one CD ROM copy of the FEIS to this office at the same time it is officially filed with our Washington D.C. Office. If you have any questions, please contact me at (415) 972-3521, or Anne Ardillo, the lead reviewer for this project. Anne can be reached at (415) 947-4257 or ardillo.anne@epamail.epa.gov

Sincerely,

/s/

Kathleen Martyn Goforth, Manager
Environmental Review Office (CED-2)

Enclosures: EPA Summary of Rating Definitions
EPA Detailed Comments

US EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED SEARCHLIGHT WIND ENERGY PROJECT, CLARK COUNTY, NEVADA, APRIL 18, 2012.

Air Quality

The DEIS analyzes the proposed 96-Wind Turbine Generator Alternative and an 87-WTG Alternative, and indicates that BLM selected the 87-WTG Alternative as the Preferred Alternative, in part, because it would minimize impacts to sensitive biological resources and air quality. According to the DEIS, the 96-WTG Alternative would exceed the threshold for particulate matter emissions during construction, even after mitigation (p. ES-xiii). In contrast, under the preferred alternative, tailpipe and fugitive dust emissions generated from construction equipment would not contribute to regional exceedances of the National Ambient Air Quality Standards (NAAQS) for criteria air pollutants (p. ES-xvi). It is unclear what standard thresholds were used for particulate matter emissions.

> *Recommendation:*
> In the FEIS, explain what standard thresholds for particulate matter emissions were used. EPA recommends that the FEIS include, in tabular format for each alternative project, emission contributions toward NAAQS, and demonstrate whether or not each alternative will contribute to regional exceedances based on these standards.

The current de minimis levels for the Las Vegas area are: CO 100 tons/year; NO_x 100 tons/year; and PM_{10} 70 tons/yr. The DEIS states that the yearly construction emissions for the 87 WTG Layout would be less than the de minimis thresholds as specified under the General Conformity Rule (40 CFR 93), thus conforming to the SIPs and the regional air quality plans. This statement appears to be incorrect, since Table 4.6-5 shows that the proposed Project PM10 levels will exceed the current de minimis level in that area.

> *Recommendation:*
> Clarify, in the FEIS, for each alternative, whether PM10 levels exceed current de minimis levels in that area. EPA recommends BLM work with the local air district and EPA to complete the evaluation and to determine whether general conformity can be achieved.

Water Resources

Drainages and Ephemeral Washes
Natural washes perform a diversity of hydrologic, biochemical, and geochemical functions that directly affect the integrity and functional condition of higher-order waters downstream. Healthy ephemeral waters with characteristic plant communities control rates of sediment deposition and dissipate the energy associated with flood flows. Ephemeral washes also provide habitat for breeding, shelter, foraging, and movement of wildlife. Many plant populations are dependent on these aquatic ecosystems and adapted to their unique conditions. The potential damage that could result from disturbance of flat-bottomed washes includes alterations to the hydrological functions that natural channels provide in arid ecosystems, such as adequate capacity for flood control, energy dissipation, and sediment movement; as well as impacts to valuable habitat for desert

species. The DEIS provides minimal information on the direct and indirect impacts to these resources as a result of the proposed Project and fails to consider the up- and downstream reach and extent of these aquatic features or their importance in this desert landscape.

Recommendations:
The FEIS should characterize the functions of aquatic features, such as washes, on the proposed Project site and discuss potential mitigation for impacts to those not subject to protection as waters of the U.S.

To avoid and minimize direct and indirect impacts to desert washes (such as erosion, migration of channels, and local scour):

- Do not place turbine support structures in washes or waters;
- Commit to the use of natural washes, in their present location and natural form and including adequate natural buffers, for flood control to the maximum extent practicable.
- Demonstrate that the proposed Project layout, roads, and drainage channels have been configured to avoid ephemeral washes, including desert dry wash woodlands within the proposed Project's footprint.
- Include a functional assessment of the waters on the proposed Project site and describe the changes to the function of those waters that would result from the proposed Project.

Fencing
The DEIS does not provide information about fencing nor the effects of fencing on drainage systems. By entraining debris and sediment, fencing can interfere with natural flow patterns. Fence design should address hydrologic criteria, as well as security performance criteria.

Recommendations:
Provide more detailed information, in the FEIS, about fencing and potential effects of fencing on drainage systems. Ensure that the fencing proposed for this project will meet appropriate hydrologic performance standards.

Review the National Park Service's published article[1] on the effects of the international boundary pedestrian fence on drainage systems and infrastructure, and ensure that such issues are adequately addressed with this project.

Floodplain Hazards
Executive Order 11988 Floodplain Management requires federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains. According to the DEIS, approximately 0.32 square mile of a FEMA designated Zone A 100-year floodplain traverses the southwestern part of the proposed Project. Another designated 100-year floodplain lies immediately outside the northeastern boundary of the project area. Drainage within the proposed Project area occurs via sheet flow, and extreme

[1] National Park Service, August 2008, Effects of the International Boundary Pedestrian Fence in the Vicinity of Lukeville, Arizona, on Drainage Systems and Infrastructure, Organ Pipe Cactus National Monument, Arizona,

rain events can result in substantial damage due to flood waters across the project and localized areas (p. 4-18).

Recommendations:
Include in the FEIS an evaluation of the project to demonstrate the project's compliance with Executive Order 11988.

The FEIS should provide a detailed description of the current FEMA floodplain.

The results of consultation with FEMA, if appropriate, should be included in the FEIS.

Water Supply
The DEIS states that all water would be obtained from either the existing Searchlight Water System, which is supplied by two wells, or another existing water right in the Searchlight area and transported to the proposed Project site. No wells would be drilled or springs developed for use by the proposed Project (p. 4-15). According to the 2006 Searchlight Water Conservation Plan, water is currently supplied to residents by the aforementioned two wells (S-1 and S-2). Well S-2 was drilled in 1990 and is the primary production well. The water table at Well S-2 has declined steadily over time. The plan indicates that, should this trend continue, Well S-2 will be unable to meet projected future demands for the town of Searchlight. Well S-1 was drilled in 1983 and serves as an emergency backup well, with limited resource and pumping capacity (p. 1).

Recommendation:
The FEIS should confirm the availability of an adequate water supply for construction and operations of the proposed Project and fully evaluate the environmental impacts associated with the ultimately proposed supply of water.

Clean Water Act (CWA) Section 404 Jurisdictional Determination
According to the DEIS, a formal jurisdictional delineation was conducted and identified areas under the jurisdiction of the US Army Corps of Engineers. USACE jurisdictional non-wetland Waters of the US total 0.174 acres, with no USACE jurisdictional wetlands occurring (p. 3-16). According to Chapter 4 of the DEIS, the approved jurisdictional determination stated that the USACE would require a Section 404 permit (p. 4-19). It is our understanding that the proposed Project may qualify for a Nationwide Section 404 Permit for construction of an access road and drainage system crossing jurisdictional waters located within the boundaries of the proposed Project.

Recommendation:
The FEIS specify whether the project will require an individual section 404 permit or be covered under a nationwide permit, and should include a final determination of the extent of jurisdictional waters at the project site.

Biological Resources

EPA is concerned about potential impacts to sensitive wildlife species, since the proposed area supports resident and migratory birds, mammals, reptiles, and their supporting habitats, including desert tortoise, golden eagles, burrowing owls, desert bighorn sheep, chuckwallas, and many bat species. Long-term impacts may occur as a result of permanent loss of habitat, increased predation, habitat fragmentation, and collisions with wind turbines and vehicles.

Consultation and Coordination with U.S. Fish and Wildlife Service
The DEIS states that the applicant and Western Area Power Administration have prepared a Biological Assessment to assess SWEP impacts on desert tortoise and will submit it to the US Fish and Wildlife Service for a Biological Opinion. The BO should play an important role in informing the decision on which alternative to approve and what commitments, terms, and conditions must accompany that approval; however, it is unclear whether a BO is currently under development specific to the resources identified. It is also unclear whether USFWS has reviewed or commented on the adequacy of the surveys and monitoring of biological resources conducted to date.

Recommendations:
We urge BLM to coordinate with USFWS on the timing of the Biological Opinion and the FEIS. Ideally, the FEIS should be published after the BO has been released, and should include the BO as an appendix. If this is not possible, the FEIS should provide an update on the consultation process and explain how the BO will be factored into BLM's decision making.

Mitigation and monitoring measures that result from consultation with USFWS to protect sensitive biological resources should be included in the FEIS and, ultimately, the Record of Decision.

Discuss, in the FEIS, coordination with USFWS and their review of the surveying, monitoring, and reporting protocols completed to date. Include a commitment to consistent application of USFWS supported methods in future protection and mitigation efforts.

USFWS finalized the voluntary Land-Based Wind Energy Guidelines on March 23, 2012, which provide a structured scientific process for addressing wildlife conservation concerns at all stages of land-based wind energy development. They also promote effective communication among wind energy developers, government agencies and local conservation organizations and tribes. The Guidelines use a "tiered approach" for assessing adverse effects to species of concern and their habitats.[2].

[2] US Fish and Wildlife, Land-Based Wind Energy Guidelines, March 23, 2012, Available: http://www.fws.gov/windenergy/

Recommendation:
Coordinate with USFWS to incorporate recommendations from the recently published USFWS Land-Based Wind Guidelines into the FEIS and ROD. Given the current status of the project, Tier 3 of the Guidelines (Field Studies and Impact Prediction) may be the most appropriate section with which to start.

Bats

According to the U.S. Geological Survey, bat fatalities have been documented at nearly every wind facility in North America where adequate surveys for bats have been conducted. Thousands of bats are estimated to have been killed each year at these sites. The DEIS indicates that 13 out of 16 bat species found in SWEP area have some federal or State special status and that bat activity in the area is generally considered to be lower than at other locations in Nevada (p. 3-25). EPA is concerned that bat use at the proposed site may have been underestimated.

According to the DEIS, no topographic or habitat features that are considered bat attractants exist within or immediately adjacent to the proposed Project area, and that accounts for the low bat use. Table 3.1-2, indicates that there are 561 active and 1,862 closed mining claims within and adjacent to the proposed Project area, however, it is unclear how many represent mining operations. Abandoned mines often serve as roosting sites and maternity colonies and are prime habitat for many different types of bats. Bat surveys conducted in 2008-2009 and 2009-2010 indicated that only two mining complexes were monitored for both years. Given the large number of mining claims and the historic use of the area, it is unclear if there are additional mines that should be surveyed. The DEIS acknowledges that no correlation has been established between preconstruction surveys and post-construction fatalities (NWCC30, 2010); therefore, even though bat activity in the area may be lower than at other locations in Nevada, the proportional effects on the bat population cannot be predicted.

Recommendation:
The FEIS should clarify the number of mine sites in and adjacent to the proposed Project area. BLM should consider whether bat surveys should be conducted at additional mine sites. It not, the FEIS should explain the rationale for surveying only 2 mining complexes.

The DEIS states that detention ponds will be used to control stormwater flow offsite (p. 2-36). We are concerned that these basins may provide a water source for bats and serve as an attractant to the SWEP site.

Recommendations:
Incorporate design features for proposed detention basins (e.g. pond netting, fencing), and commit to regular inspection and maintenance, to ensure proper protection of bats, birds, and wildlife.

The FEIS should describe avoidance measures to deter bats from roosting in the additional man-made structures.

Migratory Birds

EPA is concerned that avian use at the proposed site may have been underestimated. For example, the DEIS concludes that, compared with raptor use of other wind energy facilities, raptor use at the proposed Project area is relatively low and, therefore, raptor negative interactions would be minimized and mortality is anticipated to be low (p. 4-36). However, it is unclear whether prey availability or variations in biotic factors were considered or accounted for when the avian surveys were conducted. Raptor nesting surveys conducted in 2009 and 2010 demonstrated that 23 red-tailed hawk nests were found within the project area and 10-mile buffer. The DEIS does not explain if the number of raptor nests found was of any significance, and if they were factored in determining the proposed Project area's raptor use.

The DEIS also states that the proposed Project area does not receive a large influx of breeding birds during spring and migrants pass through infrequently, suggesting that birds are not abundant and most fly below the rotor sweep area. These results suggest a low likelihood of interactions with turbines and a low overall risk to birds (p. 4-35). However, avian surveys conducted in 2007-2009 do not account for nocturnal migrants. The avian report acknowledges that, at newer generation wind energy facilities outside of California, approximately 80 percent of documented mortalities have been songbirds, of which 50 percent are often nocturnal migrants. In addition, calculations used to determine the encounter rates for the proposed Project did not account for the migrating behavior of nocturnal migrants.

> *Recommendations:*
> Elaborate on risk assessment methods and how seasonal, prey, and biotic variations and uncertainty of avian and bat numbers and use were accounted for.
>
> Conduct nocturnal avian surveys to account for avian species that migrate at night and incorporate the results in risk assessment, siting, mitigation and avoidance measures.

The DEIS indicates that the Pacific Flyway, a major migratory route for millions of birds and waterfowl, extends through the western portion of the proposed Project area (p. 3-29). While this is disclosed in the document, it is not discussed in the avian use analysis.

> *Recommendation:*
> Include a discussion of the Pacific Flyway in the avian use analysis of the proposed Project site.

The DEIS states that an Avian and Bat Protection Plan (MM BIO-5) will be developed that will include pre-construction surveys and post-construction monitoring. The ABPP will incorporate mitigation requirements and adaptive techniques to minimize impacts to avian and bat species and will span a 3-year period (p. 2-30).

> *Recommendations:*
> Include a copy of the Avian and Bat Protection Plan in the FEIS and ROD. The ABPP should describe how mortalities of red-tailed hawks and other avian species will be assessed and evaluated for compliance with the Migratory Bird Treaty Act.

Golden Eagles

In 2009, a helicopter survey for raptor nests within the project boundary and a 2-mile buffer was conducted and no active golden eagle nests were found. In 2011, another survey was conducted between a 2-mile and a 10-mile buffer of the project area. All golden eagles identified were located on cliffs at least 4 miles from the project area. In addition, two nests were located approximately 10 miles from the project site boundary (p. 3-31). The 2011 raptor nesting survey references studies conducted in Idaho and suggests that golden eagle home range size should not overlap the project boundary; however, it acknowledges that data from a more xeric environment is lacking and home range of these golden eagles cannot be estimated from the nest data alone. In February 2011, USFWS issued Draft Eagle Conservation Plan Guidance. The Eagle Conservation Plan Guidance provides the background information necessary for wind energy project proponents to identify appropriate siting, design, and operational modifications that can be incorporated into an Eagle Conservation Plan (ECP) that will assess the risk of their project(s) to eagles and how to mitigate that risk.

> *Recommendation:*
> Coordinate with USFWS on the development of an Eagle Conservation Plan and post-construction fatality monitoring. Include the ECP in the FEIS.

Cumulative Impact Assessment

Cumulative impacts are defined in the Council on Environmental Quality's (CEQ) NEPA regulations as "the impact on the environment that results from the incremental impact of the action when added to the other past, present, and reasonable foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such actions (40 CFR Part 1508.7)". The DEIS indicates that, within the project vicinity, there are ongoing mining operations (at a small scale), electric transmission lines, pipelines and a nearby airport. We understand, however, that there may be two solar projects nearby: American Capital Energy/ Searchlight Solar LLC, 1.5 miles northwest west of Searchlight (currently in the permitting process), and Nevada Solar One in Boulder City. It is unclear why these were not included in the cumulative impact assessment.

The DEIS states that the geographic boundary utilized for the assessment of cumulative impacts is defined as the SWEP area and an immediately adjacent buffer sized 25 % larger than the project area (p. 4-129). The DEIS identifies resources affected by the proposed Project and the Western transmission line, provides a brief description and cumulative impact discussion and discusses the rationale for spatial scope of the analysis (Table 4.20-1). In its cumulative impact analysis, there is no mention of the project's potential effects on the health of the area's population of threatened desert tortoise. CEQ guidance indicates[3] that choosing the appropriate scale to use for cumulative effects analyses is critical (CEQ Guidance, p. 12). According to the guidance, the geographic areas occupied by affected resources outside of the project impact zone should be identified, and in most cases, the largest of these areas will be the appropriate area for

[3] Council on Environmental Quality, "Considering Cumulative Effects Under the National Environmental Policy Act, January 1997. Available: http://ceq.hss.doe.gov/publications/cumulative_effects.html

the analysis of cumulative impacts (CEQ Guidance, p. 15). CEQ suggests that, for resident wildlife, a species' habitat or ecosystem should be used in a cumulative impact analysis.

Recommendations:
EPA recommends that the BLM expand its cumulative impact assessment to include the Searchlight and Nevada Solar One solar projects and any other past, present, or reasonably foreseeable future actions that may affect the same resources as the proposed Project.

EPA recommends that the impacts to the threatened Mojave desert tortoise be included in the cumulative impact assessment. We recommend consulting with the USFWS on an appropriate boundary and spatial scope for this analysis.

Consultation with Tribal Governments

Consultation for tribal cultural resources is required under Section 106 of the National Historic Preservation Act. Historic properties under the NHPA are properties that are included in the National Register of Historic Places or that meet the criteria for the National Register. Section 106 of the NHPA requires a federal agency, upon determining that activities under its control could affect historic properties, to consult with the appropriate State Historic Preservation Officer or Tribal Historic Preservation Officer.

Executive Order 13007, Indian Sacred Sites (May 24, 1996), requires federal land managing agencies to accommodate access to, and ceremonial use of, Indian sacred sites by Indian Religious practitioners, and to avoid adversely affecting the physical integrity, accessibility, or use of sacred sites. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (November 6, 2000), was issued in order to establish regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, and to strengthen the United States' government-to-government relationships with Indian tribes. President Obama directed all federal agencies to develop an action plan to implement this Executive Order by February 3, 2010. For more information, refer to: http://www.whitehouse.gov/the-press-office/memorandum-tribal-consultation-signed-president.

BLM initiated consultation with the Chemehuevi Indian Tribe, Colorado River Indian Tribes, Fort Mojave Indian Tribe, Hualapai Tribe, Fort Yuma-Quechan Tribe, Las Vegas Paiute Tribe, Moapa Band of Paiute, and Pahrump Paiute Tribe. Consultations are still on-going for this project (p. 5-3). According to the DEIS, Spirit Mountain is a National Historic Place and is also listed as a Traditional Cultural Property for its significance to the Yuman tribes as the spiritual birthplace of the tribes. Spirit Mountain is about 10 miles southeast of the SWEP area. According to the DEIS, BLM is consulting with the Tribes to determine potential visual impacts from the SWEP (p. 3-36).

The DEIS indicates that construction and use of the proposed WTGs and associated access roads will have various levels of direct and indirect adverse effects on two prehistoric and three

historic sites that are eligible for NRHP listing. Types of mitigation recommended for these five sites include consultations between the proponent and the agencies to determine if some project elements can be rerouted or not constructed; development of a Treatment Plan for each eligible site, describing in detail how the impacts would be mitigated; and development of a Memorandum of Agreement outlining all of the affected parties' roles and responsibilities including the Treatment Plans (p. 4-40).

Recommendations:
The FEIS should describe the process and outcome of government-to-government consultation between the BLM and each of the tribal governments within the project area. Discuss issues that were raised, including Spirit Mountain, and how those issues were addressed in relation to the proposed action and selection of a preferred alternative.

Include a copy of each Treatment Plan and MOA in the FEIS.

National Historic Trails

BLM Wind Energy Development Program Policies and Best Management Plans state that the BLM will not issue ROW authorizations for wind energy development on lands on which wind energy development is incompatible with specific resource values. Lands that will be excluded from wind energy site monitoring, testing and development include designated areas that are part of National Historic and Scenic Trails (Appendix C, p. A-2). The development of the SWEP appears to be in conflict with this policy. The DEIS states that a review of historic maps indicates that the Mojave Route of the Old Spanish National Historic Trial is within the SWEP area (p. 3-35). In addition, approximately 1.5 miles of an existing road, which is an element of the proposed Project and proposed for upgrading, crosses the northern portion of the Old Spanish National Historic Trail. Construction activities would have minimal but permanent impacts on the trail (p. 4-94).

Recommendations:
Clarify whether the SWEP will include the Old Spanish National Historic Trail area and whether it will conflict with the BLM Wind Energy Development Program Policies and BMPs.

If mitigation measures are required, include them in the FEIS.

Completion of Plans

Searchlight Wind LLC has included a suite of Applicant Proposed Measures to avoid or minimize impacts of the proposed Project on environmental resources. While the DEIS provides expanded discussion on some of them, most of the specific plans associated with the APMs have yet to be developed. In addition, mitigation measures will require development of plans such as the Cactus and Yucca Salvage Plan, Wildlife Mitigation and Monitoring Plan, Terrestrial Wildlife Plan, and Traffic Management Plan.

Recommendation:
Further discussion on all the APMS, such as identification of identifying responsible parties, relative timelines, potential impacts and expected effectiveness should be included in the FEIS. All salvage plans, mitigation and monitoring plans, wildlife plans and traffic management plan should be completed and included in the FEIS and ROD.