

APPENDIX H

**PUBLIC COMMENTS AND RESPONSES ON
DRAFT ENVIRONMENTAL IMPACT STATEMENT**

According to NEPA, federal agencies are required to identify and formally respond to all substantive public comments. A standardized content analysis process was conducted to analyze the public comments on the Draft EIS. Each comment letter and email message received was read, analyzed and considered by BLM, Reclamation, and Western to ensure that all substantive comments were identified. In performing this analysis, the BLM, Reclamation, and Western relied on the Council on Environmental Quality's regulations to determine what constituted a substantive comment.

A substantive comment does one or more of the following:

- Questions, with a reasonable basis, the accuracy of the information and/or analysis in the EIS.
- Questions, with a reasonable basis, the adequacy of the information and/or analysis in the EIS.
- Presents reasonable alternatives other than those presented in the Draft EIS that meet the purpose and need of the proposed action and addresses significant issues.
- Questions, with a reasonable basis, the merits of an alternative or alternatives.
- Causes changes in or revisions to the proposed action.
- Questions, with a reasonable basis, the adequacy of the planning process itself.

Thirty-seven individual comment letters and/or emails were submitted to the BLM during the 45-day comment period. Within the 37 comment letters, 322 comments were identified and addressed.

Comments on the Draft EIS that failed to meet the above description were considered non-substantive because they expressed personal opinions or preferences that were not relevant to the adequacy or accuracy of the Draft EIS, or represented commentary regarding resource management unrelated to the Draft EIS. These comments did not provide specific information to assist the BLM and Reclamation in selecting the Preferred Alternative, did not suggest other alternatives, and did not take issue with methods used in the Draft EIS. Of the 322 comments, 21 were determined by BLM, Reclamation, and Western to be non-substantive in nature, as they were not relevant to the EIS scope, analysis, or process as stated in CFR 1503.4(c). Table H-1 provides a list of the commenters and their affiliations (if applicable).

A systematic process was used for responding to comments to ensure all substantive comments were tracked and considered. The comments received on the Draft EIS are organized by agency (federal, state, county and local), organization or company, and individuals. Each comment within each letter is assigned a number, and each numbered comment received a response. The following pages provide copies of the coded letters and/or emails, with a side-by-side response to each coded comment.

**Table H-1 Commenters and Affiliations on the Proposed
Mohave County Wind Farm Draft EIS**

Comment Letter	Commenter	Affiliation	Comment Number(s)
Federal Agencies			
	Enrique Manzanilla, Director Communities and Ecosystem Division Anne Ardillo, Lead Reviewer	U.S. Environmental Protection Agency, Region IX	Comments 1 through 50
	Bill Werner Debra Bills	U.S. Department of Interior, U.S. Fish and Wildlife Service, Arizona Ecological Services Office	Comments 51 through 63
	William K. Dickinson, Superintendent	U.S. Department of Interior, National Park Service, Lake Mead National Recreation Area	Comments 64 through 86
State Agencies			
	Linda Taunt, Deputy Director Water Quality Division	Arizona Department of Environmental Quality	Comments 87 through 94
Organization or Company			
	Matt Clark, Southwest Representative	Defenders of Wildlife (email)	Comment 95
Joint Signatories on one letter	Ian Dowdy, AICP Conservation Outreach Associate	Arizona Wilderness Coalition	Comments 96 through 182
	Sandy Bahr, Chapter Director	Sierra Club – Grand Canyon Chapter	Comments 96 through 182
	John Shepard, Senior Adviser	Sonoran Institute	Comments 96 through 182
	Matt Clark, Southwest Representative	Defenders of Wildlife	Comments 96 through 182
	Alex Daue, Renewable Energy Associate	The Wilderness Society	Comments 96 through 182
		The Tucson Audubon Society	Comments 96 through 182
	Kevin Emmerich Laura Cunningham	Basin and Range Watch Group	Comments 183 through 234
	Daniel J. Runyan, Vice President Business Development	BP Wind Energy	Comments 235 through 239
	Lisa T. Belenky, Senior Attorney	Center for Biological Diversity	Comments 240 through 254
	Dave Garello, Vice President Sales	Johnson Wind Tower	Comment 255
	Leonard Mardian	The Mardian Ranch	Comment 256
	Richard A. Zander, Principal	Zander Environmental LLC, Representing SpiderPlow Services, Inc.	Comment 257
	Elno Roundy	Colorado Mining Company, LLC	Comment 258
Individuals			
	Anonymous		Comment 259
	Dan Bastian Debbie Bastian		Comments 260 and 261

Comment Letter	Commenter	Affiliation	Comment Number(s)
	Judy Bundorf		Comments 262 through 274
	Sandra Burton		Comments 275 through 278
	Gloria J. Davidson		Comment 279
	Bill Eddy		Comment 280
	Chantal Eddy		Comment 281
	Andy Fiora		Comment 282
	William Gann		Comment 283
	Matthew T. Grider		Comment 284
	George Heilman Carol Heilman		Comments 285 through 293
	Steen Hillestrom		Comments 294 through 297
	Dennis Jablonski		Comments 298 and 299
	Dawn Lenza		Comment 300
	Aubrey Loucks		Comments 301 through 303
	Zenon MocarSKI		Comments 304 and 305
	Jean Public		Comments 306 through 309
	Catherine Robertson		Comment 310
	Elno Roundy		Comment 311
	John Sandow		Comment 312
	Rick Sherwood		Comments 313 through 319
	Tom Treaccar		Comment 320
	Arthur J. Schlosser, Jr.		Comments 321 and 322

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LETTER



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX
75 Hawthorne Street
San Francisco, CA 94105

JUN 18 2012

Ruben Sánchez
Bureau of Land Management/Renewable Energy Coordination Office
Arizona State Office
One North Central Avenue, Suite 800
Phoenix, AZ 85004-4427

Subject: Draft Environmental Impact Statement for the Mojave County Wind Farm Project (CEQ #20120120)

Dear Mr. Sánchez:

The U.S. Environmental Protection Agency (EPA) has reviewed the April 2012 Draft Environmental Impact Statement for the proposed Mohave County Wind Farm Project, Mohave County, Arizona. 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.

Based on our review of the DEIS and the updated estimate of impacts to jurisdictional waters described below, we have rated the action alternatives and the document as *Environmental Concerns – Insufficient Information* (EC-2). Please see the enclosed “Summary of EPA Rating Definitions.” An “EC” signifies that EPA’s review of the DEIS has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the proposal or application of mitigation measures that can reduce the environmental impact. 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.

The DEIS states that it is possible that up to 74 miles (93.8 acres) of waters of the U.S. could be affected by construction of the project due to the construction of access roads, grading, and placement of foundations for turbines. We understand that BLM views this as an unlikely, worst case estimate and that, because the jurisdictional delineation of waters of the United States has

Letter Continued

not been finalized, the actual likely full extent of impacts has not been determined. As a result of our discussions with BLM and the U.S Army Corps of Engineers, it was suggested by USACE that BP Wind Energy update its estimate of potential waters impacts, based on refinements to project elements that were not available at the time of publication of the Draft EIS.

Subsequently, in a memo dated June 8, 2012 (Enclosed), BP Wind Energy described the two tier method that it employs in the development of wind projects, and indicated that the current conservative estimate of potential impacts to the waters of the U.S. would be reduced to between 14.34 acres and 14.95 acres for Alternative A, between 12.79 acres and 13.39 acres for Alternative B, and between 12.92 acres and 13.49 acres for Alternative C. In addition, with micro-siting of project structures, the impacts are expected to be further reduced. This new information is helpful and encouraging, and we appreciate BLM's responsiveness to our concerns regarding the magnitude of the potential impacts projected in the DEIS. It is unclear why this information was not included in the DEIS. We strongly recommend that, in the future, this sort of analysis be completed prior to the issuance of a DEIS, so that it can be incorporated into the document for public consideration during the comment period.

EPA is also concerned with the potential impacts to air quality, biological resources, and cultural resources. We believe that alternatives may be available that could avoid or significantly reduce the proposed project's adverse impacts. 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, and for minimizing adverse impacts.

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 the address above (mail code: CED-2) at the same time it is officially filed with our Washington D.C. Office. If you have any questions, please contact me at (415) 972-3843, or Anne Ardillo, the lead reviewer for this project. Anne can be reached at (415) 947-4257 or ardillo.anne@epamail.epa.gov

Sincerely,



Enrique Manzanilla, Director
Communities and Ecosystem Division

Enclosures: EPA Summary of Rating Definitions
EPA Detailed Comments
BP Wind Mohave County Wind Farm DEIS - Preliminary Waters Impact
Evaluation Memorandum

Cc: Bill Miller, U.S. Army Corps of Engineers
Bill Werner, US Fish and Wildlife
Angie McIntire, Arizona Game and Fish Department

Letter Continued

Charles Wood, Chairman, Chemehuevi Indian Tribe
Tom Pradetto, Environmental Director, Chemehuevi Indian Tribe
Eldred Enas, Chairman, Colorado River Indian Tribes
Guthrie Dick, Acting Environmental Director, Colorado River Indian Tribes
Timothy Williams, Chairperson, Fort Mojave Indian Tribe
Luke Johnson, Environmental Director, Fort Mojave Indian Tribe
Don Watahomigie, Chairperson, Havasupai Tribe
Tommy Siyuja Sr., Environmental Director, Havasupai Tribe
Louise Benson, Chairman, Hualapai Tribal Council
Don Bay, Environmental Director, Hualapai Tribal Council
Manuel Savala, Chairman, Kaibab Band Of Paiute
LeAnn Skrzynski, Environmental Director, Kaibab Band Of Paiute
Tonia Means, Chairperson, Las Vegas Tribal Council
Stephen Gill, Chief Financial Officer, Las Vegas Tribal Council
William Anderson, Chairman, Moapa Tribal Council
Darren Daboda, Environmental Director, Moapa Tribal Council
Lee Choe, Acting Chairman, San Juan Paiute Tribal Council
Leroy Shingoitewa, Chairman, The Hopi Tribe
Gayl Honanie, Environmental Director, The Hopi Tribe
Ernie Jones, Sr., President, Yavapai-Prescott
Amber Tyson, Environmental Director, Yavapai-Prescott
David Kwail, Chairperson, Yavapai Apache Nation
David Lewis, Environmental Specialist, Yavapai Apache Nation

Letter Continued

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

Letter Continued

US EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED MOHAVE COUNTY WIND FARM PROJECT, MOHAVE COUNTY, ARIZONA, JUNE 18, 2012.

Water Resources

Clean Water Act (CWA) Section 404 Jurisdictional Determination

The DEIS states that a preliminary jurisdictional delineation consisting of ephemeral waters was completed in December 2011, which indicated the presence of about 93.8 acres of potential jurisdictional waters within the anticipated disturbance areas within the Project Area (p. 3-24). According to the Preliminary Jurisdictional Delineation Report, the areas surveyed within the project limits only included the proposed 500-foot-wide turbine corridors, the proposed 40-foot-wide roads and the proposed locations for the supporting facilities and construction areas. The U.S. Army Corps of Engineers has not verified this jurisdictional delineation (p. 3-24).

Recommendations:

1 [EPA recommends that the FEIS: (1) include the findings of a Corps' verified
2 [jurisdictional delineation for the project site, and (2) provide a table in the EIS identifying
the acreage of jurisdictional waters for each project feature for each alternative. This table
should describe each type of water and include the direct/indirect permanent and
temporary impacts to waters.

Substantial Potential Impacts to Waters of the U.S.

The alternatives proposed in the DEIS encompass between 34,720 and 47,059 acres divided among three watersheds: Lower Detrital Wash, Middle Detrital Wash and Trail Rapids Wash - Lower Colorado River. Detrital Wash and Trail Rapids Wash convey runoff into Lake Mead which is part of the Colorado River. The majority of the proposed project would be located within the Lower Detrital Wash watershed (p. 3-23). The waters on the project site provide sediment transport and deposition downstream, energy dissipation, ground water recharge, hydrologic connectivity, geochemical connectivity and ecosystem connectivity to the Colorado River.

The DEIS states that it is possible that up to 74 miles (93.8 acres) of waters could be affected by construction of the project due to the construction of access roads, grading, and placement of foundations for turbines, but the anticipated actual disturbance would be less, once final technology and turbines locations are identified (p. 4-16). Based on the DEIS, it is not clear how much less disturbance is expected. According to updated information provided by BP Wind Energy, EPA believes that project modifications or other feasible alternatives may be available that would avoid or substantially reduce this level of impact.

Recommendations:

3 [The FEIS should incorporate sensitive design criteria into the project description, such as:
4 [reducing the fill footprint; locating all turbines out of waters; locating substations and
transmission towers out of waters and designing turbine pads to minimize erosion and
sedimentation off pads into waters. Additional avoidance and minimization measures,

Responses

1 In the Final EIS, Section 3.4.3.3 has been revised to reflect the U.S. Army Corps of Engineers' (USACE) acceptance of the Preliminary Jurisdictional Delineation, which included verification of the delineation as requested by BP Wind Energy. The text referring to the February 2012 pending approval has been removed, and replaced with the following sentence: "USACE accepted the preliminary Jurisdictional Delineation report on June 8, 2012 and has decided to 'treat all waters and wetlands that would be affected in any way by the permitted activity on the site as if they were a jurisdictional water of the U.S.'" The revision to the text does not change the analysis included in the Draft EIS.

2 As described in Sections 2.6.2, 2.6.3, and 2.6.4 (beginning on page 2-40 of the Draft EIS), "The specific turbine count and layout would be determined through micro-siting, which may include analysis of the physical constraints of the landscape, the strength of the wind resource, geotechnical testing results, and avoidance of waters of the U.S. and cultural resources, among other factors. Flexibility to place turbines within the corridors would be necessary in order to address specific engineering and environmental constraints identified through this EIS and during BLM's and Reclamation's review of construction plans prior to issuance of notices to proceed with construction."

Sections 4.4.2.1, 4.4.3.1, and 4.4.4.1 of the Draft EIS contain information that identifies the potential impacts on jurisdictional waters of the U.S. Based on revisions to the project design after the USACE approval of the preliminary jurisdictional delineation, these sections in the Final EIS were revised to reflect the potential permanent impacts to jurisdictional waters of the United States by alternative and turbine manufacturer specifications. Tables 4-4, 4-6, 4-7, and 4-8 provide an estimate of maximum amount of potential long-term impacts to jurisdictional waters by turbine type for Alternatives A, B, C, and E respectively. Additional micro-siting and site-specific engineering during final design would reduce these impacts on jurisdictional waters of the United States.

Each of the action alternatives in the Draft EIS Sections 2.6.2 through 2.6.4, respectively, would use micro-siting to determine the specific turbine count and layout. The analysis in these sections provides adequate relevant information for the BLM and Reclamation's planning and decision making in relation to the potential environmental effects.

3 In the Final EIS, Sections 2.6.2, 2.6.3, and 2.6.4 has been revised to expand on the description of micro-siting so that it includes avoidance of waters of the U.S.

Page 2-22 in Section 2.5.2.6 of the Draft EIS notes: "The locations of the proposed substations would be strategically selected in an effort to avoid environmentally and culturally sensitive areas." Electrical features, in particular, need to be sited in relatively flat locations and avoid the potential for standing water, not only for the erosion risk that could undermine foundations, but also for electrical safety.

4 Section 4.4.7 of the Final EIS has been revised to include an additional mitigation measure stating: "Avoid locating project features in jurisdictional waters, ephemeral washes, and aquatic features and/or minimize impacts through techniques such as bridging, using at-grade crossing for roads, providing adequate buffers for flood control, and minimizing the number of road crossings over waters."

5 BP Wind Energy has not submitted a 404 permit application to the USACE because they are still in the process of micro-siting, as BP Wind Energy described in a technical memo addressed to BLM dated June 8, 2012. Micro-siting decisions are being made based on consultation with USACE, and it is anticipated that the Project proponent would obtain an Individual Permit under the Clean Water Act. Based on consultation with the USACE, the single and complete project definition applies to an entire drainage, rather than to the entire project footprint. BP Wind Energy continues to be in close communication with the USACE as part of the separate but related process for 404 permitting in accordance with the Clean Water Act.

Based on BP Wind Energy's consultation with USACE after the June 8, 2012 approval of the Preliminary Jurisdictional Delineation report, the text in Section 4.4.2.1 of the Final EIS was revised to state: "If BLM and Reclamation approve the right-of-way (ROW) grant, BP Wind Energy in consultation with USACE will obtain an Individual Permit under the Clean Water Act."

Letter Continued

4 [such as bridging and the use of at-grade crossings or Arizona crossings for roads, should also be considered.

Eligibility for Nationwide Permit

According to the DEIS, the applicant intends to comply with the conditions of the USACE Nationwide Permit 51 to avoid the necessity of submitting a pre-construction notification. The DEIS also asserts that NWP 51 requires impacts of less than 0.1 acre to any single jurisdictional water (p. 4-16). This is incorrect.

5 [NWP 51 authorizes discharges of dredged or fill material into non-tidal waters for the construction, expansion or modification of land-based renewable energy production facilities (33 CFR Part 330). The discharge may not cause the loss of greater than 0.5-acre of non-tidal waters, including the loss of no more than 300 linear feet of stream bed, unless the district engineer waives the 300 linear foot limitation based on a determination the discharge would result in minimal adverse effects. Contrary to the statement made in the DEIS, a pre-construction notification to the Corps is required for the use of NWP 51. If NWP 51 is used in combination with other NWPs, such as NWP 12 and 14 to cover transmission lines and site access roads, the cumulative impacts of each separate “single and complete project” must be considered when determining whether the project qualifies for NWP authorization. Although utility lines and roads are generally considered to be separate and complete linear projects, the Corps notes in the regulations that crossings of waters have to be at separate and distant locations for each to be considered a single and complete project. Crossings that are close together would not be considered separate single and complete projects (33 CFR Part 330 Final Notice, Discussion of Comments Nationwide Permits p. 10233).

6 [The DEIS states that the materials source for access road aggregate and for mixing concrete for foundations would be from the existing Detrital Wash Materials Pit (Materials Source) which will impact the Detrital Wash. New mining activity would expand the existing mine to the north. Impacts would occur as sand and gravel is excavated from the banks and channel of Detrital Wash; deepening and widening the stream channel (p. 4-17). The extent of impacts to waters from sand and gravel mining has not been disclosed in the DEIS. Although NWP 51 includes attendant features, EPA believes sand and gravel mining within waters for use in the construction of the proposed project would not be considered an attendant feature.

7 [EPA believes that the potential impacts to waters described in the DEIS and updated analysis are more than minimal and warrant evaluation through a Corps individual permit process. If a Section 404 permit is required, EPA will review the proposed project for compliance with the Federal Guidelines for Specification of Disposal Sites for Dredged or Fill Materials (40 CFR 230), promulgated pursuant to Section 404(b)(1) of the CWA (Guidelines). Pursuant to the Guidelines, any permitted discharge into waters must be the Least Environmentally Damaging Practicable Alternative (LEDPA) available to achieve the project purpose. No discharge can be permitted if it will cause or contribute to significant degradation of waters.

8 [If impacts to aquatic resources cannot be avoided, alternatives that minimize impacts must be fully considered. With projects such as transmission lines, substations and wind turbines, there

Responses Continued

The revision to the text in the Final EIS does not change the Draft EIS analysis.

6 The Detrital Wash Materials Pit (Materials Source) described in Section 2.5.2.2 (starting on page 2-11 of the Draft EIS) is sited on public land administered by the BLM. The Materials Source has an approved Environmental Assessment and Mine Plan of Operation in compliance with National Environmental Policy Act (NEPA). Based on this comment, Section 2.5.2.2 of the Final EIS has been revised to add: “The Materials Source (Detrital Wash Materials Pit) is a previously mined and highly disturbed area encompassing approximately 320 acres of the bed, banks, and associated floodplain. Prior mining activity within the Detrital Wash Materials Pit area was permitted by BLM, Mohave County Flood Control District, and the USACE.” The Clean Water Act prohibits “the discharge of any pollutant” into “waters of the United States” without a permit. As discussed with USACE in August 2012, the discharge of dredged material is defined to exclude “incidental fallback” (i.e., scoop and haul or the gravel and sand extraction itself). Because excavated material from the Material Source would involve only “incidental fallback,” it would not be regulated by nor require a permit from the USACE.

The addition of fill or gravel in connection with construction of a temporary access road within Detrital Wash leading to the Materials Source excavation site would be regulated, but temporary impacts do not count toward the 0.5 acre of permanent and cumulative impacts under a Nationwide Permit. The addition of fill or gravel for access to the Materials Source would be considered temporary as long as the gravel is removed within the planned use period for construction and reclaimed according to BLM requirements described in Section 2.5.2.2 beginning on page 2-11 of the Draft EIS. The access and use of fill and gravel from the Materials Source would not require a USACE permit.

7 See response 5.

8 Following USACE’s approval of the Preliminary Jurisdictional Delineation on June 8, 2012, BP Wind Energy made design changes to Alternatives A, B, and C to minimize impacts to jurisdictional areas, and to specifically avoid placing permanent project features (i.e., turbine footings, access road crossings) in drainages to the extent practicable. As the Draft EIS discusses in Sections 2.6.2 through 2.6.4 and in Response 2, the specific turbine count and layout would be determined through micro-siting. Micro-siting would occur as part of the Plan of Development.

Letter Continued

8 [are opportunities to avoid and minimize direct, indirect, and cumulative impacts to potential jurisdictional waters by applying sensitive design criteria, as recommended above.

Recommendations:

The FEIS should:

- 9 [
- Provide corrected information regarding NWP 51, as discussed above.
 - Describe, in detail, the direct, indirect and temporary impacts to waters, quantify these impacts in a table, as recommended above, and discuss steps that would be taken to avoid and minimize impacts for each of the project alternatives.
 - Identify the LEDPA, if applicable, and describe how the project would comply with the 404(b)(1) Guidelines. The location of ephemeral waters and other sensitive habitats and species should be considered during development of the LEDPA.
- 10 [

Compensatory Mitigation for Losses of Aquatic Resources

The Compensatory Mitigation for Losses of Aquatic Resources Final Rule (Department of Defense [33 CFR parts 325 and 332], Environmental Protection Agency [40 CFR Part 230], April 10, 2008) established standards and criteria for the use of all types of compensatory mitigation to offset unavoidable impacts to waters of the United States authorized through issuance of permits by the Corps pursuant to section 404 of the CWA. Under Section 230.93(a)(2), compensatory mitigation may be performed using the methods of restoration, enhancement, establishment, and, in certain circumstances, preservation. If an individual permit is required by the Corps, the regulations at Section 230.93(b)(1) and 230.94(c) require a final approved mitigation plan prior to permit issuance. If the Project would be covered by a Nationwide Permit (NWP) and the Corps determines the applicant needs mitigation, the Corps can issue an NWP based on a conceptual mitigation plan; but the applicant cannot commence work without a final Corps approved plan (230.94 (c)(1)(ii)).

Recommendation:

11 [Include, in the FEIS, compensatory mitigation measures for potential impacts to waters, as appropriate, pursuant to the Compensatory Mitigation for the Loss of Aquatic Resources Final Rule, 33CFR 325 and 332, April 10, 2008.

Aquatic Resources

EPA is concerned with the scope of direct and indirect impacts to all natural washes and site hydrology, regardless of their jurisdictional status. 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.

Responses Continued

- 9** See response 2 regarding potential impacts to Jurisdictional Waters of the U.S.
- 10** See response 5 regarding compliance with 404 guidelines.
- 11** BP Wind Energy would complete the compensatory mitigation and conditions outlined in Loss of Aquatic Resources Final Rule (33 CFR 325 and 332, April 10, 2008), as part of the 404 permitting process, if required. The mitigation measures in Section 4.4.6 on page 4-22 of the Draft EIS and Appendix B, Best Management Practices, provide adequate relevant information for the BLM and Reclamation planning and decision making in relation to the potential environmental effects.

Letter Continued

12 [The DEIS provides minimal information on the direct and indirect impacts to waters as a result of the proposed project and fails to consider the up and downstream reach and extent of waters or their importance in this landscape.

Recommendations:

13 [The FEIS should characterize the functions of aquatic features, such as washes, on the proposed Project site and discuss how the project would protect and maintain those functions.

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

- 14 [• Avoid placing turbine support structures in aquatic features to the maximum extent practicable.
- 15 [• Use natural washes, in their present location and natural form and including adequate natural buffers, for flood control to the maximum extent practicable.
- 16 [• Describe how 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, to the maximum extent practicable.
- 17 [• 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.
- 18 [• Minimize the number of road crossings over waters and design necessary crossings to provide adequate flow-through during storm events to the maximum extent practicable.

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:

19 [In the FEIS, describe where permanent fencing will be used and the potential effects of fencing on drainage systems. Ensure that the fencing proposed for this project will meet appropriate hydrologic performance standards.

20 [Review the National Park Service's published article¹ 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.

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,

Responses Continued

12 See response 2 regarding potential impacts to Jurisdictional Waters of the U.S.

13 Section 3.4.3.3 on page 3-24 of the Draft EIS describes the jurisdictional waters in the Project Area. A functions and values analysis of the ephemeral washes in the Project Area is not required to meet the USACE 404 permitting requirements. The analysis in Sections 4.4.2.1, 4.4.3.1, 4.4.4.1, and 4.4.6.1 of the Final EIS describing potential effects on surface waters, including jurisdictional waters of the United States, provides adequate analysis for the BLM and Reclamation planning and decision making in relation to the potential environmental effects.

14 See response 2 regarding the placement of support structures, and response 4 regarding micro-siting to minimize potential impacts to Jurisdictional Waters of the U.S.

Following USACE's approval of the Preliminary Jurisdictional Delineation on June 8, 2012, BP Wind Energy made design changes to Alternatives A, B, and C to minimize impacts to jurisdictional areas, and to specifically avoid placing permanent project features (i.e., turbine footings, access road crossings) in drainages to the extent practicable.

15 See response 2 regarding the placement of support structures, and response 4 regarding micro-siting to minimize potential impacts to Jurisdictional Waters of the U.S.

Design of the drainage crossings would be developed as part of the design-build process if the agency Record of Decision (ROD) approves the Project and ROW grants are issued. Mitigation measures from the Final EIS, including commitments to water resource protection, would become stipulations of the ROW grant.

16 The distribution of jurisdictional areas throughout the site coupled with the nature of construction and operation of a wind energy project, makes complete avoidance of jurisdictional features infeasible.

Section 2.7 on page 2-55 of the Draft EIS discusses that "Surface disturbance locations and acreages identified in this EIS are based on a preliminary level of engineering and represent a reasonable maximum disturbance amount anticipated for construction, operation, maintenance, and decommissioning of the Project, including all ancillary facilities." See response 2 regarding the placement of support structures, and response 8 regarding design changes following USACE's approval of the Preliminary Jurisdictional Determination.

17 See response 13 regarding the functions and values analysis requirements.

18 See response 4 regarding added mitigation to avoid potential impacts to Jurisdictional Waters of the U.S.

The proposed action's potential to alter the existing drainage pattern(s) of the site also would be minimized through compliance with design specifications and Best Management Practices (BMPs) identified by the BLM, listed in Section 4.4.6 and Appendix B of the Draft EIS.

As stated in Appendix B of the Draft EIS, one of the BMPs from BLM's Programmatic EIS for Wind Energy Development that would be implemented during the Project would address drainage pattern alterations. "Existing drainage systems shall not be altered, especially in sensitive areas such as erodible soils or steep slopes. Potential soil erosion shall be controlled at culvert outlets with appropriate structures. Catch basins, roadway ditches, and culverts shall be cleaned and maintained regularly."

The Project would minimize the use of culverts or other methods to confine existing drainages because the desert wash system is dynamic and the locations of the surface washes meander as a result of heavy storm events. By returning the construction areas to the original contours, the effects on drainage patterns would be minimized and the implementation of standard BMPs and requirements in the Stormwater Pollution Prevention Plan during construction would further reduce the potential for adverse impacts to drainage patterns.

Letter Continued

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, the nearest designated 100-year floodplain is located around Detrital Wash, which is anticipated to supply materials for the Project's construction. The DEIS acknowledges that floodplain impacts would occur as sand and gravel is excavated from the banks and channel of Detrital Wash. The excavations would temporarily decrease the floodplain capacity of the wash by widening and deepening the stream channel (p. 4-17).

21 [In addition, a FEMA-designated floodplain Zone D abuts the northwestern- and the northeastern-most boundaries of the Project Area. The Zone D designation is described as an Undetermined Flood Hazard by FEMA, which means no analysis of flood hazards has been conducted (p. 3-26).

Recommendations:

The FEIS should demonstrate the project's compliance with Executive Order 11988.

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

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

Water Supply

24 [The DEIS states that water requirements for Project construction would be met using groundwater from three off-site wells at the Materials Source located along the access road from US 93. Any water demands that surpass what well 531378 supplies would be met using the other permitted industrial water supply wells at the Materials Source (p. 4-18). However, EPA understands that, currently, there is no final agreement between the applicant and the private owner of Materials Source.

25 [In addition, there is contradicting information in chapter 2 of the DEIS, which states that aggregate and water are planned to be obtained from within the Wind Farm Site (p. 2-13).

Recommendation:

The FEIS should confirm the availability of an adequate water supply for construction and operations of the proposed Project. The water supply source should be identified consistently throughout the document.

Air Quality

EPA supports incorporating mitigation strategies to minimize fugitive dust emissions, as well as emission controls for particulate matter (PM) and ozone precursors for construction-related activity. All applicable State and local requirements and the additional and/or revised measures listed below should be included in the FEIS in order to reduce impacts associated with ozone precursors, PM, and toxic emissions from construction-related activities.

Responses Continued

19 As described in pages 2-24 to 2-27 of the Draft, EIS permanent fencing would be required around the perimeter of the substations (see Section 2.5.2.6), switchyard (see Section 2.5.2.7), and Operations & Maintenance (O&M) building facility (see Section 2.5.2.9); chain-link fences would be used. Substation and switchyard locations are selected, in part, based on areas that are flat and well removed from drainage systems because of the danger associated with standing water near electrical facilities. The location of the O&M building also avoids drainage areas. Fencing details are illustrated in Figure 2-15 on page 2-34 of the Draft EIS. Fencing is not expected to interfere with hydrologic performance standards of the Clean Water Act. In addition, BP Wind Energy would need to obtain permits, such as the Arizona Pollutant Discharge Elimination System stormwater permit (under Section 402 of the Clean Water Act), which would be specific to the Project and would meet the appropriate hydrologic performance standards.

20 Few fences would be maintained in the operations and maintenance phase of the project, no length of fence would be expected to exceed 1,500 feet in length, and no fences would bisect drainage systems. This is a much different scenario than the 5.2-mile-long border fence that crossed at least seven washes, as described in the National Park Service (NPS) article.

21 The Draft EIS describes floodplains in Section 3.4.3.4, page 3-26. Based on this comment, Section 3.4.3.4 in the Final EIS has been revised to include the following text: “Under Executive Order 11988, federal agencies are to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.” Consistent with the requirements of Executive Order 11988, on-site or off-site flooding would not result from construction and operation of any alternatives considered in detail as turbines and roads would not be constructed in floodplains. In addition, Section 4.4.6 of the Final EIS regarding water resource mitigation measures has been revised to add: “Avoid, to the extent possible, the short- and long-term adverse impacts associated with the occupancy and modification of floodplains.” The revisions to the text do not change the analysis included in the Draft EIS.

The final location for the turbines, access roads, and water pipeline would be determined during micro-siting and would not be placed in floodplains.

22 See response 23 concerning Federal Emergency Management Agency (FEMA) floodplain mapping.

23 Page 3-25 (Section 3.4.3.3) of the Draft EIS includes the location of mapped floodplains on Map 3-5, Water Resources. Consultation with FEMA, although considered, has not been necessary for this project due to the Project Area elevation, relief, and the relationship to the undesignated floodplain zones. Section 2.5.2.2 under the subheading Materials Source and Initial Processing of the Final EIS has been revised to include: “Prior mining activity within the Detrital Wash Materials Pit area was permitted by BLM, Mohave County Flood Control District, and the USACE.”

24 The Materials Source is on BLM-administered land and is not privately owned. Use of the materials source and associated wells would be subject to a sales contract with BLM.

25 Chapter 2, Section 2.5.2.2 has been revised in the Final EIS to state: “Aggregate and water are planned to be obtained from the Materials Source located on the main access road to the Project Area, although the well that would be established at the O&M building may also serve as a source of water during project construction.”

Letter Continued

Recommendations:

EPA recommends that best management practices, all applicable requirements under local or State rules, and the following additional measures be implemented at all times and incorporated into the FEIS, a Construction Emissions Mitigation Plan, and the Record of Decision.

Fugitive Dust Source Controls:

- 26 [• Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- 27 [• Install wind fencing, and phase grading operations, where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.
- 28 [• When hauling material and operating non-earthmoving equipment, prevent spillage, and limit speeds to 15 miles per hour (mph) instead of 25 mph minimize the number of road crossings over waters and design necessary crossings to provide adequate flow-through during storm events.
- 29 [• Limit speed of earth-moving equipment to 10 mph.

Mobile and Stationary Source Controls:

- 30 [• Reduce use, trips, and unnecessary idling of heavy equipment.
- 30 [• Maintain and tune engines per manufacturer's specifications to perform EPA certification levels, where applicable, and to perform at verified standards applicable to retrofit technologies. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications.
- 30 [• Prohibit any tampering with engines and require continuing adherence to manufacturer's recommendations
- 31 [• If practicable, lease new, clean equipment meeting the most stringent of applicable Federal or State Standards.
- 32 [• Utilize EPA-registered particulate traps and other appropriate controls where suitable, to reduce emissions of diesel particulate matter and other pollutants at the construction site.
- 32 [• Limit vehicle speeds on unpaved roads to 15 mph.

Administrative controls:

- 33 [• Identify all commitments to reduce construction emissions and incorporate these reductions into the air quality analysis to reflect additional air quality improvements that would result from adopting specific air quality measures.
- 34 [• Identify where implementation of mitigation measures is deemed to be not implementable due to economic infeasibility and provide comparable determinations for other similar projects as justification for this decision.
- 35 [• Prepare an inventory of all equipment prior to construction, and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking. (Suitability of control devices is based on: whether there is reduced normal availability of the construction equipment due to increased downtime and/or

Responses Continued

26 Section 4.2.6 in the Draft EIS provides mitigation measures that would be employed to control fugitive dust, including application of water or appropriate palliatives during blasting, excavation, and surface clearing activities. In addition, the BMPs included in Appendix B specify that dust abatement techniques shall be used on unpaved, unvegetated surfaces to minimize airborne dust, and these techniques shall be used before and during surface clearing, excavation, or blasting activities. Also note in Appendix B, construction materials and stockpiled soils shall be covered if they are a source of fugitive dust.

27 A draft Dust Control Plan has been prepared and appended to the Plan of Development to address potential dust impacts and include mitigation measures to minimize the amount of dust. Earthwork associated with construction would be phased; turbines are installed in an assembly line fashion with temporary disturbance areas reclaimed once construction activities have been completed for the turbine string. Controlling dust by spraying with water is proposed as described in Section 2.5.2.2 under the Production Needs and Water Source subheadings on pages 2-13 and 2-14 of the Draft EIS.

28 During the construction phase, BLM proposes to monitor (or retain a third-party contractor to monitor) construction activities to verify that project stipulations are being satisfied and that BMPs and other mitigation measures are being implemented. Speed limits would be monitored and enforced. Should dust levels exceed acceptable standards with a 25 mph speed limit, adaptive management strategies would be employed, which may include lowering the speed limit, increasing use of dust palliatives, limiting construction activities during certain wind conditions, and/or other strategies deemed appropriate. The BMPs for roads listed in Appendix B, Section B.2.3 include: "Access roads shall be located to minimize stream crossings. All structures crossing streams shall be located and constructed so that they do not decrease channel stability or increase water velocity. Operators shall obtain all applicable federal and state permits."

29 See response 28 regarding dust levels and adaptive management strategies for dust control. Limiting earth moving equipment to 10 mph may not be necessary to meet acceptable safety and dust emission standards. Speed limits would be monitored and enforced.

30 An additional mitigation measure has been added to Section 4.2.7 of the Final EIS that would require construction contractors to maintain equipment to meet federal and state requirements and to conduct scheduled and unscheduled inspections to check for unnecessary idling and to confirm that equipment is in proper operation per the Health, Safety, Security and Environment (HSSE) plan and in adherence with manufacturer's recommendations.

31 While construction contractors would not be required to lease new equipment, Section 4.2.7 of the Final EIS has been revised to indicate that construction contractors would be required to maintain equipment to meet federal and state requirements.

32 See response 30 regarding added mitigation addressing equipment maintenance.

33 Air quality related mitigation measures for the Project are found in Section 4.2.6 of the Draft EIS and in Appendix B. In addition, the approach to project development, as described in Section 2.5, incorporates strategies to reduce construction emissions. These include minimizing the footprint needed for construction, using existing interior access roads for road improvements, locating collector lines within temporary roadbeds to avoid additional disturbance, controlling the number of vehicles traveling on-site during construction by restricting worker vehicle travel beyond the laydown yards, and establishing a second mobile batch plant for northern turbine corridors to minimize hauling distances.

34 Mitigation measures were developed to address the issues and concerns identified in scoping, as well as to recognize standard BMPs for construction projects. The NPS, a cooperating agency, recommended in their review of administrative drafts of the EIS that air quality and visibility monitoring be included in the mitigation measures for all the action alternatives with an air quality monitoring station within Lake Mead NRA. BLM considered this request and responded that continuous instrumental

- 35 [power output, whether there may be significant damage caused to the construction equipment engine, or whether there may be a significant risk to nearby workers or the public.)
- 36 [• Meet EPA diesel fuel requirement for off-road and on-highway (i.e., 15 ppm), and where appropriate use alternative fuels such as natural gas and electric.
- 37 [• Develop construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow.
- 38 [• Identify sensitive receptors in the project area, such as children, elderly, and infirm, and specify the means by which you will minimize impacts to these populations. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners.

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, raptors, banded Gila monster, 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.

39 [The U.S. Fish and Wildlife Service (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

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.

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. Also, it is unclear whether bats killed by turbines are local residents, migrants moving through the area, bats actively mating, or some combination of these things. At present, little is understood about the Southwestern bat species fatalities at wind farms. The DEIS indicates that up to 20 species of bats could occur in the Project area (p. 3-37). It acknowledges post-construction monitoring will be necessary to quantify the actual turbine-related impacts on bats from this Project.

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

Responses Continued

monitoring of ambient air quality and visibility requires careful planning and implementation to help ensure that it meets the monitoring objectives. However, due to the number and variability of influencing factors, such as seasonal wind patterns, topography, soil types, surface conditions, periods of rain and drought, and other emission sources, the final configuration of a monitoring program must balance the cost of sophisticated equipment at numerous locations versus the probability of capturing useful data during an emission event attributable to the construction activity. As a result, data collected from such monitoring often does not facilitate identification of the contributing sources of fugitive dust, or the allocation of each source's contribution, particularly during high wind periods. Periodic observation of dust plumes within a construction area, and implementation of focused dust control in areas experiencing high emission events, has generally been more successful than ambient monitoring in identifying emission sources and minimizing impacts on regional air quality and visibility.

Monitoring within residential areas usually results in negative outcomes. First, the appearance of, and sound from, the monitoring devices can seem strange and may even frighten local residents. Secondly, placement of monitoring devices within residential areas causes the data to be unduly influenced by nearby vehicle traffic and human activity (fires, cooking, landscaping, recreation, etc.). Third, monitoring stations placed within or near residential areas are the most likely to be damaged by vandalism.

Particulate matter (PM₁₀) from ground disturbing activities would settle near the source and it is anticipated that mitigation measures will effectively control construction-related PM₁₀. If determined that mitigation is not as effective as anticipated, adaptive management strategies would be employed to determine what more would be required, which would include the use of portable monitoring devices.

35 See response 30 regarding added mitigation addressing equipment maintenance, and response 34 regarding particulate matter.

36 The use of “on-road” (or “clear”) diesel containing no more than 15 ppm sulfur is now required throughout the United States (see 40 CFR 89.510(b)). The use of this fuel would dramatically lower diesel soot emissions.

37 The *Transportation and Traffic Plan*, which is appended to the Plan of Development and summarized in Appendix C of the Final EIS, addresses transport requirements, estimated vehicle trip counts, and estimated traffic congestion.

38 Section 3.10.3.1, starting on page 3-81 of the Draft EIS, describes the demographics of the Project Area, and Section 3.12.2 of Draft EIS describes the sensitive receptors in the vicinity of the Project from a visual perspective. The distance of sensitive receptors to the proposed turbines is listed in Appendix D, in the table titled “Range of Viewing Conditions and Photographic Details;” this table indicates that the nearest residential housing is more than a mile from the closest proposed turbine. Mitigation measures concerning air quality (including vehicle emissions and dust) are discussed in Section 4.2.6 of the Draft EIS, and include dust suppression, rehabilitation of disturbed areas, and reduction of earthmoving activity during periods of sustained winds in excess of 22 mph. Mitigation measures to reduce impacts from dust to any populations also are discussed in Appendix B, Best Management Practices. Section B.2.2 describes general practices that would be initiated, including implementing a monitoring program to ensure that environmental conditions are monitored during all phases of the Project. Section B.2.2 also requires that the required health and safety program establish a safety zone or setback for wind turbine generators from residences and occupied buildings, as well as other preventative measures to help ensure public health and safety are not compromised. Section B.2.3 describes BMPs to reduce air emissions, specifically dust, during construction.

In addition to the BMPs and other mitigation measures a safety assessment would be conducted to describe potential safety issues and the means that would be taken to mitigate them. This would include preparation of an HSSE Plan that addresses safety issues related to workers and the public.

Responses Continued

39 The U.S. Fish and Wildlife Service (USFWS) has been consulted during the NEPA process. BP Wind Energy and the BLM, Reclamation, and Western have used a tiered approach that is consistent with the USFWS guidelines published in 2012. The final Wind Energy Guidelines were not published until March 23, 2012. The applicant of the Mohave County Wind Farm Project initiated field studies to develop a Project Area baseline similar to the Tier 3 protocols, which was completed in 2009. Throughout the project planning and the development of the baseline information, BP Wind Energy voluntarily implemented the draft Wind Energy Guideline protocols where applicable. Additional surveys were conducted in 2012. BP Wind Energy is required by BLM, Reclamation, and Western to have an Eagle Conservation Plan / Bird Conservation Strategy (ECP/BCS) accepted by the USFWS prior to signing the ROD to demonstrate Bald and Golden Eagle Protection Act (BGEPA) and Migratory Bird Treaty Act (MBTA) compliance for NEPA. In addition, BP Wind Energy has voluntarily agreed to restructure the proposed action with an eagle avoidance area and committed to work with the USFWS to pursue an eagle take permit.

Letter Continued

Recommendations:

- 40 [Continue additional pre-construction biological surveys of raptors and bats prior to siting turbines. Elaborate, in the FEIS, on risk assessment methods and how seasonal, prey and biotic variations were accounted for.
- 41 [Consider utilizing unique types of radar technology , acoustic surveying and night vision to monitor for bird and bats.³
- 42 [Consider a tactical shut down option during critical hours of species activity, as appropriate, to minimize adverse impacts on such species.
- 43 [Consider blade feathering/idling (including on-the-spot and seasonal shutdowns), reducing cut-in speeds, and adjusting turbine speeds during strategic intervals to reduce take and to prevent mortality.
- 44 [Monitor developments in deterrent technology that may be used in the proposed project.

Golden Eagles

The DEIS indicates that aerial raptor nest surveys have documented potential golden eagle nests within 10 miles of the proposed Project boundary. Thirty-three likely golden eagle nests were located at 24 locations during the initial round of survey. During the second survey, all of the nests found during the initial survey were rechecked and, due to a change in the project boundary, a small area of additional habitat was searched along the far southern edge of the new 10-mile buffer. Two golden eagle nests were located in this area (p. 3-45).

The DEIS states that the proposed Project Area and surrounding region seem to be sparsely populated by golden eagles. However, it acknowledges that a single year of surveys does not provide information on breeding or population trends in the region. In 2012, Arizona Game and Fish Department is conducting follow-up surveys to better understand the breeding locations and trends of golden eagles surrounding the Project Area (p. 3-46).

- 45 [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. It is our understanding that the applicant is working with USFWS on the development of an Eagle Conservation Plan and applying for a programmatic take permit.

Recommendations:

- 46 [Include the results of the AGFD2012 surveys and additional studies in the FEIS.

41 [³ For example, see <http://www.detect-inc.com/avian.html> and http://www.upi.com/Science_News/Resource-Wars/2010/03/18/Radar-reduces-wind-farm-risk-to-birds/UPI-71441268920323/. These resources are provided as examples only and do not constitute endorsement of any particular product by EPA.

Responses Continued

40 The Draft EIS includes information on golden eagle occurrences based on ground surveys conducted from 2007 to 2008 and from 2010 to 2011, as well as aerial surveys conducted in 2011. Additional preconstruction aerial surveys to assess breeding potential and population estimates were conducted in March and April 2011, with a follow-up aerial survey conducted in early 2012. Updated survey results and projected impacts are included in the ECP. The results of the 2012 golden eagle surveys conducted by the applicant are included in Section 3.5.2.3 and the projected impacts are included in Sections 4.5.2.7, 4.5.3.6, 4.5.4.6, and 4.5.6 as updates in the Final EIS including revisions to risk assessments and mortality as necessary based on the additional data.

41 BLM appreciates suggestions for further mitigation measures and realizes that further developments to help reduce mortality of bats and birds currently exist and new methods could develop in the future. With respect to wind farms, these types of radar units have only been deployed in areas with high bird migration (i.e., Texas coast) and are not likely to be useful in the context of an average wind site. In addition, there is no evidence that passage rate is indicative of risk, rather risk appears to increase under weather conditions that push migrating birds to fly at lower elevations. No published studies or reports, to date, have evaluated the use of radar to reduce bat fatalities.

Due to the uncertainty regarding impacts, BP Wind Energy has committed to 2 years of post-construction mortality monitoring after commercial operation with additional post-construction mortality monitoring occurring at 5-year intervals. The results of this monitoring would be compared against thresholds that are tied into an adaptive management strategy designed to minimize or mitigate impacts. Monitoring and adaptive management strategies are captured in BP Wind Energy's Eagle Conservation Plan/Bird Conservation Strategy and the Bat Conservation Strategy. Further mitigation measures may be employed by the BLM, Reclamation, USFWS, and Arizona Game and Fish Department (AGFD) based on post-construction mortality monitoring and an adaptive management strategy to address actual impacts and to ensure the correct level of mitigation.

42 See response 41 regarding post-construction mortality monitoring and adaptive management to reduce take.

43 As described in Section 2.5.2.3 Wind Turbines on page 2-17 of the Draft EIS, the wind turbines are capable of feathering and at a pre-determined cut-out wind speed, the turbines shut down to limit the amount of stresses on the turbine. Also see response 41 regarding post-construction mortality monitoring. The results of the post-construction mortality monitoring will feed into an adaptive management strategy, which incorporates feathering (i.e., adjusting the blades to not catch the wind) as a method to reduce fatalities.

44 See response 41 regarding post-construction mortality monitoring and adaptive management strategies to minimize or mitigate impacts.

45 As noted in section 4.5.2.7 of the Final EIS, the ECP/BCS developed for the Project meets the requirements of the BLM Instructional Memorandum 2010-156, which provides direction for compliance under the Bald and Golden Eagle Protection Act (BGEPA). BP Wind Energy has voluntarily committed to working with USFWS and BLM, Reclamation, and Western to apply for an eagle take permit from USFWS. The eagle take permit process will follow the Eagle Conservation Plan Guidance (USFWS 2013), which provides specific in-depth guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities. Based on these requirements, the ECP/BCS must be accepted by the USFWS and Appendix I contains USFWS's letter acknowledging consistency with the draft Eagle Conservation Plan Guidelines. The ECP/BCS is summarized in Appendix C and will be appended to the POD, which will be a part of the ROD and ROW grant if the project is approved.

The Draft EIS includes information on golden eagle occurrences based on ground surveys conducted from 2007 to 2008 and from 2010 to 2011, as well as aerial surveys conducted in 2011. AGFD has conducted additional eagle surveys in 2012. Updated survey results and projected impacts are included in the draft Eagle Conservation Plan. The results of the 2012 golden eagle surveys conducted by the applicant have been added into the Final EIS and are included in Section 3.5.2.3; the projected impacts are included in Sections 4.5.2.7, 4.5.3.6, 4.5.4.6, and 4.5.6.

Letter Continued

- 47 [Include the ECP in the FEIS and ROD. Provide an update on the status of the programmatic take permit application.

Consultation with Tribal Governments

The DEIS states that BLM initiated consultation with Federally recognized tribes, as well as the Federally unrecognized Pahrump Paiute Tribe (p. 1-15), and that tribes have identified concerns about direct and indirect impacts to archaeological sites, visual effects to traditional cultural resources, and the cumulative effects of energy projects on traditional territories that are of cultural importance for a range of environmental and heritage values (p. 5-8).

Recommendations:

- 48 [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, and how those issues were addressed in relation to the proposed action and the two other alternatives.

- 49 [Include a copy of each Cultural Resource Management Plan and MOA in the FEIS.

Completion of Plans

- 50 [According to the DEIS, during final design, detailed plans would be developed to further guide site preparation, construction, and post-construction phases, including: a weed management plan; transportation and traffic plan; a Health, Safety, Security, and Environment facility security plan; spill prevention plan; reclamation plan; a compliance and monitoring plan and an updated Plan of Development.

Recommendation:

Include completed plans in the FEIS and ROD.

Responses Continued

46 See response 45 regarding the insertion of 2012 survey information.

47 See response 45 regarding the application for an eagle take permit. An eagle permit is not required before a ROD, ROW grant, or Notice to Proceed can be issued.

48 Section 3.6.4 (last paragraph on page 3-62 continuing to page 3-63) and Chapter 5.2.2.3 of the Draft EIS describe BLM consultations with tribal governments and the identified tribal concerns. Chapter 3.6.4 was augmented to add more information about concerns expressed by the consulted tribes and summarize preliminary results of an ongoing ethnohistoric study being conducted by the Hualapai Tribe, and Section 5.2.2.3 was augmented to include tribal consultations conducted since the Draft EIS was issued. Based on the comment, the second paragraph of Section 3.6.1.3 of the Final EIS was revised to read: ... Ethnographic and ethnohistoric reports were reviewed for information about traditional land uses and traditionally named places in and near the Project Area (e.g., Dobyns 1956, 1957, 1976; Euler 1958; Kroeber 1935; Manners 1974; McGuire 1983; Stone 1987). BLM arranged for the Hualapai Tribe to conduct an ethnohistoric study to further investigate traditional cultural use of the project area. (Ethnography is a branch of anthropology that investigates specific human cultures, and ethnohistory combines ethnography and history.)

49 Based on the comment, the last sentence of the second paragraph in Section 4.6.2.1 was deleted [Data recovery and monitoring procedures would be incorporated into a Memorandum of Agreement (MOA) developed to resolve adverse effects in consultation with the State Historic Preservation Office, Federal agencies, tribes, and BP Wind Energy], and in Section 4.6.7 of the Final EIS, Mitigation Measures, was revised to read:

“Section 106 consultations resulted in a determination of adverse effect for the proposed undertaking, as defined by regulations for Protection of Historic Properties (36 CFR Part 800), which implement Section 106 of the National Historic Preservation Act. In accordance with 36 CFR 800.6, BLM developed, in consultation with the State Historic Preservation Office, Federal agencies, tribes, and BP Wind Energy, a MOA to resolve potential adverse effects to historic properties (see Appendix G). The MOA stipulates that a HPTP will be developed to resolve adverse effects on historic properties listed in or eligible for the National Register. The MOA also defines review procedures and other responsibilities of the consulting parties, as well as legal and professional standards that will be followed in implementing the HPTP.

“The primary strategy of the HPTP will be to avoid direct construction impacts on historic properties, but the HPTP will include procedures for recovering and preserving artifacts and information from any archaeological sites that cannot be avoided. That component of the HPTP cannot be completed until final design is undertaken and identifies which sites, if any, cannot be avoided. Final design will not be initiated until a ROD is issued authorizing development of an action alternative. Other components of the HPTP will include conducting supplemental surveys if final designs include Project facilities outside the areas that were surveyed for cultural resources during preparation of this EIS, as well as monitoring to ensure that avoided sites are not damaged and to check for vandalism or erosional damage to sites in the Project Area. The HPTP also will include a plan for protecting any unrecorded cultural resources that might be discovered during construction, operation, or decommissioning of the Project, and evaluating and treating such discoveries. The HPTP also will define procedures for training workers to protect cultural resources during construction, operation, and decommissioning of the Project and to report any discoveries that might be made. Based on recommendations of the Hualapai Tribe, a component of the HPTP will address adverse visual effects on Wi Knyimáya (Squaw Peak) and Wi Hla'a (Senator Mountain) through development of educational programs, curriculum materials, or public outreach designed to preserve information about the traditional cultural importance of the area for the Hualapai Tribe and to reinforce the Tribe's continuing cultural connections to the area.

“The HPTP would be the major component of a Cultural Resource Management Plan (CRMP) that will be prepared in accordance with guidance of the BLM *Programmatic Environmental Impact Statement on Wind Energy*. Other components of the CRMP would include a Plan of Action to address any unanticipated discoveries of human remains, funerary objects, sacred objects, and objects of cultural patrimony in compliance with the Native American Graves Protection and Repatriation Act. Other elements of the CRMP could include measures to ensure continued access for traditional religious purposes or resource collection by tribes, and may include other measures for mitigating impacts on elements of the cultural environment that are not historic properties.”

Responses Continued

50 The Final EIS summarizes a number of plans that are appended to the Plan of Development (see Appendix C); the plans appended to the Plan of Development are available for review along with the Final EIS on the BLM's website. The Plan of Development includes the Integrated Reclamation Plan, which incorporates habitat restoration, integrated weed management, and native plant salvage. The plans appended to the Plan of Development also include the HSSE plan (including emergency response and waste management), Transportation and Traffic Management Plan, and Environmental Compliance and Construction Monitoring Plan. The supplemental plans have been reviewed by appropriate agencies with jurisdictional or technical expertise or regulatory responsibilities, including but not limited to BLM, Reclamation, Western, NPS, AGFD, USFWS, and Mohave County.

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713-354-2100

MEMORANDUM

To: Jackie Neckels, BLM Arizona Environmental Coordinator
Eddie Arreola, BLM Arizona RECO Supervisor

From: Kim Wells, BP Wind Energy, Western Environmental Manager

Cc: Dan Runyan, BP Wind Energy, Vice President of West Development,
Beth Defend, URS, Third Party Contractor Project Manager
Mike Rigo, BP Wind Energy, Project Counsel
Debbie Quick, Morgan & Lewis LLP, Outside Counsel

Date: June 8, 2012

Subject: BP Wind Mohave County Wind Farm DEIS - Preliminary Waters Impact
Evaluation

I. Background

The purpose of this memorandum (memo) is to address a request for a preliminary federal jurisdictional waters impact evaluation from the Environmental Protection Agency (EPA) to the Bureau of Land Management (BLM) as the lead federal agency responsible for compliance with the National Environmental Policy Act (NEPA) for the Mohave County Wind Farm Project (the Project) for which BP Wind Energy has requested right-of-way authorizations from BLM and the Bureau of Reclamation. BP Wind Energy understands the request was suggested by the U.S. Army Corps of Engineers (USACE) to inform the current NEPA process where the Draft Environmental Impact Statement (DEIS) was released for a public comment period on April 27, 2012 that closes on June 11, 2012.

The source of the data for this evaluation is an ongoing permitting exercise with the USACE related to Section 401/404 of the Clean Water Act that is running concurrent with but separate from the Project rights-of-way application processing and NEPA cycle resulting in the DEIS being out for public comment. The Clean Water Act analysis and permitting effort began before the EPA request, is currently being refined, and is expected to continue after the public comment period closes as is typical of a permitting process in association with projects with long lead approval times and multiple permits. As such, this evaluation should be viewed as a current snapshot in time with the best information available when the request from EPA was made.

Letter Continued

Typically, wind projects proceed with a two-tiered approach to Clean Water Act analysis and permitting whereby the first step involves a conservative mapping effort of all potentially jurisdictional waters or wetlands within all areas of potential impact. All areas of potential impact for this project were defined as 500-foot wide turbine corridors plus other project features outside of those turbine corridors with impacts including access roads, staging or laydown yards, operations & maintenance buildings, substations, and switchyards. By its very nature, this initial conservative mapping effort is overly inclusive regarding both the waters that will be impacted and the amount and areas of impact to individual waters. The "turbine corridor" approach is intended to map a much larger area of potentially jurisdictional waters or wetlands compared to what will actually be impacted.

The rationale for this approach is to provide flexibility during the second tier called micro siting, where individual project components, including roads and turbine foundations within a turbine corridor, are shifted slightly to avoid and minimize impacts to sensitive features, like potentially jurisdictional waters or wetlands. Flexibility is critical due to the long lead times associated with federal permitting and NEPA cycles, which in this project began when the application was filed in 2006 (six years ago), because the rate of technology change associated with turbines is high. By preserving flexibility through the turbine corridor approach, the maximum potential extent of environmental impacts can be identified in the NEPA process in order to meet disclosure requires, while achieving avoidance and minimization of impacts to federal jurisdictional waters as well as optimizing turbine selection for project economics and the wind regime through the micro-siting process.

BP Wind Energy routinely practices this two-tiered approach to siting on all of our wind farms and is generally successful at avoiding and minimizing impacts to potentially jurisdictional waters or wetlands to facilitate eligibility under one or more Nationwide Permits, as opposed to needing an individual permit. Our goal at BP Wind energy is to minimize and avoid impacts consistent with current USACE guidance for this project, which is what the ongoing effort is designed to address. In the event our ongoing evaluation determines we are unable to avoid and minimize impacts to reduce impacts below 0.5 acres of permanent and cumulative impacts per single and complete drainage, we would make the decision to pursue an individual permit.

II. Approach

For purposes of this evaluation, BP Wind Energy with the assistance of GIS staff from URS (the third-party NEPA contractor working at the direction of BLM), prepared a rough conservative estimate of potential waters impacts based on refinements to project elements not yet available at the time of publication of the Draft EIS . This approach remains conservative, meaning estimated impacts are still larger than actual impacts due to the state of information available at the present time. Our assumptions and their degree of conservatism follow below:

- Impacts within 500-foot turbine corridors were assumed to result from new road impacts and turbine foundations or pads.
 - *Conservatism:* Existing roads have not been precisely mapped and were assumed to be only 16 feet in width but are known to be larger in some areas, meaning that fewer new roads will be ultimately needed than assumed for this analysis, so the estimate is expected to be larger than actual impacts.

Letter Continued

- Size assumptions for all projects features follow Table 2-2 of the DEIS with the exception of the switchyard that will be constructed by the Western Area Power Administration (Western) where recent specifications indicate an footprint of 17 acres instead of 37 acres is appropriate for a 500 kV interconnection.
 - *Conservatism:* Size assumptions for both substations and switchyards are based on the maximum size that could be needed, but engineering design by BP Wind Energy (for substations) and Western (for switchyards) is not final. In our experience on our existing wind facilities, we frequently need less of a footprint, so these estimates are expected to be larger than actual impacts.
- Roads were assumed to be 40 feet wide in total from shoulder to shoulder.
 - *Conservatism:* The total road width will not all be permanent impacts. BP Wind Energy will likely only need permanent roads 24 feet in width, so that impacts outside the 24-foot width will likely all be temporary, thus this estimate is expected to be larger than actual impacts.
- Existing roads (shown in pink on DEIS graphics) were assumed to be 16 feet wide in total shoulder to shoulder and are subtracted from project impact calculations due to existing disturbance.
 - *Conservatism:* Precise existing road dimensions are known to be larger in some places and have not yet been mapped, so that the amount of existing roads subtracted from impact calculations is expected to be larger than currently assumed.
- A 500 kV substation and switchyard option would have a larger footprint than a 345 kV substation and switchyard. The current rough impact calculations assume construction of 500 kV substation and switchyard.
 - *Conservatism:* It is not known yet which pair, either the 500 kV or 345 kV substation/switchyard may be built. If the 345 kV pair is constructed, the current rough estimate is expected to be 5 to 7 acres larger than actual impacts. If the 500 kV pair is constructed, this estimate is expected to be between 2 and 4 acres larger than actual impacts.
- The entire mapped jurisdictional water within the Materials Source access area for road gravel was assumed to be impacted.
 - *Conservatism:* The Materials Source is a previously impacted extraction site for road gravel that had prior USACE and Mohave County Flood permits in the 1990s. Due to the prior disturbance in existing conditions, this estimate is expected to be larger than actual impacts.
- All road crossings were assumed to represent permanent impacts.
 - *Conservatism:* In our experience, road impacts are rarely all permanent impacts, as low water crossings and other temporary impacts designs are frequently used on the majority of the roads where stabilization or significant widening is not required for heavy equipment access; therefore, this estimate is also expected to be larger than actual impacts.

III. Results and Conclusion

Letter Continued

Table 1 below illustrates the range of impacts to potentially jurisdictional waters by Alternative (for A, B, and C) and by turbine specification layout.

Table 1. Total potentially jurisdictional waters within the Mohave County Wind Farm Project by Alternative and turbine manufacturer specification options as described in the DEIS. Alternative A is what is proposed by BP Wind Energy and Alternatives B or C are being considered to reduce potential environmental and social impacts under NEPA.

DEIS Alternative	77 to 82.5 -meter Diameter Rotor Turbine	90 to 101-meter Diameter Rotor Turbine	112 to 119-meter Diameter Rotor Turbine
A (283 turbines max)	14.95	14.76	14.34
B (208 turbines max)	13.39	13.25	12.79
C (208 turbines max)	13.49	13.38	12.92

The Preliminary Jurisdictional Determination prepared by ECOPlan and submitted to the USACE on January 24, 2012, estimated 93.8 acres of potentially jurisdictional waters present within the project area using very conservative assumptions based on the "turbine corridor" method as described above. The results of the current exercise that also use conservative methods as outlined above in Section II reduce those potential impacts to between 14.34 acres and 14.95 acres for Alternative A, between 12.79 acres and 13.39 acres for Alternative B, and between 12.92 acres and 13.49 acres for Alternative C. BP Wind Energy is currently in tier two of the micro siting process, additional avoidance and minimization efforts in conjunction with Western are ongoing to further reduce any potential impacts.



United States Department of the Interior

U.S. Fish and Wildlife Service

Arizona Ecological Services Office

2321 West Royal Palm Road, Suite 103

Phoenix, Arizona 85021-4951

Telephone: (602) 242-0210 Fax: (602) 242-2513



In reply refer to:

AESO/SE

22410-2011-CPA-0095

June 11, 2012

Memorandum

To: Field Manager, Bureau of Land Management, Kingman, Arizona

From: Field Supervisor

Subject: Comments-Draft Environmental Impact Statement, Mohave County Wind Farm Project, Dated April 2012

This memorandum documents our review of the "Draft Environmental Impact Statement, Mohave County Wind Farm Project," dated April 2012, developed by the Bureau of Land Management (BLM) in accordance with the National Environmental Policy Act of 1969 (NEPA, 42 U.S.C. §4321 *et seq.*). The project includes a right-of-way, in Mohave County, Arizona, to construct, operate, maintain, and decommission a 500-megawatt (MW) wind farm, including turbine generators and associated infrastructure, on approximately 38,099 acres of land managed by the BLM and approximately 8,960 acres of land managed by the Bureau of Reclamation (Reclamation). The project is proposed to consist of up to 283 turbines, access roads, and ancillary facilities including collector lines, a substation, and an interconnecting switchyard to tie into one of two existing transmission lines operated by Western Area Power Administration (Western). [We note that mitigation for biological resources is identified in Table ES-5 and will include an Eagle Conservation Plan, a bat protection plan, an avian protection plan, and that design of above ground power lines will follow guidelines of the Avian Powerline Interaction Committee. We recommend continuing coordination with the FWS, including the Region 2 Migratory Birds Office, as the referenced plans are developed.] Noted below are areas where clarifications may be needed.

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Comments by Page

52

Page 3-36, 3.5.2.1 In the 7th line, please clarify the sentence "Wildlife included some effort on the current footprint and some off-site to the east."

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Page 3-43, 3.5.2.2 Under "Wild Burros," check "Kingman District" for accuracy. Historically the name was Kingman Resource Area of the Phoenix District.

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Page 3-45, 3.5.2.3 Under "Flight Paths," we recommend review of the text for update based on eagle survey data from 2012 surveys.

Responses Continued

51 Coordination with U.S. Fish and Wildlife Service (USFWS) in the development of the Eagle Conservation Plan and Bird Conservation Strategy will continue. Table 1 in the Eagle Conservation Plan and Bird Conservation Strategy includes the chronology of resource agency contact associated with the development of that document, including a summary of the coordination date, purpose (discussion topics), and attendees. The contact has included at least 10 conference calls, two in-person meetings, sharing of draft plans for review, and e-mail communication. BP Wind Energy, BLM, and Arizona Game and Fish Department (AGFD) also have continued coordination during the development of the Draft and Final EIS.

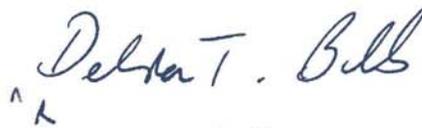
52 The sentence was revised in the Final EIS in Section 3.5.2.1 to state the following: “These wildlife surveys included some effort on the current footprint and some off-site to the east. As a result of significant changes to the proposed Project boundary, a second round of baseline wildlife studies was conducted between September 2010 and July 2011 within the current footprints of the Project action alternatives.” The revised text does not result in a change to the impact analysis in the Draft EIS.

53 The sentence was revised in the Final EIS in Section 3.5.2.2 to Kingman Field Office, (formerly called the Kingman Resource Area). The revision does not result in a change to the impact analysis in the Draft EIS.

54 Updated flight path information and nest survey results have been added to Section 3.5.2.3 of the Final EIS, using data provided in the 2012 surveys. These data were not available at the time the Draft EIS was published. The 2012 surveys found one active golden eagle nest within the Project Area. The location of this nest increases the potential for disturbance to nesting eagles under Alternative A. Based on these findings, Alternatives B, C, and E would minimize the disturbance impact to nesting eagles relative to Alternative A.

- 55 [Page 3-46, 3.5.2.3 In the fourth paragraph, we recommend review of the text for update based on eagle survey data from 2012 surveys.
- 56 [Page 4-44, 4.5.2.7 Under “Federally Listed Wildlife” please add a citation for the sentence “Furthermore, the USFWS determined that no animal species federally listed as threatened or endangered or designated critical habitat would be affected by the Project.”
- 57 [Page 4-48, 4.5.2.7 Under “Golden Eagles,” we recommend review of the text for update based on eagle survey data from 2012 surveys.
- 58 [Page 4-49, 4.5.2.7 In the seventh paragraph, the terms “Avian Conservation Strategy” and “Bat Conservation Strategy” are used. In Table ES-5 the terms “avian protection plan” and “bat protection plan” are used. We recommend clarification of the text or an explanation of the difference between a conservation strategy and a protection plan.
- 59 [Page 4-61, 4.5.6 In the first paragraph, the sentence states “Recommended biological mitigation measures follow.” Please clarify whether these measures are recommended to be included but may not be or if these measures are recommended elsewhere. We recommend review and revision of the language so it is clear. Also, please clarify how Appendix B, “BLM Wind Energy Development Program Policies and Best Management Practices (BMPs)” fits in the context of this section.
- 60 [Page 4-183, 4.16.4.1 In the third paragraph, please add “Nielson et al. 2010” to the “References” section.
- 61 [Page 6-4 Verify in the citation for “Baerwald”⁶² “reduce pat fatalities” should be reduce bat
62 [fatalities.
- 63 [Page 6-21 Under “U.S. Fish and Wildlife Service. 1998.” the form of the citation should be reviewed. While the document may be cited in Thompson, 2011, it is a Fish and Wildlife Service document and should be cited as such.

Thank you for the opportunity to provide comments on this draft environmental impact statement. Should you require further assistance or if you have any questions, please contact Bill Werner (x217) or Debra Bills (x239).



cc: Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ
Assistant Field Supervisor, Fish and Wildlife Service, Flagstaff, AZ
(Attn: Brian Wooldridge)

Responses Continued

55 See response 54 regarding 2012 survey data for golden eagle nests.

56 The citation (Project correspondence with Werner, 2011) was added to the sentence in Section 4.5.2.7 of the Final EIS, and to Chapter 6 – References. The revision to the text does not change the analysis included in the Draft EIS.

57 The results of the 2012 golden eagle surveys conducted by the applicant are included in Section 3.5.2.3 and the projected impacts are included in Sections 4.5.2.7, 4.5.3.6, 4.5.4.6, and 4.5.6 as updates in the Final EIS. The additional data do not affect the conclusions of the impact analysis described in the Draft EIS.

58 All terms in the Final EIS regarding these plans were revised as Bird Conservation Strategy and Bat Conservation Strategy. The revision to the text does not change the analysis included in the Draft EIS.

59 The sentence in Section 4.5.6 of the Draft EIS incorrectly stated “Recommended mitigation measures.” This sentence has been revised in Section 4.5.7 of the Final EIS to: “Biological mitigation measures follow.” BP Wind Energy would develop a number of plans and would follow best management practices and BLM regulations to mitigate impacts on biological resources. A noxious weed and invasive plants species management plan has been developed as part of the Integrated Reclamation Plan. This revision does not result in a change to the comparison of impacts between alternatives in the Draft EIS. The mitigation measures are described and would either avoid or reduce impacts that prevent or minimize population-level impacts. Appendix C of this Final EIS includes a summary of the draft Integrated Reclamation Plan and a complete draft of the Integrated Reclamation Plan is available on BLM’s website as an attachment to the Plan of Development. The Plan of Development will be part of the Record of Decision (ROD) package and right-of-way (ROW) grant if the project is approved.

60 In the Final EIS, Section 4.15.4.1 has been revised to cite Nielson et al. 2010 and Chapter 6 has been revised to include this reference. Nielson et al. 2010 documents the 2009 golden eagles survey results in the Western United States.

The reference information added to Chapter 6 follows:

Nielson, R.M., T. Rintz, M.B. Stahl, R.E. Good, L.L. McDonald, and T.L. McDonald. 2010. Results of the 2009 Survey of Golden Eagles (*Aquila chrysaetos*) in the Western United States. Contract #201818C027. Prepared for the U.S. Fish and Wildlife Service (USFWS), A., Virginia. Prepared by Western EcoSystems Technology, Inc. (WEST), Cheyenne, Wyoming, ed. January 7, 2010.

61 The citations for Baerwald presented in Chapter 6 were verified. In the Final EIS, a typographical error of “pat” to “bat” was corrected in the title of the following reference:

Baerwald, E.F., J. Edworthy, M. Holder, and R.M. Barclay. 2009. A large-scale mitigation experiment to reduce bat fatalities at wind energy facilities. *Journal of Wildlife Management*, 73:1077-1081.

62 See response 61 regarding the Baerwald citations.

63 In the Final EIS, the citation on pages 4-48 and 4-49 was corrected to change “Thompson 2011” to “USFWS 1998.” Thompson prepared a raptor nest survey for the proposed Mohave County wind resource area for BP Wind Energy North America in 2011. Within that study, Thompson cited the USFWS’ 1998 “Migration of Birds, Circular 16.” The reference information in Chapter 6 has been changed to clarify that USFWS 1998 was cited in Thompson, J. 2011.



United States Department of the Interior

NATIONAL PARK SERVICE
LAKE MEAD NATIONAL RECREATION AREA
601 Nevada Highway
BOULDER CITY, NEVADA 89005-2426

IN REPLY REFER TO:

D18
xL3031

June 11, 2012

Jackie Neckels, Renewable Energy Specialist
Bureau of Land Management
Renewable Energy Coordination Office
One North Central Avenue, Suite 800
Phoenix, AZ 85004-4427

RE: Mohave County Wind Farm Project Draft Environmental Impact Statement

Dear Ms. Neckels:

The National Park Service has reviewed the Subject Draft Environmental Impact Statement and offers the following comments:

General Comments

64 [The National Park Service (NPS) is a cooperating agency in the development of this DEIS, and as such, has provided comments on administrative drafts of this document. The NPS supports the development of renewable energy in the southwestern United States. It should be understood that the NPS comments are offered to refine alternatives to make the proposed project fit in the sensitive environmental setting of the Mojave Desert. [Because of the unique purposes for which Congress created Lake Mead National Recreation Area (LMNRA) on behalf of the public, we maintain that the proposal should be sensitive to the values of Lake Mead and the associated visitor experience.

It is unfortunate that a reduced footprint alternative was not evaluated as it would have truly provided a range of alternatives to consider. We will provide more comments on the reduced footprint (300 MW option) in our specific comments.

At the heart of our comments is the protection of the visual setting in the northern portion of the White Hills of Mohave County, Arizona. We have gone to great lengths to share our concerns for the outstanding visual setting associated with volcanism of Senator Mountain and Squaw Peak along with the colorful outcrops and sedimentary formations located along the boundary of LMNRA. The view is remarkable. There are few areas where you have vistas like those along the proposed project area where you can see for over 50 miles with no evidence of man and man's activities. Further, the geologic features of Senator Mountains, Squaw Peak and adjacent

Responses Continued

64 Scoping comments from Lake Mead National Recreation Area (NRA) contributed significantly to the development of Alternatives B, and C., and The National Park Service's (NPS's) concerns regarding visual and audio impacts led to the development of Alternative E (the Agencies' Preferred Alternative). Alternatives B, C, and E reduce the wind farm footprint to mitigate potential noise and visual impacts. The values of Lake Mead and the visitor experience at the national recreation area are considered in the Draft EIS; examples of sections in the Draft EIS that address the recreational experience include Sections 4.8.2.1, 4.8.2.3, 4.10.2.1, 4.12.1.4, 4.12.2.5, 4.12.3.5, 4.16.7, and 4.16.10.1.

Letter Continued

volcanic formations present a dramatic visual setting that attracts the focus of travelers along U.S. Highway 93 which runs along the west side of the project.

The Temple Bar Access Road provides access to the Temple Bar area of LMNRA. We view this road as a scenic drive entering the park. The first 10 miles of this road are on BLM administered lands with the remaining 20 miles are within LMNRA. The sole purpose of this road is to provide access to LMNRA and there were approximately 80,000 visitors who used that road in 2010. Some of the critical Key Observation Points are located along this road, one four miles into the road and the second at the park entrance station located at approximately mile marker 10. We have visited these KOPs many times with various representatives to share our concern for the outstanding views afforded these locations. The construction of a wind energy project in this area with its 400-foot tall turbines, parallel 50-foot wide roads, transmission lines and substations will forever change this setting

65

In our previous comments, we are on record supporting Alternative B and proposing the relocation or removal of turbines in Alternative B that are located within the lands administered by the Bureau of Reclamation (Township 29N; Range 20West; Sections 3, 4, 5, 8, 9, 16, 17, 20, 21, 28, 29, 32 and 33). The justification for the removal of these turbines is to protect the integrity of the view for those visitors to LMNRA that are entering or exiting the park on the Temple Bar Access Road. We have previously submitted comments on the significance of the view along the park access road and specifically on the key observation points located along that road. The view is dominated by the rugged landscape with little influence of man and man's activities. The view is remarkable and should be provided the level of protection that will prevent the construction of wind turbines on the west-facing bajada.

66

We have also provided comments on our desire to protect the Temple Bar Backroad corridor from the full impact of the wind farm project. Previously, we requested a one-mile buffer be placed on that road within the project area to protect the recreational experience for those who want to explore the Temple Bar backcountry. We understand the impact of a one-mile buffer and suggest consideration of a smaller buffer to protect the experience. How much of a separation between the road and turbines can be provided? In addition, we recommend the relocation of turbines in Township 29 South; Range 20 West; Section 1 and Township 29 South; Range 19 West, Section 6 to a potential site within the second string of turbines north of the existing powerline corridor. This corridor appears to have space within Township 28 North; Range 20 West, Sections 4, 9, and 10 near the Laydown/Staging Area.

67

To offset this protection, the NPS is proposing to adapt Alternative B with the addition of the southern row of turbines in Township 28 North, Range 20West; Sections 27, 28, 29 and 30. The addition of this row of turbines will offset the removal of the turbines from the sections identified above. It will allow the field to operate at the 425 MW required to meet the WAPA permitting standards. Of course, BP Wind Energy may have other solutions to address these concerns.

68

In the mitigation section there are a number of additional plans required. There may be additional planning identified as we move through the compliance process. Prior to final approval, the NPS requests the opportunity to review and comment on the Dust Management Plan, Stormwater Pollution Prevention Plan, Spill Prevention Control and Countermeasure Plan,

Responses Continued

65 Alternative E, the Agencies' Preferred Alternative identified in this Final EIS, was developed to address public concerns, including NPS concerns regarding visual and noise impacts. Alternative E excludes turbines in Township 29 North, Range 20 West, Sections 3, 4, 5, 8, 9, 16, 17, 20, and 21. If the nameplate generation capacity can be achieved without constructing turbines in Sections 28 and 29, these two sections also would be excluded from the construction area. Sections 32 and 33 of the same township and range are the farthest from Lake Mead NRA and would be available for turbine construction because this land was considered less sensitive to viewers than the land in the southernmost turbine corridor.

66 BLM understands the desire to buffer the Temple Bar Backroad corridor from turbines. Section 3.9.2 on page 3-77 of the Draft EIS reports that while traffic count data were not collected for the Temple Bar Back Road, NPS staff suggested that the data would be comparable to AR136, Gregg's Hideout Road. Based on traffic count data for Gregg's Hideout Road, NPS estimates that in 2010 approximately 2,500 people traveled on this road and that visitor use on Temple Bar Back Road would be comparable.

Section 1.3.1.3 on pages 1-8 to 1-9 of the Draft EIS explains that the nameplate capacity is 425 MW for an interconnection with the Liberty-Mead 345-kV transmission line and 500 MW for an interconnection with the Mead-Phoenix 500-kV line. In the development of Alternatives B and C, which reduce the project footprint and the number of turbines that could be installed, the priority was to increase the distance between turbines and Lake Mead NRA land and privately owned land. To provide a buffer along the Temple Bar Back Road would further reduce the ability to satisfy the nameplate capacity requirements and/or require the use of larger, higher generating capacity turbines. Considering the relatively few visitors using the Temple Bar Back Road in comparison to the estimated 7.3 million annual visitors to Lake Mead NRA, no buffer along the Temple Bar Back Road is proposed.

67 In selecting the preferred alternative, BLM and Reclamation considered all agency and public input. Several owners of private property also voiced concern for the visual effects of turbines near their property. There are existing residences in Township 27 North, Range 20 West, Section 9 that are about 2 miles from the turbine corridor in Township 28 North, Range 20 West, Sections 27-30, which is proposed with all action alternatives. The NPS recommendation to use this corridor to offset removal of turbines in the northernmost corridors would not be feasible due to the minimum spacing needed between turbines. Including an additional turbine corridor in Sections 27-30 is not possible due to wake effects and manufacturer's requirements for turbine separation.

Redistributing turbines into corridors that appear to have available space, based on the maps included in Chapter 2 of the Draft EIS, is not a likely option. As an example, the 112- to 118-meter diameter turbine rotors display corridors that have open space. Due to the optimization of turbine positions and the need to maintain minimum spacing between turbines to lower impacts from wake effects and turbulence to acceptable levels, it is anticipated these corridors would remain without turbines. As described in the Final EIS in Section 2.6.6, Alternative E – Agencies' Preferred Alternative, BLM and Reclamation worked with BP Wind Energy on setting a priority order of construction of turbines that would be built only if they would be needed in order to meet the interconnection requirement.

68 The Draft EIS describes a number of plans that have been appended to the Plan of Development, which is available on the BLM's website. Appendix C of the Final EIS contains a summary of the draft plans and their associated mitigation measures. The Plan of Development appendices include the Integrated Reclamation Plan (which includes habitat restoration, weed management and native plant salvage); Eagle Conservation Plan and Bird Conservation Strategy; Bat Conservation Strategy; Dust and Emissions Control Plan; Mine (Materials Source) Plan of Operations; Transportation and Traffic Plan; and Health, Safety, Security, and Environment (HSSE) Plan (which includes Emergency Response and Waste Management). These supplemental plans have been reviewed by appropriate agencies with jurisdictional or technical expertise or regulatory responsibilities, including but not limited to BLM, Reclamation, Western, NPS, AGFD, USFWS, and Mohave County.

68 Waste Management Plan, Site Rehabilitation and Facility Decommissioning Plan, Restoration Plan, Traffic Management Plan, and Hazardous Materials Handling Management Plan. We have recent experience in site restoration in this area as part of U.S. Highway 93 expansion within LMNRA.

The NPS also requests the opportunity to participate in the development of the Emergency Response Plan and the Lighting Plan to protect the night sky. We would seek the opportunity to help develop and implement the Wildlife Mitigation and Monitoring Plan and the Eagle Conservation Plan.

69 The NPS would appreciate if the BLM added a post-installation strategy that focused on the applicant conducting sound monitoring within LMNRA. This monitoring effort would ensure that actual noise levels are not exceeding the 35 dBA nighttime standard and are not causing impacts to park resources (including wildlife) and visitor experience. Since the monitoring would occur in LMNRA boundaries, NPS would appreciate if it complied with the NPS Acoustical Sampling and Analysis Guide," available at <http://science.nature.nps.gov/im/monitor/VitalSigns/BrowseProtocol.aspx>. If through monitoring the applicant determines that noise levels are higher than predicted or there are impacts to park resources, they would then implement additional mitigation measures.

Specific Comments

70 Page 2-60, Section 2.9.8 Reduced Footprint with Reduction in Capacity. The document states, "*A reduced footprint alternative that focuses on a 300 MW limit for generation capacity would not necessarily produce a project that is smaller in footprint size than Alternatives B and C.*" We disagree with this statement. The relationship of MW capacity and footprint is generally a proportional one. For example, the BP Wind Energy proposal is for 500 MW generation capacity and it requires approximately 38,099 acres of land managed by BLM and approximately 8,960 acres of Reclamation lands or a total of 47,059 acres. The 425 MW capacity alternatives require 12,872 acres less than Alternative A (see page 2-45). Proportionally, a 300 MW generation capacity alternative would use approximately 28,235 acres or approximately 60 percent of the land required for a 500 MW generation capacity development.

71 BP Wind Energy representatives have stated that a 300 MW generation capacity project is the minimum capacity necessary to have an economical project at this location. Based on the reduced land disturbance and associated impacts, a 300 MW generation capacity alternative should have been considered separate alternative. The 300 MW alternative is reasonable and should have been treated as an alternative carried through the full analysis in this document. Not doing so, leaves out an important perspective which may have been the appropriate level of development for this area. Because the alternative would have required additional permitting process on the part of the Western Area Power Administration and the applicant, does not provide sufficient grounds for the alternative to be discarded.

Alternatives B and C are very similar and limited to 425 MW. There is value in evaluating a smaller footprint alternative which would provide a greater range of development options and

Responses Continued

Supporting documents related to other plans or permits would be prepared and reviewed by BLM prior to issuing the Notice to Proceed with construction; this documentation would include the Stormwater Pollution Prevention Plan; Spill Prevention Control and Countermeasure Plan; Mohave County grading permit; sedimentation and erosion control measures; Blasting Plan; and supplemental geotechnical and soils testing information.

69 Post-installation noise monitoring is not proposed. While no decision has been made regarding which alternative would be selected, the models indicate that operational noise would be unlikely to exceed the adopted 35 dBA Leq threshold for Project noise over Lake Mead NRA lands associated with Alternative B and C, making the investment in monitoring questionable, particularly for these alternatives. By way of example, based on Table 4-25 in Section 4.15.2.1 and Table 4-26 in Section 4.15.2.2 of the Draft EIS analysis, Alternatives B and C would not create impacts above the adopted 35 dBA Leq threshold for Project noise over Lake Mead NRA lands, but would be expected to generate construction and operation noise levels that are fairly well below that threshold (10 dBA lower or more). For Alternative E, the Agencies' Preferred Alternative, noise levels would be expected to occasionally exceed 35 dBA Leq, depending on turbine layout and wind direction, in an area of up to about 300 acres within Lake Mead NRA land (see Final EIS Section 4.15.6). BLM recognizes NPS' expertise in noise monitoring and would consider the need for adaptive management if either Alternative A or Alternative E were selected and if independent NPS monitoring results demonstrate that the 35 dBA Leq threshold (and not the predicted level, which may be lower) related specifically to Project noise is frequently exceeded within Lake Mead NRA boundaries.

70 The variables that can influence the footprint of the Project are available land area, sufficient wind resource, presence of natural and cultural resources, topography, soil stability, spacing requirements, and the nameplate capacity of the turbines selected for the Project. BP Wind Energy has filed an interconnection request for 425 MW on the 345-kV Liberty-Mead transmission line and for 500 MW on the 500-kV Mead-Phoenix transmission line. BLM has revised Section 2.9.8 to better explain the rationale for eliminating a reduced footprint alternative. A reduced footprint/300-MW minimum generation alternative from detailed analysis because the technical design of such an alternative would be substantially similar in both its design and effects to the reduced footprint Alternatives B and C. Alternatives B and C analyze an output range from 310 MW to 500 MW, and thus the 300 MW minimum generation output design is within the scope of these alternatives. A reduced footprint alternative that focuses on meeting a 300-MW minimum for generation capacity would produce a project with a similar footprint size to Alternatives B and C. The size of the footprint is dictated by the type of turbines selected (i.e., manufacturers' specifications of the different types of turbines vary). BP Wind Energy has not yet selected which turbines it will purchase but needs to maintain the flexibility to do so as discussed in Section 2.5. To understand why the Project footprint might not change, consider that it would require 200 turbines with a 1.5-MW nameplate capacity to generate a total of 300 MW. The estimated number of turbine positions that would fit within the Alternative B and Alternative C footprint with this size of machine is 208; this is illustrated in Maps 2-5 and 2-8, respectively, and analyzed in Chapter 4.

71 See response 70. Alternatives B and C analyze an output range that includes 310 MW even though such an alternative would require the Applicant to reapply for interconnection with Western even though such re-application process could make the Project infeasible due to added costs, delays, and uncertainties associated with the new application's assumption of a later position in the interconnection queue.

Letter Continued

- 71 [associated impacts. This is especially so when the proponent has stated the project would be economical at a lesser capacity.
- 72 [Page 2-61, Section 2.9.8. The document states, “*For this project, preliminary turbine spacing was generally 8 to 10 rotor diameters between the rows of turbines and 3.5 to 5 rotor diameters within the corridors.*” As long as the spacing is consistent for all alternatives, the 300 MW alternative should require less acreage than the 500 MW alternative.
- 73 [Page 2-61, Section 2.9.8. The document states, “*Additionally, as described in Section 1.3.1.3, BP Wind Energy’s interconnection request filed under Western’s tariff sets the minimum output from the project at 425 MW nameplate for the 345-kV transmission line. Any MW output below the 425 MW would essentially be considered a new project, requiring a new interconnection application under Western’s Large Generator Interconnection Procedure (LGIP) to reflect the smaller project capacity, and would cause BP Wind Energy to lose its place in the interconnection queue.*” This statement highlights a procedural flaw in the permitting process due to the multi-agency permitting process. The process is making capacity decisions before the appropriate land use decisions are considered under the National Environmental Policy Act. The full range of land use alternatives are not being considered by the Bureau of Land Management due to Western’s administrative process. This administrative sequence compromises the environmental analysis under NEPA.
- 74 [Page 3-98, 3.12.3. A project of this scale and importance should not rely on an inventory prepared before 1990. BLM’s VRM policy states that inventories should not only be prepared but also maintained on a continuing basis. While not ideal, a project level inventory should have been prepared for this project to reflect any potential changes in the visual values of the area that may have occurred in the last 20 plus years.
- 75 [Page 3-99-100. Again, taking the existing scenic quality evaluation at face value seems to diminish the basis of the analysis. A brief aerial photo review reveals that SQRUs 14 and 41 are quite different and that 41 in fact seems very similar to the unit south west of US 93 that received a scenic quality rating of B in the previous inventory. While not to suggest that the rating can be done through aerial photographs, an updated inventory would have provided the rationale for retaining (or revising) the ratings based on a review and discussion of the scenic quality factors.
- 76 [Page 3-100, Section 3.12.4.2. It is not consistent with the current BLM approach to visual resource inventories that sensitivity level rating units should be exactly the same as scenic quality rating units (SQRU). The sensitivity rating process most often reveals different geographic areas of the landscape where the types of users, amount of use and other sensitivity rating factors are the same even though the area contains several types of landscape character and scenic quality. An updated inventory would reveal more current sensitivity level rating units that would not likely align with the SQRU boundaries.
- 77 [Page 3-102, Figure 3-10. Distance zones from the previous inventory are not accurately reflected. A five mile buffer from Temple Bar Road for the foreground-middleground would extend well into the Project boundary (and would include Squaw Peak) and the 15 mile background limit would encompass the entire project site. These distances are important in

Responses Continued

72 See response 70 regarding the spacing required for different turbine types and how this may influence the MW generation capacity.

73 The BLM, Reclamation, and Western’s decision-making process for the Mohave County Wind Farm Project is consistent with applicable statutes, regulations, plans and policies. Applications for commercial wind energy facilities are processed as right-of-way authorizations under Title V of the Federal Land Policy Management Act (FLPMA) and its implementing regulations (43 CFR Part 2804); they also must comply with the BLM, Reclamation, and Western’s environmental, planning, and right-of-way application requirements. As described in Section 1.1 on page 1-3 and 1-4 of the Draft EIS, BLM, Reclamation, and Western may each issue a Record of Decision (ROD) as the “The Federal agency decisions regarding the Project components and facilities are interdependent; in addition to BLM, Reclamation has jurisdiction for a portion of the proposed Wind Farm Site and Western has jurisdiction for the interconnection request.”

74 Visual resource inventories (VRI) are prepared for use during the land use planning process at which time Visual Resource Management (VRM) Classes are designated in the Resource Management Plan (RMP). While the BLM is required to maintain a current inventory, national policy is not specific on the circumstances that constitute the need to re-inventory the visual resource. It is reasonable to anticipate that changes to the visual environment will occur over the life of the RMP, especially in active areas designated VRM Class III and IV. Given that this project is located within an area designated as a VRM Class IV by the current RMP, which allows for major visual modification to occur, it was deemed appropriate to analyze the changes that the proposed action may impose to the inventoried visual values. The findings within the analysis will then be available for the BLM field office to monitor the final outcome of the development while under operation, at which time the BLM will be well-positioned to update the inventory to reflect the visual changes from the proposed action.

There is no provision or guidance for conducting a “project level inventory” within the BLM’s Visual Resource Management System. There is only policy guidance for inventory of visual values that supports the land use planning process when designating VRM classes.

The BLM’s VRM policy does provide guidance for project level analysis, which requires conducting the Visual Contrast Rating (VCR) process. A part of the VCR process requires consideration of 10 individual human and environmental factors that serve as a basis of determining degrees of visual contrast that may occur from Key Observation Points (KOPs) in order to determine conformance with the RMP and to identify means for reducing visual contrast cast by the proposed action. The assessment of the 10 environmental and human factors is specific to the visual effect that project level actions would have on the casual observer. The Contrast Rating system and assessment of the 10 environmental factors are in a sense an inventory of project level visual parameters associated with a proposed action, which may assist with design modifications to reduce visual contrast.

75 In reference to BLM Manual H-8410-1, Visual Resource Inventory, Section II: Scenic Quality ratings are determined using seven key factors that include landform, vegetation, water, color, adjacent scenery, scarcity and cultural modifications. The evaluation of these seven factors may produce a rating that is different from one tract of land than another that is not apparent based upon a review of aerial photos for two different Scenic Quality Rating Units (SQRUs).

VRIs are instrumental for making decisions during the land use planning process. VRIs are updated based upon changes to the visual values under the implementation of the land use plan. The BLM is not revising or amending the current RMP, but did assess impacts that the proposed action may have to the VRI that was conducted at the time of the RMP. Also see response 74 regarding the policy guidance for project level inventory and analysis.

76 See responses 74 and 75 regarding the policy guidance for project level inventory and the use of VRI in the land use planning process.

Letter Continued

- 77 [identifying the correct inventory classes, as the foreground-middleground zone is critical in the distinction between classes in several situations.
- 78 [Page 3-109, Section 3.15.1.2, Page 4-143, 4.15.1 – NPS notes and appreciates that the DEIS introduces and offers impact assessments in comparison to the 35 dBA nighttime limit proposed by LMNRA for park lands. The addition addresses previous ADEIS comments on appropriate management thresholds proposed by NPS to protect park visitors and overnight camping that could occur on LMNRA lands.
- 79 [Page 4-30 Sections 4.5.2.4, 4.5.2.7, 4.5.3.6, 4.5.4.4, 4.5.4.6 – NPS notes and very much appreciates that the DEIS incorporates noise in the impact analysis sections for wildlife. Throughout the analysis there are several references to habituation. We would appreciate if the EIS recognized habituation as an impact in itself. What is often referred to as habituation, can be better explained with the term “learned deafness”. Wildlife are learning to ignore particular sounds rather than become comfortable with them. Not only does this cause an animal to ignore a sound that they would typically respond to under normal conditions, but also risk the masking of other important sounds. It is important to note the negative effects that “learned deafness” can have on the species.
- 80 [Page 4-107 to 4-114. Visual Resources. The document provides extensive background for the discussion of visual resources including the BLM Contrast Rating Procedure, the BLM Visual Resource Inventory Analysis and the BLM Conformance with VRM Objectives. There is no parallel discussion for the 8,960 acres of Reclamation lands which form the primary basis for our comments on the impact on visual resources in this area. (“*Reclamation does not have management objectives for visual resources or area specific management plans for the Project Area*” Page 3-97). The fact that there is no land use planning completed by Reclamation for this area complicates the visual impact analysis. Please clearly indicate that the landscape descriptions include BOR lands but that the VRM Classes do not apply. It is the view looking generally toward Squaw Peak that is at issue and this area is not included in the BLM VRM program. This is why the use of a current inventory is important to the analysis as it will provide the basis for assessing impacts.
- 81 [The descriptions should provide more detail on the landscape. Instead of just saying “varied form, line, color and texture” or “moderate levels of variation” consider describing what the actual variation is. Is the texture fine to coarse with stippled vegetation texture, does the color vary from tan to gray/green color, does the landform vary from horizontal to gently rolling with some distinctive features and steep slopes? These details will help in assessing impacts.
- 82 [The NPS contends the general view toward Squaw Peak on Reclamation land to be a significant visual resource as viewed from the Temple Bar Access Road. The existing inventory considered the landscape as a whole without regard for administrative boundaries, which is the correct approach. However, an updated inventory would have revealed a high level of sensitivity across much of this viewshed, resulting in a different inventory class. With a scenic quality rating of C and a high sensitivity level rating, the foreground of Temple Bar Road would be considered VRI Class III. An updated inventory may also have resulted in a scenic quality rating of B for SQRU 41, in which case a portion of the site within the foreground of Temple Bar Road may have

Responses Continued

77 Visual inventories are updated based upon significant changes to these three factors: Scenic Quality, Sensitivity Levels, or Distance Zones. No significant land modifications had occurred in the area to trigger a need to change Distance Zone delineation for BLM administered land, or outside the BLM authority since the completion of the current inventory. The data presented on Map 3-10 of the Draft EIS provide the inventory data that were prepared for making decisions on VRM Class designations during the land use planning process. VRIs are instrumental for making decisions during the land use planning process. VRM Class designations may differ from VRI Classes depending on compatibility with allocation decisions. VRIs are updated based upon changes to the visual values under the implementation of the land use plan. The BLM is not revising or amending the current RMP, but did assess changes that the proposed action may have to the values described in the VRI that was conducted at the time of the RMP.

78 See response 69 regarding the 35 dBA Leq threshold.

79 “Learned deafness” and habituation, while not synonymous according to Hatch and Fistrup (2009), may be perceived by an average observer to be one in the same. The Draft EIS indicates in Section 4.5 the range of responses that wildlife may have to noise. The range of these responses is inclusive of those that could fall under the category of learned deafness.

At this time, there is no specific method for determining if the Project would have future environmental consequences on terrestrial wildlife hearing. With the information available today about wildlife and hearing loss, it is not possible to determine the overall contribution the cumulative effects of the action alternatives would have on wildlife hearing and learned deafness.

80 We concur that the analysis on Reclamation land needs to be clarified. A paragraph was added to Section 4.12.1 in the Final EIS stating: “The BLM prepared visual inventory classes and management class objectives throughout its planning unit, which includes non-BLM land. The inventory classes are informational and provide a basis for considering visual values. The visual management classes provide objectives to BLM that must be considered when evaluating potential impacts on BLM-administered land. Therefore the management classes do not apply to Reclamation, state trust, and private lands, and are not used for analysis of these lands.”

The first sentence in Section 4.12.1.1 in the Final EIS also was revised to state, “Indicators used to measure potential impacts to visual resources that could result from the Project include:

- The level of visual contrast created by the Project on both BLM and Reclamation land
- Changes in Visual Resource Inventory (VRI) class, including component VRI in values (scenic quality, visual sensitivity, and distance zones) that was inventoried for both the BLM and Reclamation land
- Conformance with existing VRM objectives for only the BLM land.

81 We concur that adding more detail to the verbal descriptions would help the reader to visualize what the contrasts may be compared to the wind turbines. Section 4.12.1.4 and Section 4.12.2.2 of the Final EIS were revised to add detail.

Section 4.12.1.4:

On page 4-110 of the Draft EIS under Temple Bar Road, the following was added to the Final EIS to replace the fifth sentence. “The valley landform is flat to rolling with rounded to peaked hills and mountains in the distance. The soil is smooth and light gray to reddish tan. The hills and mountains are smooth to coarse with erosion channels. They appear light to dark brown with bluish hues for the most distance features. The valley vegetation includes short gray to tan grasses, rounded green, tan, brown and gray shrubs (leaves and branches), with some vertical cacti and shrub branches. Manmade features include the dark gray rolling Temple Bar Road, brown parallel utility poles, the night-lighted brown rectangular park entrance station, and the gray parallel transmission towers in the distance.”

Responses Continued

On page 4-110 of the Draft EIS under Lake Mead NRA, the following was added to the Final EIS to replace the sixth and seventh sentences. “The landform is rolling with rounded to peaked hills and mountains in the distance. The soil is gray to tan with scattered dark cobbles and rocks. The hills and mountains are smooth to coarse with erosion channels. They appear light to dark brown with bluish hues for the most distance features. The vegetation includes rounded green, gold, and brown shrubs (leaves and branches) that are scattered and patchy. Manmade features include the dark gray rolling and curving Temple Bar Road, the vertical communications tower on the distant Senator Mountain, and the brown utility poles paralleling the road. The communications tower and utility poles are characterized by weak contrast to the surrounding landscape, and are not easily detected from this view.”

Text on page 4-110 of the Draft EIS under Traditional Cultural Locations was revised so that the Final EIS states: “The valleys are rolling to undulating with the more distant rounded to peaked hills and mountains. Soils range from gray to beige and reddish tan, and the hills and mountains are browns, reds, tans, and grays, all with bluish hues at a distance. The hills and mountains appear smooth to rough depending upon location and distance. Vegetation is scattered, and patchy to uniform in distribution. Shrubs are short to tall, generally rounded, but with some vertical cacti and yuccas. Colors include greens, browns, reds, purple, and yellow. Manmade features seen from Senator Mountain (KOP 169), a high elevation viewpoint located 1.4 miles east of the Project Area, include community structures (generally white) and roads, the single lane dirt Squaw Peak Road running north-south along the eastern portion of the Project Area, and the dull metallic Mead-Phoenix and Liberty-Mead high voltage transmission lines along with its dirt service roads and tower pads. The manmade features seen from Squaw Peak (KOP 173) located inside the Project boundary for all action alternatives and on the east side of Squaw Peak and Young Mountain, include a reddish tan dirt road and a narrow metallic meteorological tower in the foreground of the view. Manmade features seen from the Mata Thi:ja KOP (171), situated inside the Project boundary defined by Alternative A and at the Project boundary defined by Alternatives B and C, includes the dull metallic lattice towers and wires of the Liberty-Mead 345-kV and Mead-Phoenix 500-kV transmission lines and the reddish tan dirt road that cross the foreground of the view.”

On page 4-111 of the Draft EIS under US 93, in the second paragraph, the following replaces the third sentence in the Final EIS. “The valley landform is flat to rolling with rounded to peaked hills and mountains. The grayish to reddish soil is scattered with darker pebbles. The hills and mountains are smooth to coarse with erosion channels. They appear to be medium to dark gray with red hues, and with bluish hues for the more distance features. The valley vegetation includes short tan grasses, rounded short to tall green, tan, and brown shrubs (leaves and branches), with some widely scattered vertical cacti. Manmade features include the dark gray divided highway, a barbed wire fence and brown wood vehicle barrier in the immediate foregrounds, and two parallel rows of dark gray lattice transmission towers in the distance.”

On page 4-111 of the Draft EIS under Residential Areas, the following replaces the sixth sentence in the Final EIS. “The landform is convex uphill and rolling and with rounded to peaked mountains in the distance. The soil is gray to reddish tan with light and dark pebbles. The mountains are smooth to medium with erosion channels. They appear light reddish brown to dark gray with red hues, and the more distant mountains also have bluish hues. The patchy vegetation includes rounded short to tall shrubs with interspersed vertical cacti and yucca. Colors are green, brown, gray, and tan and include leaves, branches, and trunks. Manmade structures include the dark gray lattice towers of the Mead-Phoenix and Liberty-Mead high voltage transmission lines, however they are distant and indistinct to the casual viewer.”

A second paragraph to “Visual Contrast” was added in the Final EIS under Section 4.12.2.2 stating: “Analysis is based upon the visual simulations (as described in Section 4.12.1.8 and as referred to in the following text), field verification, and the contrast rating analysis to determine deviations in the form, line, color, and texture of the characteristic landscape due to the proposed activity. Refer to Appendix D, forms 8400-04, for the contrast form descriptions.”

Letter Continued

82 received a VRI Class II. While we understand these values would not change current management as Class IV, it suggests a more substantial impact to an important aspect of the existing landscape.

83 Again, it is our recommendation that alternative B be modified to eliminate turbines in Sections 20, 28, 29, 32 and 33 (Township 29N; Range 20West) to protect the Squaw Peak viewshed and adjacent bajada from the Temple Bar Access Road. This viewshed is considered to have a high level of sensitivity because it provides the entry and exit experience for the Lake Mead users. To offset this reduction, we suggest the row of turbines eliminated at the southern edge of the project be added in Sections 31, 32, 33 and 34 (Township 28N; Range 20W).

84 Page 4-20, Alternative A - Visual Contrast – Temple Bar Road. The document states, “*In summary, when viewed from the Temple Bar Road, overall visual contrast of form, line, color and texture of the Project under day and night conditions would be strong. The project would demand attention, would not be overlooked, and would dominate the landscape.*” We agree with this statement and contend that development of this outstanding viewshed would not be appropriate. Rather it should be managed for its scenic values.

85 Page 4-125, Alternative B - Visual Contrast – Temple Bar Road. The document states, “*Operations and maintenance of Alternative B would result in similar direct impacts to visual resource as those described under Alternative A when viewed from the Temple Bar Road; however the duration of the time that motorists would observe the Project would be reduced. . .*” While this is generally true, the overall visual contrast of form, line, color and texture of the Project under day and night conditions would still be strong as described for Alternative A. The difference between the two alternatives is the duration of the time the turbines are visible to park visitors. 86 In order to protect the view from the Temple Bar Road, it is recommended that additional turbines be removed in sections 20, 28, 29, 32 and 33 (Township 29N; Range 20W). This would remove turbines from the bajada, placing them more distant from the roadway and generally decrease their prominence in the viewshed.

We appreciate the opportunity to offer these comments and we are available should the planning team wish to discuss any of these concerns or concepts presented. Please contact Jim Holland, Park Planner at (702) 293-8986 to coordinate that meeting.

Sincerely,



William K. Dickinson
Superintendent

cc:
Kay Sunberg, Realty Specialist
Bureau of Reclamation, Lower Colorado Region
P.O. Box 61470
Boulder City, NV 89006

Responses Continued

82 See response 74 regarding VRI and management classification, response 75 regarding the use of VRI in the land use planning process, and response 76 regarding the contrast rating process.

83 See responses 65 and 67 regarding why the selection of the preferred alternative did not incorporate the NPS recommendations for Township 29 North, Range 20 West. While development of turbines in Township 28 North, Range 20 West, Sections 31, 32, 33, and 34 may be considered with Alternative E, BLM prefers to avoid development in this corridor because of its close proximity to existing residences, and the public concerns for visual and noise effects on private property.

84 The Scenic Quality classification for this area is C, the lowest rating. The rating was based on the assessment of seven factors: landform, vegetation, water, color, adjacent scenery, scarcity and cultural modification. The evaluator(s) found, based on an evaluation of the seven factors and with consideration of the physiographic region, that the scenic qualities were low. Local interest for the visual landscape along Temple Bar Road, such as Squaw Peak, would be factored into the visual resource inventory as part of the Sensitivity Level analysis.

The BLM's RMP took the inventory of visual values into consideration with other resource allocations and made informed decisions when designating VRM Classes. This area was designated as VRM Class IV. The proposed project is in conformance with the RMP decisions.

85 We agree and the first sentence under Temple Bar Road in the Final EIS Section 4.12.3.2 has been revised to state, "Operations and maintenance of Alternative B would result in similar direct impacts to visual resources as those described under Alternative A when viewed from Temple Bar Road; however the duration of time that motorists would observe the Project would be reduced (Figure D-2(e))."

86 See response 65 regarding which elements of this recommendation are encompassed by the preferred alternative.



Janice K. Brewer
Governor

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Henry R. Darwin
Director

May 4, 2012

Bureau of Land Management
Renewable Energy Coordination Office
Arizona State Office, One Central Avenue, Suite 800
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SENT VIA E-MAIL: KFO_WindEnergy@blm.gov

Re: Mohave County Wind Farm Draft EIS

We received a copy of the Draft Environmental Impact Statement (EIS) on the Mohave County Wind Farm project for BP Wind Energy North America Inc.'s right-of-way application to construct, operate, maintain, and decommission a wind energy facility and associated infrastructure in Mohave County. The Arizona Department of Environmental Quality, Water Quality Division (ADEQ) is responsible for ensuring the delivery of safe drinking water to customers of regulated public water systems under the Safe Drinking Water Act, permits for proposed discharges to surface waters of the United States under the federal Clean Water Act (CWA), permits under the State aquifer protection program, and water quality certifications of certain federal licenses and permits. With the information provided, ADEQ would like to make you aware of some water quality issues that may need to be addressed.

1. Clean Water Act Permits

As of December 5, 2002, Arizona has authorization from the U.S. Environmental Protection Agency (EPA) to operate the National Pollutant Discharge Elimination System (NPDES) Permit Program (Section 402 of the CWA) on the state level. The NPDES program, and the surface water permits issued, are referred to as the Arizona Pollutant Discharge Elimination System (AZPDES) Permit Program.

87 [Stormwater discharges associated with activities, such as clearing, grading, or excavating, that disturb one acre or more must obtain permit coverage under the AZPDES Construction General Permit. As part of permit coverage, a Stormwater Pollution Prevention Plan (SWPPP) must be prepared and implemented before ground disturbance begins. The SWPPP must comply with ADEQ's Construction General Permit's SWPPP requirements, and must identify such elements as the project scope, anticipated acreage of land disturbance, and the best management practices that would be implemented to reduce soil erosion, and contain or minimize the pollutants that might be released to waters of the U.S. In addition to preparing the SWPPP, the project proponent must file for permit coverage.

88 [Any point source discharge to surface waters (including ephemeral washes and their tributaries) requires AZPDES permit coverage. The De Minimis General Permit (DMGP) is designed to

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Responses Continued

87 As described in Section 2.5.1 on page 2-6 of the Draft EIS, details regarding the equipment to be used during site preparation and pre-construction activities can be found in Appendix C. Sediment and erosion control measures would be implemented before any clearing and grading activities occur; these control measures would be in accordance with the Stormwater Pollution Prevention Plan (SWPPP) that would be prepared in the final design stage, as well as established Best Management Practices (BMPs) (see Appendix B).

As described in Table 1-2 on page 1-12 of the Draft EIS, a SWPPP application would be submitted to Arizona Department of Environmental Quality (ADEQ) for review if the Project is approved by the federal agencies preparing Records of Decision (RODs). A Final SWPPP would be prepared and implemented for the Project prior to construction, and would fully comply with the Arizona Pollutant Discharge Elimination System (AZPDES) Construction General Permit. Based on the final design for the Project, the SWPPP would identify the project scope, anticipated acreage of land disturbance, and the best management practices that would be implemented to reduce soil erosion, and contain or minimize the pollutants that might be released to waters of the United States.

88 The Final EIS Table 1-2 has been revised to include a De Minimis General Permit (DMGP) along with the other permits required from ADEQ prior to construction. The Draft EIS describes in Section 2.5.2.2 that water for dust control, batching water for concrete production, and water for other washing needs, would be obtained from three existing production wells at the Materials Source production site. Table 2-3 on page 2-14 of the Draft EIS provides the capacity of the wells and expected use of the well water. The wells owned by BLM near the Materials Source along Detrital Wash are permitted for industrial withdrawals. One of these wells, registration number 531378, has a permitted pumping rate of 60 gallons per minute with a well capacity of 1,000 gallons per minute. The capacity of this well would be able to meet most of BP Wind Energy's construction water needs. Any water demands in addition to what well 531378 can supply would be met using the other industrial water supply wells permitted to BLM at the Materials Source or the new well located at the O&M building permitted by the Arizona Department of Water Resources (ADWR). Water for production would be pumped from the wells, and a valve meter would be installed at each well to maintain overall usage during the course of mining and construction activities.

88 [cover specified types of discharges that meet the applicable surface water quality standards, are generally of limited flow and/or frequency, are managed using appropriate best management practices, and do not last continuously for longer than 30 days unless otherwise approved in advance by ADEQ. The Mohave County Wind Farm may require coverage under the DMGP for activities such as subterranean dewatering and well development.

89 [The Draft EIS mentions weed control measures. If pesticides and herbicides could be used for vegetation and insect control, ADEQ has issued an AZPDES general permit for discharges from the application of pesticides on and near waters of the U. S. ADEQ's permit is based on EPA's pesticide general permit.

90 [The Draft EIS mentions that the Preliminary Jurisdictional Delineation Report is pending submittal to the U.S. Army Corps of Engineers. If a 404 permit (or any other federal permit) is required for the project, a state-issued CWA section 401 certification of the permit may be required to ensure that the permitted activities will not result in a violation of Arizona's surface water quality standards.

2. Drinking Water

91 [The Draft EIS mentions the use of drinking water to support the workforce. A water system that has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least 60 days out of the year must comply with state drinking water regulations. As part of the regulatory requirements, an applicant for a new drinking water system, or modifying an existing system, must submit plans for review and approval before construction begins, including well development. New drinking water systems may require that ADEQ approve the source water as a drinking water source. Also, ADEQ may need to evaluate and approve an Elementary Business Plan to ensure that the water system has and can maintain adequate technical, managerial, and financial capabilities to consistently provide safe drinking water.

3. Aquifer Protection Program

92 [Facilities that discharge, meaning add a pollutant either directly to an aquifer, to the land surface or the vadose zone in such a manner that there is a reasonable probability that the pollutant will reach an aquifer, generally must obtain an Aquifer Protection Permit (APP). Wastewater treatment facilities, including on-site treatment facilities, require an APP. A general APP is available for most sewage collection systems and on-site systems (septic) that have a design flow less than 24,000 gallons per day. ADEQ has delegated permitting and enforcement responsibilities for general permits regarding septic/wastewater and wastewater treatment facilities to Arizona counties, meaning the owner of the wastewater treatment facility contacts the county where the project is located for approvals, except when a government entity is the owner or applicant. Any on-site system that cannot qualify for a general APP will require an individual APP, which can be issued only by ADEQ.

93 [Discharges of water, drilling fluids, or drill cuttings from a well, such as for water quality sampling, hydrologic parameter testing, well development, redevelopment, or potable water system maintenance and repair purposes, are authorized under a 1.04 General APP as long as the

Responses Continued

89 BP Wind Energy will apply for an AZPDES Construction General Permit prior to completing final design for the Project. Table 1-2 in the Final EIS has been revised to clarify this requirement in accordance with Section 402 Clean Water Act. Page 2-37 in Section 2.5.4.2 of the Draft EIS discusses methods of weed control in the substation and switchyard; maintenance may include installing an underlayment, using physical or biological methods, or treating crushed rock surfaces with herbicides to control weeds, if approved by the BLM and/or Reclamation. Page 4-64 in Section 4.5.6 of the Draft EIS includes the following mitigation measure:

- Use an integrated approach to manage infestations that includes scheduled surveys and reporting of any infestations along Project roads, disturbance zones, and Project facilities. Utilize chemical, mechanical, or biological methods of weed control to limit the spread of noxious weeds and invasive plants and tailor treatments to specific weeds on site.

Further, Appendix B lists the BMPs from BLM's Wind Energy Development Program and Policies. These BMPs include the following:

- Operators shall develop a plan for control of noxious weeds and invasive species, which could occur as a result of new surface disturbance activities at the site. The plan shall address monitoring, education of personnel on weed identification, the manner in which weeds spread, and methods for treating infestations. The use of certified weed-free mulching shall be required. If trucks and construction equipment are arriving from locations with known invasive vegetation problems, a controlled inspection and cleaning area shall be established to visually inspect construction equipment arriving at the project area and to remove and collect seeds that may be adhering to tires and other equipment surfaces.
- If pesticides are used on the site, an integrated pest management plan shall be developed to ensure that applications would be conducted within the framework of BLM and Department of the Interior policies and entail only the use of U.S. Environmental Protection Agency-registered pesticides. Pesticide use shall be limited to nonpersistent, immobile pesticides and shall only be applied in accordance with label and application permit directions and stipulations for terrestrial and aquatic applications, and in accordance with the Final Environmental Impact Statement for Vegetation Treatments on BLM Lands in 17 Western States, 2007.

An Integrated Reclamation Plan, which contains an integrated weed management plan, has been prepared and a summary of the plan is included in Appendix C of the Final EIS. A complete draft of the Integrated Reclamation Plan is available on BLM's website as an appendix to the Plan of Development, which will be part of the Record of Decision (ROD) package and right-of-way grant if the project is approved.

90 The Preliminary Jurisdictional Delineation Report was accepted by the U.S. Army Corps of Engineers on June 8, 2012. BP Wind Energy will apply for 401 certification from ADEQ in connection with the 404 permit, if the project is approved by the BLM, Reclamation, and Western.

91 Section 2.5.2.9 on page 2-27 of the Draft EIS discusses providing drinking water to support the workforce occupying the operations and maintenance building. As shown in Table 1-2 on page 1-12 in the Draft EIS, if the Project is approved, BP Wind Energy will apply to the Arizona Department of Water Resources for a well drilling permit, as necessary, consistent with Groundwater Management Code ARS Title 45-454. Consistent with ADEQ regulations, BP Wind Energy will apply for a Drinking Water Approvals during final design if the Project is approved by the BLM, Reclamation, and Western.

Once the well at the operations and maintenance building is established, it may serve as a source of drinking water for the construction workers. Until the well is established, and approved for such use, bottled water would be provided through a water vending service.

92 Consistent with ADEQ's delegation to Mohave County and as described in Delegation Agreement #06-0025, permitting authority for septic/wastewater systems is shown on page 1-13 in Table 1-2 of the Draft EIS. BP Wind Energy will obtain a septic permit from Mohave County if the Project is approved by the BLM, Reclamation, and Western.

Letter Continued

Page 3 of 3

drilling and testing operations for each drilling location meet the rule requirements. See Arizona Administrative Code R18-9-B301(D). ADEQ does not require any submittal for this 1.04 APP.

- 93 Similarly, discharges of wastewater resulting from washing concrete from trucks, pumps, and ancillary equipment to an impoundment are authorized under a 1.12 General APP as long as the conditions meet the rule requirements. See Arizona Administrative Code R18-9-B301(L). ADEQ does not require any submittal for this 1.12 APP.

4. Impaired Waters

- 94 ADEQ agrees with the assessment that there are no impaired waters within the project area, based on the 2006/2008 305(b) Assessment Report and 303(d) Impaired Waters list and the Draft 2010 Status of Water Quality in Arizona 305(b) Assessment and 303(d) Listing Report. ADEQ would add that there are no surface waters identified as an Outstanding Arizona Water according to Arizona Administrative Code, R18-11-112.

We appreciate the opportunity to review and provide comments. If you need further information, please contact Wendy LeStarge of my staff at (602) 771-4836 or via e-mail at w11@azdeq.gov, or myself at (602) 771-4416 or via e-mail at lcl@azdeq.gov.

Sincerely,



Linda Taunt, Deputy Director
Water Quality Division

Responses Continued

The Project would not have wastewater treatment facilities; instead, as described in Section 2.5.2.9 of the Draft EIS, an on-site septic system comparable in capacity and design to a residential system would be installed for the Operations & Maintenance building and included in the respective permit from Mohave County.

93 If BLM, Reclamation, and Western approve a ROW grant and the project proceeds to construction, BP Wind Energy will apply for a 1.04 General Aquifer Protection Permit consistent with Arizona Administrative Code R18-9-B30 1 (D). The discharges of wastewater resulting from washing concrete trucks, pumps and ancillary equipment in an impoundment would be authorized under a 1.12 General APP consistent with Administrative Code R18-9-B301(L).

94 Based on this comment, the Final EIS has been revised to incorporate the following additional information in Section 3.4.3.1: “The Clean Water Act (Section 303[d]) requires states, Tribes, and territories to develop lists of impaired waters which do not meet established water quality standards. Based on information in ADEQ’s 2006/2008 305(b) Assessment Report and 303(d) Impaired Waters list Assessment Report, no impaired waterways have been identified in the Project Area. There are no surface waters identified as an Outstanding Arizona Water according to Arizona Administrative Code, R18-11-112 (Arizona Department of Environmental Quality 2012).”

The revision to the text does not change the analysis included in the Draft EIS.

LETTER

From: Matt Clark [mailto:MClark@defenders.org]
Sent: Thursday, May 24, 2012 1:09 PM
To: BLM_AZ_KFO_Wind_Energy
Subject: Official DEIS Comment Deadline?

To whom it may concern:

95 [I am writing to confirm what the public comment deadline is for the Mohave County Wind Farm Project is.
According to my calculation, it should be June 18th – 45 days after the NOI came out on May 4th. Is that correct?

Thanks in advance,

From: BLM_AZ_KFO_Wind_Energy [BLM_AZ_KFO_Wind_Energy@blm.gov]
Sent: Friday, May 25, 2012 8:46 AM
To: Matt Clark
Cc: Arreola, Eduardo J; Neckels, Jacqueline D; Defend, Beth (beth.defend@urs.com)
Subject: RE: Official DEIS Comment Deadline?

Matt,

The NOI for the Mohave County Wind Farm draft EIS was published by the BLM on May 4. However, the EPA publication of the NOI on April 27 kicked off the comment period. Thus the comment period ends officially on June 11.

Feel free to contact me if you have other questions.

Dennis Godfrey
Public Affairs Specialist
Bureau of Land Management
Arizona State Office
dgodfrey@blm.gov
602.417.9499

From: Matt Clark <MClark@defenders.org>
Sent: Friday, May 25, 2012 9:28 AM
To: BLM_AZ_KFO_Wind_Energy
Cc: Arreola, Eduardo J; Neckels, Jacqueline D; Defend, Beth
Subject: RE: Official DEIS Comment Deadline?

Thanks Dennis for your quick response.

Matt

Matt Clark
Southwest Representative
Defenders of Wildlife
(520) 623-9653 ext 2

Responses Continued

95 Dennis Godfrey, the BLM Public Affairs Specialist, responded to this comment via email on May 25, 2012, with the following: The NOI (sic, the intended term was NOA) for the Mohave County Wind Farm Draft EIS was published by the BLM on May 4. However, the EPA publication of the NOI (sic) on April 27 kicked off the comment period. Thus the comment period ends officially on June 11.

Letter Continued

Comments on the Mohave County Wind Farm Draft EIS

June 11, 2012

Bureau of Land Management
Renewable Energy Coordination Office
Arizona State Office
One North Central Avenue, Suite 800
Phoenix, AZ 85004-4427

Delivered via electronic mail (KFO_WindEnergy@blm.gov) and U.S. mail (with attachments).

Dear Mr. Sanchez:

The undersigned groups are pleased to provide these comments in response to the Draft Environmental Impact Statement (DEIS) for the Mohave County Wind Farm Project (MCWFP).

We are supportive of the MCWFP's intent to supply needed clean renewable energy to the southwest. Renewable energy is part of a comprehensive solution to transition the United States toward a more sustainable future. Many experts agree that domestic renewable energy sources can contribute toward a safer, more reliable, and more environmentally conscious future by replacing dirtier and less sustainable fossil fuels. We also agree, however, that these facilities should be carefully scrutinized to ensure that they are implemented in such a way as to limit impacts to the environment and preexisting users of public lands.

Over the past five years, dozens of applications have been submitted to the Bureau of Land Management (BLM) for approval of a variety of renewable energy projects. Many of these presented a variety of conflicts with important natural, cultural, and societal values including wildlife habitat, recreation areas, and a variety of other conflicts that overbalanced the benefit that these projects could provide. To help resolve this issue, the BLM has undertaken two separate processes to help guide the future development of renewable energy in Arizona. The first, the Programmatic Environmental Impact Statement (PEIS), focuses solar energy development into specific areas called Solar Energy Zones (SEZs), two of which were identified in Arizona in the PEIS, while allowing other development to occur on some lands outside of the zones through a variance process. Earlier this year, the BLM Arizona office published a Draft Environmental Impact Statement (DEIS) for the Restoration Design Energy Project (RDEP) that proposed to screen lands throughout the state to limit conflicts with important resources. RDEP proposes to establish Renewable Energy Development Area (REDAs), which are low-conflict areas suitable for solar and wind development at various scales.

1. General Comments

Availability of the site for solar development.

As a component of the RDEP, some of the area in and around the MCWFP, especially the land south of the existing electrical transmission line, was identified as a REDA. The Arizona Solar Working Group (ASWG), made up of solar industry representatives, conservation groups, and power companies, commissioned a review of the REDA by Ian Dowdy of the Arizona Wilderness Coalition, which is attached

Letter Continued

Comments on the Mohave County Wind Farm Draft EIS

as an appendix to these comments (Appendix I). The purpose of the evaluation of this particular REDA, was to determine whether the screening criteria that informed the selection of REDA lands in the RDEP process had succeeded at avoiding areas that contained significant environmental resources. The analysis of the REDA highlighted the following issues that may be pertinent to the MCWFP:

96 Although this evaluation has discovered no significant concern regarding environmental issues in the Mohave REDA, the landscape is of high natural and scenic character and retains some value for wildlife connectivity and habitat. Mitigation measures should be implemented as the site develops to preserve key wildlife corridors, slopes, and the Detrital wash.

Co-location of Energy Facilities

97 The presence of the BP Wind Energy project raises the possibility that may be an opportunity for the co-location of wind and solar facilities that may have benefits to balancing energy risk and load to customers. The BLM should consider policies that would facilitate the sharing of REDA and SEZ sites between different methods of renewable energy generation.

98 **Recommendation:** There is potential for solar development to still occur in the area both within and around the MCWFP as many renewable energy advocates believe that wind and solar generation facilities can co-locate, providing many benefits to the overall reliability of the energy resources. We encourage the applicant to consider ways to integrate solar development within the project.

2. Purpose and Need Statement and Consideration of Alternatives.

99 The purpose and need statement should reflect the potential benefits of the project, the public interest in a cleaner energy economy, and potential alternative means of achieving that goal. Rather than presenting the choice as whether to “approve” or “deny” the project, the purpose and need should set the stage for incorporating environmental concerns at every stage and phase of the project.

As courts have cautioned, “One obvious way for an agency to slip past the structures of NEPA is to contrive a purpose so slender as to define competing ‘reasonable alternatives’ out of consideration (and even out of existence.)” Davis v. Mineta, 302 F.3d 1104, 1119 (10th Cir. 2002) (quoting Simmons v. United States Army Corps of Eng’rs, 120 F.3d 664, 669 (7th Cir. 1997).

100 The BLM has articulated in the DEIS a broad statement of purpose and need for the project, consistent with the statutory authorities and policies applicable to the Bureau of Land Management, including those providing for contributions towards achieving the renewable energy and economic stimulus and renewable energy development objectives under the Energy Policy Act of 2005 (EPAAct) and Secretarial Order 3285A1. The DEIS also acknowledges the project’s support of states’ renewable energy portfolio standards.

101 However, the DEIS is limited to responding solely to BP’s proposed use of the land. It does not address how other options might address these policies, including the construction of wind projects closer to demand centers in a less environmentally damaging way, or a reconfiguration of this project so that it might include a solar component.

Responses Continued

96 The Draft EIS used the best available data with respect to wildlife movement corridors, habitat connectivity, and habitat fragmentation. Existing literature and baseline data, as evaluated in Section 4.5.2.5 of the Draft EIS, do not indicate that habitat connectivity would be compromised for wildlife resources. Access roads would not block movement for big game, desert tortoises, or other wildlife. No reviewed studies indicate that operating wind turbines would reduce movement of terrestrial species through the Project Area. The baseline conditions and impact analyses were developed in consultation with BLM, Reclamation, Western, National Park Service (NPS), U.S. Fish and Wildlife Service (USFWS), and Arizona Game and Fish Department (AGFD). The information was sufficient for the BLM and Reclamation to determine the Project's impacts to wildlife movement and to allow decision makers to make reasoned decisions about the Project.

BLM appreciates comments regarding further conservation measures for Detrital Wash. However, as described in Section 2.5.2.2 of the Draft EIS, Detrital Wash would not be impaired by project infrastructure. The Project Area is approximately 0.8 mile east of Detrital Wash at the closest point. The closest wind turbine corridor would be about 1.2 miles east of this wash. As is described in Chapter 2, an existing borrow pit would be used as a materials source and the Project access road from US 93 both incorporate a highly disturbed part of Detrital Wash. This area was disturbed during previous sand and gravel mining and excavation. The material source for this Project would be within the permitted area including areas that were previously disturbed.

BLM realizes the importance of developing mitigation measures that are designed to lessen or eliminate impacts to the targeted resource or species. BLM is implementing mitigation measures consistent with its programmatic EIS for wind developments, similar wind development projects, and the level of impacts for this specific project. These mitigation measures can be found in Appendix B Best Management Practices in the Draft and Final EIS.

97 The opportunity for the collocation of wind and solar facilities is not eliminated by the proposal to approve a right-of-way (ROW) grant for the development of the wind farm project. Should there be a proposal to collocate solar facilities within or adjacent to the proposed Mohave County Wind Farm Project, BLM would consider the proposal and whether the application for solar facilities would conflict with the wind farm project (43 CFR 2805.15(b)).

98 Currently, there is no proposal for a solar generation component to be collocated within the wind farm site, although solar panels may be installed on top of the Operations & Maintenance (O&M) Building as a source of power for the building. BLM and Reclamation are responding to the existing application to develop wind energy. Federal regulations allow for the common use of ROWs and if a compatible solar energy application is submitted for the facility to be located within or near the proposed Wind Farm Site, the BLM would be required to consider the application. BLM and Reclamation could consider applications for solar energy development projects in the future, similar to their consideration of this project, should applications for such uses of public land be requested. At this time, BP is not developing solar projects, but the construction of a wind farm would not preclude the construction of a solar project on the same land or in the vicinity should BP or another developer file an application with BLM in the future for rights-of-way that do not conflict with the project (43 CFR 2805.15(b)).

99 While it is the responsibility of BLM and Reclamation to approve or deny ROW applications, Section 1.3 of the Draft EIS states that the purpose for the proposed action is to respond to the projected demand for renewable energy and the need is to assist Arizona (or other western states) with meeting established Renewable Energy Portfolio Standards. The proposed action also would assist in addressing the management objectives in the National Energy Policy Act of 2005 (EPAct) to approve 10,000 MW of electricity from non-hydropower renewable energy projects located on public lands, and to further the purpose of the Secretarial Order 3285A1, which establishes the development of environmentally responsible renewable energy as a priority for the Department of the Interior.

The National Environmental Policy Act (NEPA) process provides for addressing and incorporating environmental concerns throughout the entire process, and is the primary reason for establishing the act.

Comments on the Mohave County Wind Farm Draft EIS

102 Nor does the DEIS describe the project’s contributions toward reducing greenhouse gas (GhG) emissions associated with fossil-fuel energy production, and including reduced local and regional air and public health impacts, increased energy resource diversity and decreased price volatility. A reduction in GhG emissions from developing renewable energy should be based on comparative emissions from fossil fuel-based energy production.

Because a reduction in GhG emissions is a primary public benefit of renewable energy development, it is critical that the agencies quantify this reduction to the extent possible. The agencies’ analysis of GhG reductions should also include a comprehensive look at the project’s impacts, including GhG emissions during manufacture, construction, operation, decommissioning, and reclamation of the project site.

The results of this analysis should then be compared to similar analyses for fossil-fuel based energy production, including combined-cycle natural gas fired and coal fired power plants. Such an analysis will provide the public a clear indication of the costs and benefits of the proposed project and allow stakeholders to make decisions regarding the project based on the best available science and data.

The BLM has a responsibility to ensure that this proposed project is truly in the public’s interest and that the trade-offs—industrial development in the desert near a wilderness area and national recreation area versus promoting renewable energy—are worth it.

The Mojave County Wind Farm project will be the second wind project to go through the permitting process on BLM land in Arizona and has the opportunity to be a leader and a model for subsequent applicants in the process. By being sited on public lands, this project will benefit from a public resource and should reflect a strong commitment to natural resource stewardship and the environment.

103 **Recommendation:** In the Final EIS, the BLM should address how other options, including other project locations and configurations, might address the policies identified as part of the project’s purpose and need.

104 **Recommendation:** In the Final EIS, the BLM should comprehensively analyze the MCWFP project’s net reductions to GhG emissions, including GhG emissions during manufacture, construction, operation, decommissioning, and reclamation of the project site. The analysis should consider both the potential for the project to reduce GhG emissions as well as potential for the project to increase GhG emissions, for example, by disturbing undisturbed land currently useful for carbon sequestration. The results of this analysis should then be compared to the same type of analysis for fossil-fuel based energy production, including combined-cycle natural gas fired and coal fired power plants.

3. Necessity for a Broader Range of Alternatives

The alternatives section is the “heart of the environmental impact statement” and “should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public.” 40 C.F.R. § 1502.14. As part of this requirement, BLM must “[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study,

Responses Continued

Scoping comments provide initial guidance in the issues to be analyzed. Data collection and information obtained through literature and agency coordination contributes to the impact analysis and the development of environmentally sensitive alternatives. Public and agency comments on Draft EISs often helps to identify additional methods to further mitigate adverse environmental effects.

100 See response 98 regarding the development of renewable energy.

101 As described in BLM Instruction Memorandum No. 2011-059, the BLM relies on industry to identify renewable energy technologies and general project locations and configurations that are technically and economically viable given current market conditions, renewable portfolio standards, technological advancements, and transmission access. BLM's purpose and need for action arises from the BLM's responsibility under Federal Land Policy Management Act (FLPMA) to respond to a ROW application requesting authorized use of public lands for a specific type of renewable energy development.

102 Section 4.2.5 includes a graph (Figure 4-1) that provides a comparison of the life cycle greenhouse gases (GHG) emissions for a wide range of electricity generating technologies including wind generated energy and fossil fuel generated energy. The figure shows GHG emissions directly associated with the power generating equipment and more indirect emissions resulting from acquiring the fuel source (if applicable), transporting materials, constructing the facility, and decommissioning the facility. The life cycle GHG emission factor per kilowatt hour of energy produced for wind energy is shown as 5 percent and 10 percent of the GHG emission factors for future coal and natural gas fueled facilities, respectively. While the information is not project specific, it provides the public with a clear indication that wind generated electricity results in substantially less GHG emissions than fossil-fuel generated electricity.

103 BLM considered other locations, project configurations, and options, but eliminated such alternatives from detailed analysis as described in Section 2.9 on page 2-57 of the Draft EIS. In general, BLM does not dictate what applications it receives or necessarily where a potential applicant may propose for development. BP Wind Energy's proposal seeks to use a particular area based on proprietary information that it gathered regarding a marketable wind resource. Alternatives B and C, developed in response to comments received during scoping, and Alternative E, developed in response to comments on the Draft EIS, offer three different configurations.

104 See response 102 regarding GHG emissions.

Comments on the Mohave County Wind Farm Draft EIS

briefly discuss the reasons for their having been eliminated.” *Id.* “The existence of a viable but unexamined alternative renders an environmental impact statement inadequate. An agency must look at every reasonable alternative, with the range dictated by the nature and scope of the proposed action, and sufficient to permit a reasoned choice.”¹

The BLM has failed to evaluate all reasonable alternatives for the MCWFP. While we understand that the applicant has endeavored to limit the scope of the DEIS to options that are covered under the existing interconnection request with the Western Area Power Administration (WAPA), which are either 425 MW or 500 MW depending on the ultimate Record of Decision (ROD) on the interconnection. [We believe that the three action alternatives fail to evaluate all reasonable alternatives, thereby not fully complying with the NEPA process. There may be a variety of economically feasible options for the development of this project that would both meet the project goals and lower the environmental consequences of the development.

105

One such option that could be considered would be to reduce the size of the project, avoiding the more ecologically sensitive lands that are discussed further in these comments. A reduced number of turbines, along with a reduced project footprint, could make a significant difference in impacts to visual character, noise, and wildlife. Even if the generation capacity would be reduced to 300 MW, the reduction in impacts could be significant enough to create a better overall project.

106

Recommendation: The BLM should expand the range of alternatives to include an alternative that reduces the size of the project, focusing development on lands that have lower ecological conflicts, lower impacts to visual resources, and lower noise consequences.

4. Biological Resources

4.1. Special Status Species

We appreciate the efforts of the project proponent and BLM to select a project site that avoids habitat for species listed under the Endangered Species Act (ESA). Parts of the project area are located within a REDA identified in the DEIS for the Arizona BLM’s RDEP. As noted above, REDAs are areas that have been identified through screening and that are thought to have “low resource sensitivity”.

However, the project site does contain habitats for special status species, including the Sonoran desert tortoise, an ESA candidate species. For such species, the BLM must adhere to its special status species policy: “Objectives of the BLM special status species policy are to 1) conserve and/or recover ESA-listed species and the ecosystems on which they depend so that ESA protections are no longer needed for these species; and 2) initiate proactive conservation measures that reduce or eliminate threats to BLM sensitive species to minimize the likelihood of and need for listing of these species under the ESA.”

The most prudent and cost effective way to achieve these objectives is close consultation with the U.S. Fish and Wildlife Service (USFWS) and the Arizona Game and Fish Department (AZGFD), avoidance through robust screening, monitoring, effective mitigation, and application of the precautionary

¹ [Alaska Wilderness Recreation & Tourism Ass’n v. Morrison, 67 F.3d 723, 729 \(9th Cir. 1995\).](#)

Responses Continued

105 NEPA directs the BLM to “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources” (NEPA § 102(2)(E)). As explained in BLM Instruction Memorandum 2011-59, “the BLM must explore alternative means of meeting the purpose and need for the action. For a renewable energy right-of-way application, alternatives will include denying the application (the No Action Alternative) and granting the application as submitted by the applicant following the pre-application process (the Proposed Action). The BLM must consider other reasonable alternatives through the NEPA process, including modifications to the right-of-way application as submitted, that meet the purpose and need for the action and provide a clear basis for choice among options (40 CFR 1502.14).” A discussion of alternatives need not be exhaustive. What is required is information sufficient to permit the BLM to make a “reasoned choice” among alternatives so far as environmental aspects are concerned (40 CFR 1502.14; see also, BLM NEPA Handbook H-1790-1 § 6.6), BLM NEPA Handbook H-1790-1 § 6.6.1, and BLM Instruction Memorandum 2011-59.

BLM and Reclamation did consider alternatives with fewer turbines as described in Section 2.6.2 on page 2-44 of the Draft EIS. Table 2.6 – Range of Turbine Types, Turbine Counts, and Power Production by Alternative – compared 1.5- to 3.0-MW turbines for each of the action alternatives and the feasibility of reducing the Project’s footprint based on generating capacity was considered within the boundaries described in Alternatives B and C. Section 2.9.8 Reduced Footprint with Reduction in Capacity in the Draft and Final EIS considered an alternative that both reduced the project footprint and the generating capacity to 300 MW, but this was eliminated from detailed because the technical design of such an alternative would be substantially similar to the reduced footprint Alternatives B and C, which show an output range from 310 MW to 500 MW and are analyzed in the EIS. Given the similarities in design of a reduced footprint to Alternatives B and C, the effects also would be substantially similar.

While this alternative also considered that “the Applicant would be required to reapply for interconnection with Western” the “re-application could make the project infeasible due to added costs, delays, and uncertainties associated with the new application’s assumption of a later position in the interconnection queue.” Further in this section on page 2-60, the Draft EIS also discloses that “A reduced footprint alternative that focuses on a 300 MW limit for generation capacity would not necessarily produce a project that is smaller in footprint size than Alternatives B and C. The size of the footprint is dictated by the type of turbines selected (i.e., manufacturers’ specifications of the different types of turbines vary).” The Project footprint might not change with a reduced MW project as a project of this size may not reduce the overall project footprint. A 300 MW project would require 200 turbines with a 1.5-MW nameplate capacity to generate a total of 300 MW. The estimated number of turbine positions that would fit within the Alternative B and Alternative C footprint with this size of machine is 208; this is illustrated in Maps 2-5 and 2-8, respectively, and analyzed in Chapter 4.

106 Alternative E, the Agencies’ Preferred Alternative, is a combination of Alternatives A and B. This reduced footprint alternative was developed to reduce impacts to golden eagles, while also reducing noise and visual impacts. Similar to Alternative B, several of the turbine corridors in the northwest corner of the Alternative A Wind Farm Site and certain corridors in the northeastern portion of the site where the turbines would be along ridgelines would be excluded from the Project Area. Consistent with Alternative A and B, Alternative E would provide for a minimum of ¼ mile between private property boundaries and the nearest turbine. Like Alternative A, the southernmost turbine corridor in the Wind Farm Site would be available, but only if needed to meet the generation capacity requirements identified in the interconnection agreement with Western. The Alternative E Wind Farm Site would consist of up to approximately 35,313 acres of BLM-administered land and approximately 2,777 acres of Reclamation-administered land (see Maps 2-11 to 2-13 in Chapter 2 of the Final EIS).

Alternatives B and C both reduce the size of the Project in terms of land area with Alternative B covering 12,339 fewer acres (about 26 percent) than Alternative A and Alternative C involving about 11,757 acres (about 25 percent) less than Alternative A. Alternative E, the Agencies’ Preferred Alternative, involves about 8,949 fewer acres (about 19 percent) than Alternative A, assuming that all phases of Alternative E

Comments on the Mohave County Wind Farm Draft EIS

107 principle¹ We encourage the project applicant to follow scientifically sound monitoring methodologies to detect and quantify mortality at locations where it is occurring according to the US Fish and Wildlife Service Wind Guidelines. There is still some uncertainty regarding impacts to wildlife from utility-scale wind projects. Issues such as design and placement of turbines, habitat fragmentation and displacement, and noise as a disturbance or attractant may warrant further research and/or consideration in future monitoring plans.

We advocate for avoidance, minimization and mitigation measures that result in a net-benefit for special status species. See below for our recommendations pertaining to special status and sensitive wildlife species and their habitats.

4.1.1. SONORAN DESERT TORTOISE (*Gopherus agassizii*)

As noted in the DEIS, the Sonoran desert tortoise is a federal candidate species pursuant to the federal ESA, and according to the AZGFD's HabiMap, the entire MCWFP site is within the predicted distribution for Sonoran desert tortoise. In addition, the DEIS states that three Sonoran desert tortoises, plus signs of desert tortoises such as burrows and scat, were found during various surveys of the project area. Given that the project area is both within the predicted distribution area of tortoises and includes documented habitat for tortoises, there could be significant impacts on tortoise habitat and metapopulation dynamics.

Following some background information on the Sonoran desert tortoise, we make several recommendations to assist the BLM in assuring a net conservation benefit for this special status species:

- Analyze Impacts of Non-native Species Spread and Associated Changes to Fire Regime
- Avoid and Reduce Effects of Habitat Fragmentation
- Clarify How Disturbances Equate to New Areas for Burrow Construction
- Avoid Vehicle/Tortoise Collisions and Facilitate Connectivity Across Barriers

Background

The USFWS Federal Register Notice, 12-Month Finding on a Petition To List the Sonoran Population of the Desert Tortoise as Endangered or Threatened, provides a great deal of information on this species. As part of this, USFWS announced a finding for the Sonoran desert tortoise of warranted but precluded by the need to address other higher priorities.² The following species account is a compilation of excerpts from the petition:

¹ The most broadly accepted definition of the Precautionary Principle is Principle #15 of the June 1992, Declaration of the Rio Conference on Environment and Development, which reads: "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

² Federal Register / Vol. 75, No. 239 / Tuesday, December 14, 2010. Internal (i.e. in Federal Register) references are not re-referenced herein but may be found as citations in the Federal Register notice.

Responses Continued

are needed to satisfy the nameplate capacity requirements for the Project. The changes in ecological, visual, and noise effects for these alternatives are described in Chapter 4.

See response 105 regarding other alternatives that would reduce the size of the project that were eliminated from detailed consideration.

107 As described in response 106, Alternative E, the Agencies' Preferred Alternative combines aspects of Alternatives B and C. BLM understands using current and statistically valid methods during post-construction wildlife monitoring is important to make decisions on mortality estimates. Due to the models conservative fatality and because the actual number of fatalities could vary from these projections, BP Wind Energy has committed to 2 years of post-construction mortality monitoring after commercial operation with additional post-construction mortality monitoring occurring at 5-year intervals. The results of this monitoring will be compared against thresholds that are tied into an adaptive management strategy designed to minimize or mitigate impacts. Monitoring and adaptive management strategies are captured in BP Wind Energy's Eagle Conservation Plan, Bird Conservation Strategy and the Bat Conservation Strategy. Further mitigation measures may be employed by the BLM, Reclamation, USFWS, and AGFD based on post-construction mortality monitoring and an adaptive management strategy to address actual impacts and to ensure the correct level of mitigation.

Comments on the Mohave County Wind Farm Draft EIS

Sonoran desert tortoises are most closely associated with the Arizona Upland and Lower Colorado River subdivisions of Sonoran desertscrub and Mojave desertscrub vegetation types. They occur most commonly on rocky, steep slopes and bajadas, and in paloverde-mixed cacti associations¹. Sonoran desert tortoise density has been observed to be higher in the Arizona Upland subdivision of the Sonoran desertscrub than in the Lower Colorado subdivision of the Sonoran desertscrub or in Mojave desertscrub². In addition to the use of vegetation to meet energy and nutritional needs, the Sonoran desert tortoise uses vegetation for predator avoidance, thermal protection, and in social behaviors³. An important attribute of Sonoran desert tortoise habitat is the presence of cryptogamic crusts (soil crusts with unique, microscopic association of flora and fauna)⁴. These occur on the surface of Sonoran Desert soils and assist with nitrogen fixing to enhance soil fertility, improve water infiltration into soils, and prevent or lessen effects from wind and water erosion, all of which help to sustain vegetation vital to the Sonoran desert tortoise⁵.

In addition to steep, rocky slopes and bajadas, Sonoran desert tortoises also use intermountain valleys as part of their home ranges and for dispersal at all age classes⁶. In the Ironwood National Forest, Averill-Murray and Averill-Murray (2005, p. 65) found tortoises or their signs (such as scat (droppings) and burrows) on 92 percent of transects in boulder habitat, on 71 percent of transects that included incised washes (dry stream beds that flow in response to precipitation), and on 25 percent of transects that had neither boulder habitat nor incised washes. Sonoran desert tortoises were found up to one mile (mi) (1.6 kilometers (km) away from the nearest slope, indicating that they occur in low densities in inter-mountain valleys. Averill-Murray and Averill-Murray (2005, p. 65) stated that maintaining these areas “may be important for longterm population viability....”

Urban development, canals, and transportation infrastructure, such as roads and railroads, disrupt ecological processes, increase mortality in animals, promote the degradation, loss, and isolation of wildlife habitat, and cause fragmentation of populations⁷. Sonoran desert tortoise populations are island-like in their distribution, meaning they are generally concentrated on the bajadas and hillsides of mountains, and less distributed within the valleys between these areas. As a result, they may be particularly vulnerable to large-scale disturbances that affect the suitability of

¹ Ortenburger and Ortenburger 1927, p. 120; Burge 1979, p. 49; 1980, p. 48

² Berry 1984, p. 434; AIDTT 2000, p. 4; Boarman and Kristan 2008, p. 19

³ Avery and Neibergs 1997, p. 13; Grandmaison et al. in press, p. 3

⁴ Bowker et al. 2008, p. 2309

⁵ DeFalco 1995, p. 22; DeFalco et al. 2001, pp. 1, 9

⁶ Averill-Murray and Averill-Murray 2002, p. 16

⁷ Spang et al. 1988, p. 9; Saunders et al. 1991, pp. 23–24; Averill-Murray and Klug 2000, p. 68; Seiler 2001, p. 3; Howland and Rorabaugh 2002, p. 335; Edwards et al. 2004, p. 496

Comments on the Mohave County Wind Farm Draft EIS

intervening habitat¹ (). Factors that affect interpopulation dynamics in Sonoran desert tortoises include distance between populations, physical size of habitat areas, sizes of source populations, and the ease of which intervening areas can be crossed by dispersing individuals². The effect of potential barriers to inter-population movements of Sonoran desert tortoises (discussed above in the Species Information section) is not equal across their range. The ability for the Sonoran desert tortoise to move among populations is also important for allowing shifts in their range in response to climate change, and to promote recolonization after fire or other regional disturbances³.

As stated above, habitat loss and fragmentation, disease, exotic plant species and associated fires, illegal collection, and off-road vehicles, among other issues, threaten the stability and recovery of Sonoran desert tortoise populations. It is critical that we protect large, undisturbed areas of habitat from these stressors to protect declining populations of this species.

Analyze Impacts of Non-native Species Spread and Associated Changes to Fire Regime

Habitat conversion, including conversion to fire-prone grasslands associated with non-native grasses, is a major concern relative to desert tortoise habitat.

According to the National Park Service: There has been a substantial decrease in perennial grasses, shrubs, and native annuals and an increase in exotic annuals such as red brome (*Bromus rubens*). These changes in vegetation can be detrimental to desert tortoises for a number of reasons. First, they require perennial shrubs for cover from the intense solar radiation in the desert. Second, perennial grasses are important secondary food sources for the desert tortoise in many areas. Third, recurrent fires and competition from exotic annuals may reduce the abundance and diversity of native forbs which are the major food source of the desert tortoise. There is some controversy over the role that introduced exotics play in the desert tortoise diet suggesting that further research is needed.⁴

108 Unfortunately, no specific noxious weeds surveys have been conducted in this project area (DEIS at 3-
109 35), but many such species have been observed and are known to be in the area including Sahara
mustard (*Brassica tournefortii*), red brome (*Bromus rubens*), and cheat grass (*Bromus tectorum*), among
others. Impacts of the spread of these non-native species in the project area should be considered more
thoroughly in the EIS. Only minimal information is provided, and specific impacts the spread of non-
native vegetation pose to desert tortoise habitat and ecosystem processes such as fire regime are not
adequately addressed.

¹ Spang et al. 1988, p. 9

² Howland and Rorabaugh 2002, p. 335

³ Beier and Majka 2006, p. 2

⁴ Desert Tortoise, available at <http://mbreiding.us/ert/Arizona/Rincons/www.nps.gov/moja/www.nps.gov/moja/planning/tort.htm> (last viewed on 01/04/2010).

Responses Continued

108 The weeds mentioned in this comment are addressed in the text in Section 3.5.1.5 of the Draft and Final EIS and are described as known from the region as well as a recent introduction of the Malta star thistle. Section 3.5.1.5 includes a review of weed data that was from both incidental observations of weed infestations during baseline biological surveys and the records data available through the Southwest Exotic Plant Information Clearinghouse (SEPIC). This information is the records data available through the SEPIC. The SEPIC data were reviewed in the 25-mile area surrounding the Project Area in order to capture all known infestations of non-native plants in the region.

The Draft EIS used the best available data regarding the presence and location of noxious weeds and invasive plant species. As stated on page 2-5 of the Draft EIS, prior to ground disturbance the “locations of sensitive resources would be flagged or clearly marked in and around the Project work area to identify any possible conflicts or to distinguish areas to be avoided and/or areas requiring cultural resource, biological, paleontology, or weed monitoring.” BP Wind Energy shall conduct surveys for biological resources including noxious weed species within the Project Area once the final disturbance areas are determined. The Project would be designed to avoid (if possible) or minimize impacts on sensitive resources. The BLM may rely on the best available information (even if it is not all the information that could be generated with unlimited time and funding about a resource or type of impact) if it is sufficient to allow a reasoned analysis of particular impact using scientific analysis, expert agency comments, and comments resulting from public scrutiny.

109 Impacts from weed infestations are described in Section 4.5 of the Draft EIS, including subsections for wildland fire and desert tortoise during project construction, operation and maintenance, and decommissioning. Project construction and operations would incorporate the Best Management Practices (BMPs) as stated in Attachment A of the *Record of Decision for the Implementation of a Wind Energy Development Program and Associated Land Use Plan Amendments* as described in Section 2.4 on page 2-4 of the Draft EIS. As discussed on page 2-5 of the Draft EIS, sensitive resources would be flagged or clearly marked to identify any possible conflicts or to distinguish areas to be avoided.

The data and other information BLM used in preparing the Draft and Final EIS are identified in the individual sections as well as in Chapter 6 – References. The Draft and Final EIS provide adequate analysis for the BLM, Reclamation, and Western planning and decision making in relation to the potential environmental effects on desert tortoise and their populations.

Comments on the Mohave County Wind Farm Draft EIS

110 [**Recommendation:** The BLM should fully analyze the potential impacts construction and operations could have upon desert tortoise habitat and ecosystem processes (e.g. fire regime) via the introduction and/or spread of non-native plants.

Avoid and Reduce Effects of Habitat Fragmentation

Habitat fragmentation is a major factor in tortoise decline. Each tortoise requires about 1.5 square miles of habitat over its lifetime, and male tortoises may require even more. Tortoise habitat area needs are greater in drought years, which Arizona has been experiencing for many years. Since 1958, average annual precipitation has decreased in most of Arizona. There also have been indications that the strong westerly jet stream that directs storms in the Southwest during the winter has shifted north in the spring since the 1970s. Less precipitation and warmer conditions worsen drought conditions¹. A shift in rainfall patterns associated with climate change is an issue of concern for tortoises as it impacts the availability of forage, cover plants, and more.

111 [The MCWFP is likely to further fragment habitat for tortoises. This fragmentation has the potential to be significant, considering developments planned for the lands around and in close proximity to the project area. However, detailed analysis of these impacts to tortoise is not included in the DEIS. The EIS must include a thorough description and analysis of potential direct, indirect, and cumulative impacts to the tortoise due to habitat fragmentation.

112 [The DEIS appears to underestimate additional important Sonoran desert tortoise habitats in the project area. In particular, habitat in flatter terrain in intervening valleys, although more sparsely populated, is nonetheless key to maintaining habitat connectivity. Areas that are free of human-created barriers are also vital so as to maintain a functionally connected metapopulation. As described in the species account, core, higher density populations of this species tend to be “island like” and associated with steeper terrain and aspects, however, the AZGFD’s predicted distribution, includes more of the flatter terrain that “may be important for long-term population viability”.

113 [**Recommendations:** Habitat connectivity in the valley between core, higher density populations in the foothills and bajadas should be protected through careful planning and siting of wind turbines, roads, and other supporting infrastructure. Areas with habitat characteristics favorable for tortoises should be avoided and minimized to the greatest extent practicable. The EIS must include a thorough description and analysis of potential direct, indirect, and cumulative impacts to the tortoise due to fragmentation.

How Does Disturbance Equate to New Areas for Burrow Construction?

114 [The DEIS states that “the development of project features such as roads and foundations for turbines and other facilities could result in new areas for the construction of burrows,” which “could indirectly help maintain burrow sites and the tortoise population within the project area” (DEIS at 4-44).
115 [However, the DEIS does not provide justification for this statement. [The reference cited (Lovitch 2000)
115

¹ Climate Assessment for the Southwest (CLIMAS): <http://www.climas.arizona.edu/sw-climate/climate-change>

Responses Continued

110 BLM manages desert tortoise according to Instruction Memorandum AZ-2012-031 Desert Tortoise Mitigation Policy and IM AZ-91-16, Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona, and Reclamation is following this guidance for this Project. The Draft EIS used the best available data regarding the presence and location of known infestations of noxious weeds, desert tortoise habitat and presence based on baseline surveys. Impacts from weed infestations are described in Section 4.5 of the Draft EIS, including subsections for wildland fire and desert tortoise during project construction, operation and maintenance, and decommissioning. The analyses in the Draft EIS conclude that fire regime could change, with more frequent and intense fires that have the potential to change native plant associations and that both infestations and changes to fire regime may degrade or destroy habitat for the desert tortoises. However, as discussed in Section 4.5.2.7, the Draft EIS also acknowledges that development of and adherence to a weed management plan could minimize direct and indirect impacts on individuals and habitats over the life of the Project. Appendix C includes a summary of the draft Integrated Reclamation Plan.

111 See response 110 regarding impacts on desert tortoise. Section 4.16.4.1 of the Draft EIS analyses the cumulative effects of Alternatives A, B, and C, and Section 4.16.4.1 in the Final EIS includes analysis of Alternative E in conjunction with planned developments in the cumulative impact analysis area. An aggregate description of the effects is presented in both the alternatives and cumulative sections of the document. As is stated in Section 4.16.4.1, the disturbances from the Project would contribute less than 0.1 percent of the analysis area for cumulative impacts.

The Draft EIS used the best available data with respect to wildlife movement corridors, habitat connectivity, and habitat fragmentation, as described in response 96. The baseline conditions and impact analyses were developed in consultation with BLM, Reclamation, Western, NPS, USFWS, and AGFD. The Draft EIS and Final EIS provide adequate analysis for BLM, Reclamation, and Western's planning and decision making in relation to the potential environmental effects.

112 In the Draft EIS, Section 3.5.2.4 describes the use of the Project Area by Sonoran desert tortoise and Section 3.5.2.6 describes the wildlife movement corridors. As described in the Section 3.5.2.6, "Given that there is little development, broad areas of topographic relief, and most land is under Federal jurisdiction; the landscape is highly connected and conducive to broader movements of big game, medium-sized mammals, tortoises, or smaller terrestrial wildlife that would not be confined to a corridor." Potential direct and indirect effects on the Sonoran desert tortoise population were evaluated in Section 4.5.2.5 of the Draft EIS. As indicated in the Draft EIS, distribution and metapopulations of the Sonoran desert tortoise are not expected to change as the "impacts from disturbance and infrastructure would affect about 3 percent of the available habitats in the Project Area during the long-term, which could minimally impair wildlife movement in the long-term. No regionally important wildlife movement areas would be impacted."

113 See response 96 regarding habitat connectivity impacts to desert tortoise and other wildlife. As discussed in Draft EIS Section 4.5, Impacts to Biological Resources, the project would not directly affect habitat within wildlife movement corridors and would not conflict with desert tortoise recovery goals and objectives. Section 3.5.3.3 of the Final EIS has been revised to reflect updated desert tortoise habitat classification showing that Category I and II habitat is not present with the Project Area. Category III habitat is present in the northern two-thirds of the Project Area.

114 The literature reference was erroneously entered in the text and was overlooked as an entry into the bibliography. The text is corrected from Lovitch 2000 to Lovich and Daniels 2000. The full citation is added to the bibliography as:

Lovich, J.E. and R.Daniels. 2000. Environmental characteristics of desert tortoise (*Gopherus agassizii*) burrow locations in an altered industrial landscape. *Chelonian Conservation and Biology* 3(4):714-721.

The cited text in the Draft EIS is consistent with the conclusions of the referenced document. The revised reference does not result in a change to the comparison of impacts between alternatives in the Draft EIS.

Letter Continued

Comments on the Mohave County Wind Farm Draft EIS

115 | is not included in the References section (Chapter 6)¹¹⁵ so we could not verify this information. Numerous
114 | studies, including those mentioned above, have shown that even small developments such as dirt roads
and the resulting habitat loss have significant negative impacts on tortoises.

Recommendation: The above statement (DEIS at 4-44) either needs to be clarified or removed and the impacts better analyzed.

Avoid Vehicle/Tortoise Collisions and Facilitate Connectivity across Barriers

116 | One of the primary concerns regarding tortoises is mortality due to vehicle collisions. The DEIS
identified a 25-mph speed limit as a possible mitigation factor for this threat. How will the 25-mph
117 | speed limit be enforced? Is there any funding available to ensure enforcement activities? Without strict
enforcement, it is highly unlikely that those traveling on the project area will adhere to the 25-mph
118 | speed limit, especially members of the general public who access the area for recreation, etc. The DEIS
states that “using full-time, qualified tortoise biological monitors to escort vehicles would reduce vehicle
collisions and the direct loss of individual tortoises” (DEIS at 4-45). Will all vehicles traveling on site be
escorted at all times throughout the life of the project? While preferable, such a measure does not
seem feasible. Other approaches that could avert vehicle/tortoise collisions, such as building road
crossing structures and utilizing temporary tortoise-proof fencing during construction and
decommissioning should be considered and implemented.

119 | Much of the Mitigation Strategies section (Section 4.5.6, DEIS at 4-60) focuses on operators surveying
the project area in order to identify potential threats to species, such as the tortoise. However, it should
be mandatory to have a qualified biologist conduct these surveys prior to any actions on the landscape,
rather than the operators. Many species that inhabit this area, such as the desert tortoise, are highly
specialized and can be difficult to locate, even by qualified professionals.

120 | **Recommendations:** Wildlife-dedicated crossing structures designed to facilitate the safe movement of
tortoise across barriers such as roads should be implemented. *Temporary* tortoise-proof fencing should
be installed along roadways during construction and decommissioning phases so as to prevent tortoises
from crossing into harm’s way during periods with the highest traffic volumes. Such fencing should be
removed when traffic volumes are projected to be lighter, so as to avoid unintentional habitat
121 | fragmentation. The project proponent must employ biologists trained specifically in desert tortoise
biology and mitigation techniques, rather than relying on operators who have not received such focused
training.

4.1.2. BATS

Background Information

Bat species currently face a number of emerging threats with cumulative effects that could pose serious threats. White-nose syndrome (WNS), an epidemic disease affecting cave-dwelling bats in the Eastern U.S., has rapidly spread from New York as far west as Missouri since 2006, and has the potential to affect species in the Southwest in the near future. Wind power development is also expanding, with

Responses Continued

115 The reference “Lovitch 2000” is misspelled in the text. The correct spelling is “Lovich.” Section 4.5.2.7 (page 4-44 in the Draft EIS) has been revised in the Final EIS to (Lovich and Daniels 2000).

116 During the construction phase, BLM proposes to monitor (or retain a third-party contractor to monitor) construction activities to verify that project stipulations are being satisfied and that BMPs and other mitigation measures are being implemented. Speed limits would be monitored and enforced. Should tortoise mortality or dust levels exceed acceptable standards with a 25 mph speed limit, adaptive management strategies would be employed, which may include lowering the speed limit and/or other strategies deemed appropriate. During operations, the 25 mph speed limit would be retained, but it would be less enforceable, particularly with the public. Speed limits would be expected to be less of a concern during operations because onsite traffic would be substantially less than during construction.

117 . BLM manages desert tortoise according to Instruction Memorandum AZ-2012-031 Desert Tortoise Mitigation Policy and IM AZ-91-16, Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona. BLM has developed mitigation measures appropriate to the level of activity and desert tortoise habitats. The mitigation measures section states that the use of biology monitors would be consistent with the recommendations from the Arizona Interagency Desert Tortoise Team (AIDTT 2008). These mitigation measures may only be warranted in areas with moderate to high tortoise density, Category I or II habitat, or in Sonoran Desert Management Areas. The Mohave County Wind Farm Project does not contain Category I or II habitat and is not located within a Sonoran Desert Management Area.

Section 4.5.6 on pages 4-61 to 4-63 of the Draft EIS include the following mitigation measures:

- Employ BLM’s Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona: New Guidance on Compensation for the Desert Tortoise (Instruction Memorandum No. AZ-92-46) if the classification of desert tortoise habitat includes categories listed in the Programmatic Agreement. This would include implementation of the standard 100 percent avoidance for desert tortoise and their burrows, as outlined in AGFD guidelines.
- Configure access roads and utility corridors to avoid high quality habitats and minimize habitat degradation and fragmentation.

The designated desert tortoise coordinator would watch for tortoises wandering into construction areas, check under vehicles prior to vehicle movement, check at least three times per day and prior to placing project related items or backfill material into any excavations that might trap tortoises, and conduct other activities necessary to ensure that death and injury of tortoises is minimized.

118 Areas of suitable habitat occur within the Project Area, but the Project is not located within areas classified as Category I or II habitat or a Sonoran Desert Management Area. If desert tortoises should be present, the mitigation measures proposed within Section 4.5.6 of the Draft EIS would minimize the potential for collisions with vehicles. The AIDTT released their Recommended Standard Mitigation Measures for Projects in Sonoran Desert Tortoise Habitat in 2008. The mitigation measures recommended (e.g., fencing, construction monitoring by qualified desert tortoise biologist), “may only be appropriate in areas of moderate to high tortoise density, Category I or II habitats, or Sonoran Desert Management Areas.”

119 BLM understands that the use of the term ‘operators’ is confusing, and has revised this term to ‘BP Wind Energy’ in the mitigation sentences that utilize the term ‘operators.’ BLM and BP Wind Energy acknowledge that the detection of species in the Project Area can be difficult, and have developed the species surveys and survey protocols consistent with BLM, USFWS, NPS, Reclamation, and AGFD requirements. Survey protocols were reviewed and approved by the BLM and cooperating agencies and the survey design maximizes detection of species. Qualified biologists would collect and analyze the data.

120 See response 118 regarding required tortoise mitigation.

121 See response 119 regarding the use of the term “operators.”

Comments on the Mohave County Wind Farm Draft EIS

developments planned in habitats, such as the Sonoran Desert, where it has never existed before at a large scale. Although tree bat species (hoary bat, western red bat, silver-haired bat) that frequent the altitudes occupied by turbine blades and forage in open airspace have been most affected by wind turbine mortality to date (Arnett et al. 2008), free-tailed species found in the desert southwest such as the Mexican/Brazilian free-tailed bat and greater-western mastiff bat could also be vulnerable due to their similar use of this airspace; Mexican free-tailed bat mortalities have been documented in Oklahoma (Piorkowski and O'Connell 2010)¹.

122

Bats are long lived—some species routinely living to 30 years—and they do not reproduce quickly. Thus, they are particularly susceptible to dramatic population declines, particularly when breeding adults are lost from the population. While no nationwide programs track how many bats are killed by wind energy each year, the annual number of bat deaths attributed to wind energy is estimated to reach as high as 111,000 by 2020². Factors that contribute to bat deaths at wind farms are complex, poorly understood, and can be site-specific. In addition, estimates of preconstruction bat activity using established, ground-based bat inventory methods are not reliably correlated with post-construction fatalities at the same sites based on an analysis of data from existing facilities (NWCC 2010). This highlights the need to pursue survey methods that are more targeted to the specific problem, such as monitoring bat echolocation calls at the altitudes within which rotor blades would be installed, and monitoring of migration and daily movement patterns from nearby bat roosts or hibernacula.

Based on research conducted at other industrial wind turbine facilities, bats are killed by colliding with wind turbines, by barotrauma, or most likely a combination of the two³. Pulmonary barotrauma is tissue damage due to air expansion in the lungs that is not compensated for by exhalation, and is caused by abnormal high pressure such as that encountered by bats on the rear side of rapidly spinning turbine blades. Bats have an extremely sensitive and high-efficiency respiratory system, and a high sensitivity to pressure changes; because of this, the pressure drop experienced as they come in close proximity to the blades results in death due to barotrauma. Grodsky, Drake, and Behr et al hypothesize that if a turbine blade is spinning at roughly 170 meters per second—and assuming the reach of a bat's echolocation is about 60 meters—a bat would have roughly one-quarter of one second to react to the blade. Even if bats are able to avoid direct collision, they may not be able to avoid injuries from barotrauma. In fact, a recent study found that 90 percent of bat wind turbine fatalities found during carcass searches had injuries consistent with pulmonary barotrauma, and 50 percent had no injuries that could be attributed to wind turbine impact⁴; in other words, many bats that die due to wind turbine interactions never touch the turbine blades, and necropsy evidence indicates that this could be the major cause of bat mortality from wind turbines.

¹ Piorkowski, M.D., and T.J. O'Connell. 2010. Spatial Pattern of Summer Bat Mortality from Collisions with Wind Turbines in Mixed-grass Prairie. *The American Midland Naturalist* 164(2):260-269.

² <http://www.publicbroadcasting.net/netradio/news.newsmain/article/0/0/1842697/Nebraska.News/Holy.battere.d.bats!.Double.menace.threatens.farmers'.helpers>

³ Baerwald et al. 2008, Grodsky 2011, Cryan and Barclay 2009

⁴ Baerwald et al. 2008

Responses Continued

122 The BLM agrees that impacts to bats from wind energy projects are important, can be site specific, and the potential impacts may not be reliably predicted from preconstruction surveys. The level of importance is reflected in their detailed treatment in baseline surveys and descriptions of the existing conditions in Section 3.5.2.2 of the Draft EIS. The analysis of impacts in Section 4.5.2.4 is equally detailed. The results of both ground level and elevated acoustic monitoring stations are incorporated into both these sections. The limitations of reliably predicting fatality numbers from operating turbines are discussed in Section 4.5.2.4.

BP Wind Energy has committed to developing a Bat Conservation Strategy that includes post-construction mortality monitoring for 2 years initially and at 5-year intervals for the life of the project. USFWS, BLM, Reclamation, Western, and AGFD approved the Bat Conservation Strategy. The results of the post-construction mortality monitoring will feed into an adaptive management strategy, which incorporates feathering (i.e., adjusting the blades to not catch the wind) as a method to reduce fatalities. Further mitigation measures may be employed by the BLM, Reclamation, USFWS, and AGFD based on post-construction mortality monitoring and an adaptive management strategy to address actual impacts and to ensure the correct level of mitigation.

Comments on the Mohave County Wind Farm Draft EIS

Bat mortality from wind turbines is becoming recognized as possibly the most serious negative impact of large-scale wind power on wildlife species. Although relatively few bat mortalities were detected prior to 2001 because of the small size of bat carcasses and the fact that mortality monitoring studies were designed to detect birds (Kunz et al. 2007¹), as bat mortality monitoring has improved, increasing numbers of carcasses are being detected at WRAs across the U.S.

The number of proposed turbine towers more than 200 feet tall has increased nationwide from 950 in 2003, when the USFWS first issued voluntary guidelines for wind energy projects, to a total 79,513 by 2010, according to the American Bird Conservancy². In the second quarter of 2011 alone, the U.S. wind industry installed 1,033 megawatts, according to a report by the American Wind Energy Association. This trend towards taller wind turbines being installed is significant given that taller turbines have been linked to greater bat mortality (Barclay et al. 2007³, Rydell et al. 2010⁴), and this makes proper siting of these new installations critical to conserve bat species.

Based on these general concerns regarding bat biology and wind turbine interactions, we offer the BLM analysis and recommendations on the following topics for inclusion in the Avian and Bat Protection Plan and in the Final EIS:

- Management of BLM Sensitive Bat Species and AZGFD Wildlife of Concern
- Increased Cut-In Speeds During Night Operations
- Avoid Siting Turbines in the Northwest Portion of the Project Area and Near High-Quality Bat Habitat
- Need for Comprehensive Post-Construction Mortality Monitoring
- When Decommissioning Turbines in High-Quality Bat Habitat, do so at Low Activity Times of Year
- Active Monitoring for White-Nosed Syndrome

Management of BLM Sensitive Bat Species and AZGFD Wildlife of Concern

Five bat species documented in the Project vicinity or that could occur in the project area are categorized as BLM sensitive species. These include Allen's big-eared bat, California leaf-nosed bat, greater western mastiff bat, spotted bat, and Townsend's big-eared bat. The greater western mastiff bat is the only species among these that exclusively uses crevice sites for roosting while the spotted bat primarily uses crevice roost sites (WBWG 2005). Crevice sites are most likely to occur in the mountains surrounding Squaw Peak. Both species could be disturbed by blasting, construction, and

¹ Kunz, T. H., E. B. Arnett, W. P. Erickson, A. R. Hoar, G. D. Johnson, R. P. Larkin, M. D. Strickland, R. W. Thresher, and M. D. Tuttle. 2007. Ecological impacts of wind energy development on bats: questions, research needs, and hypotheses. *Frontiers in Ecology and the Environment* 2007; 5(6):315–324.

² <http://www.latimes.com/news/local/environment/la-me-gs-bird-advocates-urge-mandatory-standards-for-wind-energy-projects-20111214,0,2978806.story>

³ Barclay, R.M.R., Baerwald, E.F., Gruver, J.C., 2007. Variation in bat and bird fatalities at wind energy facilities: assessing the effects of rotor size and tower height. *Canadian Journal of Zoology* 85, 381–387.

⁴ Rydell, J., L. Bach, M. Dubourg-Savage, M. Green, L. Rodrigues, and A. Hedenström. 2010. Bat Mortality at Wind Turbines in Northwestern Europe. *Acta Chiropterologica* 12(2):261-274.

Comments on the Mohave County Wind Farm Draft EIS

decommissioning. The greater-western mastiff bat and Allen's big-eared bat were documented during baseline studies as flying at heights within the rotor sweep area, which represents an ongoing threat to these species during periods of operation.

The big free-tailed bat is the only bat species documented in the project area that is categorized by AZGFD as wildlife of greatest conservation need. Potential impacts to this species include potential for loss of roost sites that could occur in the mountains surrounding Squaw Peak in the northwestern corner of the project area, especially during blasting, construction and decommissioning.

Bat Acoustic Monitoring Should Be Done at Multiple Heights

123 [Acoustic surveys for bats are a well-established method to sample relative levels of pre-construction bat activity at windpower sites using non-invasive means. However, bat call data collected at ground level only is not a good predictor of post-construction bat fatalities (Collins and Jones 2009¹, Hein et al. 2011²), and research has shown that producing pre-construction bat data useful to project expected mortality requires acoustic monitoring at multiple heights above ground level (Weller 2007³).

124 [In particular, monitoring the airspace within the rotor swept area of turbine blades, ideally at the exact locations where turbines are proposed, is essential for bat mortality risk assessment. Thermal infrared video monitoring of bat interactions with wind turbines indicates that bats actively forage and congregate around turbines, repeatedly approaching both rotating and non-rotating blades, following or becoming entrapped in blade tip vortices, and rarely being struck by turbine blades (Horn et al. 2008⁴). They seem to be attracted to wind turbines as a landscape feature, although this assertion has not been tested rigorously, and would be difficult to test. Aside from foraging, there may be other reasons that bats are attracted to wind turbines. The migratory tree dwelling bats primarily affected by wind turbine mortality segregate themselves sexually in the spring and early summer, living in distinctly different areas during these times, and actively aggregate during the late summer/early fall migration period, when they make large latitudinal migrations. Although little detail is known about their mating habits, evidence indicates that they are a lekking species (similar to sage grouse) that concentrate themselves in defined areas during mating season in order to select mates and reproduce. It has been suggested that for the bat species that are primarily killed by wind turbines, the key features in the landscape where this naturally occurs are tall trees, and that wind turbines in the landscape are attracting migrating bats

¹ Collins, C., and G. Jones, 2009. Differences in Bat Activity in Relation to Bat Detector Height: Implications for Bat Surveys at Proposed Windfarm Sites. *Acta Chiropterologica* 11(2):343-350

² Hein, C. D., M. R. Schirmacher, E. B. Arnett, and M. M. P. Huso. 2011. Patterns of pre-construction bat activity at the proposed Resolute Wind Energy Project, Wyoming, 2009–2010. A final project report submitted to the Bats and Wind Energy Cooperative. Bat Conservation International, Austin, Texas, USA.

³Weller, T. J. 2007. Evaluating Pre-construction Sampling Regimes for Assessing Patterns of Bat Activity at a Wind Energy Development in Southern California. PIER Energy-Related Environmental Research Program. CEC-500-01-032.

⁴ Horn, J. W. E. B. Arnett and T. H. Kunz. 2008. Behavioral responses of bats to operating wind turbines. *Journal of Wildlife Management* 72: 123-132.

Responses Continued

123 See response 122 regarding acoustic monitoring surveys for bats.

124 BLM is aware that some species of bats are vulnerable to fatal interactions with wind turbines. Both ground level and elevated detectors were used in acoustic sampling. Elevated detectors used microphones attached to the met-towers that sampled bat activity within the rotor sweep area. The results of the elevated detectors are summarized in Section 3.5.2.2 of the Draft EIS, and the impacts are described in Section 4.5.2.4 of the Draft EIS for individual bat species detected at elevated stations. A detailed description of bat inventory methods, results, and mitigation measuring, including monitoring and adaptive management strategies, are captured in BP Wind Energy's Bat Conservation Strategy. Appendix C of the Final EIS includes a summary of the draft Bat Conservation Strategy and the mitigation measures, and the complete draft is appended to the Plan of Development. A final version of the Bat Conservation Strategy would be part of the Record of Decision (ROD) package and incorporated into the ROW grant if the project is approved.

Comments on the Mohave County Wind Farm Draft EIS

125 for this reason (Cryan 2008¹). [The possibility that migrating bats actually are attracted to wind turbines, the fact that they seem to actively investigate turbine blades, and the growing evidence that bats do not need to be touched by the blades to be killed raise the possibility that the viability of these bat species could be seriously compromised by wind turbine proliferation. Clearly, the most direct means to predict bat mortality using acoustic monitoring is to target bat detectors on the areas where this mortality is occurring.]

126 [The DEIS mentions the use of 13 portable met towers for pre-construction wind evaluations, but the bat surveys described on page 3-37 specify the use of ground-based detectors only. Pre-construction surveys should have made use of these portable detectors.] [The DEIS also mentions that during construction there will be three permanent met towers installed and that several portable met towers will remain; detectors should be mounted on these towers and used throughout construction and into the operations phase.]

128 [**Recommendation:** Consistent with current scientific consensus regarding best practices for pre-construction bat monitoring, acoustic bat surveys should be performed at long term monitoring stations that collect data at multiple heights, including heights as close as possible to the rotor swept areas of proposed turbines.]

Increased Cut-In Speeds and Turbine Curtailment, if Justified by Monitoring Data

Most bat mortality occurs at times when wind speeds are low; although turbine blades are pitched strongly into the wind and are rotating at close to normal speeds, power generation is negligible (Kerns et al. 2005²). These low wind speeds (less than six meters per second) tend to correlate with higher bat activity and higher turbine-related deaths (NWCC 2010), but the underlying processes causing this pattern are poorly understood (Arnett et al. 2011³). Emerging evidence suggests that increasing the cut-in speeds (the wind speed at which blades begin to operate) of rotors during the night can lessen the possibility of bat fatalities with little impact to energy production (Baerwald et al. 2009⁶). Alternatively, turbines could be shut down during periods of high bat mortality risk, specifically during autumn migration (Kunz et al. 2007⁴). However, curtailment has not been investigated in the deserts of the

1 Cryan, P.M. 2008. Mating behavior as a possible cause of bat fatalities at wind turbines. *Journal of Wildlife Management* 72(3): 845-849.

2 Kerns, J, W. P. Erickson, and E. B. Arnett. 2005. Bat and bird fatality at wind energy facilities in Pennsylvania and West Virginia. Pages 24–95 in E. B. Arnett, editor. *Relationships between bats and wind turbines in Pennsylvania and West Virginia: an assessment of bat fatality search protocols, patterns of fatality, and behavioral interactions with wind turbines*. A final report submitted to the Bats and Wind Energy Cooperative. Bat Conservation International, Austin, Texas, USA.

3 Arnett, E. B., M. Schirmacher, M. M. P. Huso, and J. P. Hayes. 2009. Effectiveness of changing wind turbine cut-in speed to reduce bat fatalities at wind facilities. An annual report submitted to the Bats and Wind Energy Cooperative. Bat Conservation International. Austin, Texas, USA.

4 Kunz, T. H., E. B. Arnett, W. P. Erickson, A. R. Hoar, G. D. Johnson, R. P. Larkin, M. D. Strickland, R. W. Thresher, and M. D. Tuttle. 2007. Ecological impacts of wind energy development on bats: questions, research needs, and hypotheses. *Frontiers in Ecology and the Environment* 2007; 5(6):315–324.

Responses Continued

125 See response 122 regarding bat mortality and monitoring.

126 See responses 122 and 124 regarding acoustic monitoring stations, including the use of elevated stations.

127 See response 122 regarding acoustic monitoring stations and post-construction mortality monitoring. Permanent met-towers would be installed, but temporary met-towers would be removed upon going into the operational phase of the project

128 See response 122 regarding acoustic monitoring stations.

Comments on the Mohave County Wind Farm Draft EIS

Southwest, where the overall composition of species and habitat are very different from the previous investigation sites.

129 **Recommendation:** We recommend the BLM and the project developer commit to increasing the cut-in speeds during night operation and/or shutting turbines down at night if justified by 1) high bat activity of at-risk species as defined by the above-ground monitoring mentioned above, or 2) mortality surveys that indicate bat mortalities clustering in space or time at particular locations or during particular seasons.

Avoid Siting Turbines in the Northwest Portion of the Project Area and Near High-Quality Bat Habitat

Thompson et al. (2011b) suggest that spatial use of the project area may not be even. Based on acoustic monitoring, about a quarter of all bat activity occurred on the west slope of the mountains near Squaw Peak and peak bat use of the project area occurred during the spring.

Bat species potentially occurring in the area characteristically include those that roost in rock and boulder crevices, mines, caves, and human-made structures. These species forage for insects, normally in sparse desert habitats, xeroriparian areas along drainages and washes, or at higher altitudes above the desert floor. Tree roosting and forest-dwelling bat species are expected to be seasonal migrants in the proposed project area.

Of the 20 species that have been identified as possibly occurring in the project area, nine have been documented to have had fatalities at other industrial wind farms, including: the long-legged bat, little brown bat, western red bat, big brown bat, silver haired bat, Mexican free-tailed bat, western long-eared bat, hoary bat, and big free-tailed bat (Thompson et al. 2011). Mexican free-tailed bats, big free-tailed bats, big brown bats and western mastiff bats are especially vulnerable during periods of operation because their high foraging altitudes, which include rotor swept heights between 77 and 492 feet (WBWG 2005 and Menzel et al. 2005).

Based on flight characteristics and foraging ecology, the Mexican free-tailed bat, big free-tailed bat, hoary bat, silver-haired bat, and possibly Allen's big-eared bat are considered to be the most susceptible to fatal interactions with wind turbines during periods of operation at the proposed project area (Thompson et al. 2011). Thompson et al. predict that Mexican free-tailed bats will comprise the majority of fatalities associated with operation of the wind turbines in the project area, based on the likely relative abundance and susceptibility. Thompson et al. (2011b) predict that this project could result in between 1,085 to 2,149 bat deaths per year operating at a maximum of 500 MW and suggest that deaths may tend toward the higher estimate based on comparison to other industrial wind projects located in the arid Southwest, especially the Dry Lake facility in Arizona.

130 **Recommendation:** We recommend a modified alternative be developed that avoids the northeastern area of the project site, encompassing the west slope of the mountains near Squaw Peak. Such an alternative could effectively avoid significant projected bat deaths. We recommend turbine sites should

Responses Continued

129 BLM is cognizant of the literature on raising cut-in speeds as being a method to decrease bat fatalities. Table 2-4 Characteristics of Wind Turbines in Section 2.5.2.3 describes the different cut-in speeds of the three types of wind turbines evaluated in the Draft EIS. The potential impacts of cut-in speeds are discussed in Section 4.5.6 on page 4-34 of the Draft EIS. As acknowledged in the Draft EIS, additional information is necessary to determine if additional mitigation is required and which mitigation measures, if any, would be appropriate. As noted in response 122, adaptive management strategies may be based on post-construction mortality monitoring results.

130 Alternatives B and C eliminate turbine corridors from the northwestern area of the project site, which encompasses the west slope of the mountains near Squaw Peak. Also, the preferred alternative eliminates turbine corridors in this area.

The original proposed action, described in Section 2.9.1 on page 2-57 of the Draft EIS, was eliminated from further consideration in part because of concerns for effects on bats; the current action alternatives more effectively avoid the potential for avian and bat impacts. A draft Bat Conservation Strategy, which is appended to the Plan of Development and summarized in Appendix C of the Final EIS, has been prepared in cooperation with AGFD to further examine methods to minimize effects on bats.

As described in Sections 2.6.2 through 2.6.4 and 2.6.6 of the Final EIS, the specific turbine count and layout would be determined through micro-siting, which may include analysis of the physical constraints of the landscape, the strength of the wind resource, geotechnical testing results, and avoidance of waters of the U.S. and cultural resources, among other factors. Avoidance of xeroriparian habitat and major drainages would be considered in micro-siting. BLM may consider the removal of selected turbines in the ROD to mitigate project effects.

The higher elevation areas (ridge lines) generally provide a better wind resource and improve the effectiveness of the turbines. The highest elevation areas, however, are generally not used because the terrain on mountain tops limits constructability.

Comments on the Mohave County Wind Farm Draft EIS

- 130 be located away from xeroriparian areas along washes, higher altitudes above the desert floor (e.g. hillsides, ridges and major drainages), and areas with abundant rock and boulder crevices and caves.

Need for Comprehensive Post-Construction Mortality Monitoring

- 131 Grodsky, Drake and Behr et al. hypothesize that, after monitoring and measuring searcher efficiency and scavenger removal, post construction surveys are underestimating the rate of bat mortality because there might be more sub-lethal effects going on than has been detected. When inner ear trauma occurs, it can impair the bat's balance and flight capability. If the injured bats ability to fly is impaired, then their ability to move across the landscape to feed, their mortality may be delayed and they may not die within the search area. While the northern half of the project area had more activity than the southern half, a full 25.1 percent of all the calls recorded during acoustical monitoring surveys were noted at one monitoring site in the northeast portion of the proposed project, along the western slope of the mountains north of Squaw Peak (Thompson et al. 2011).

Recommendation: Post construction survey search areas should include all areas surveyed prior to construction adjacent or near to the project site to capture all, or at least more, turbine-caused mortalities.

When Decommissioning Turbines in High-Quality Bat Habitat, do so at Low Activity Times of Year

Species projected to be the most likely to be impacted by decommissioning include the pallid bat, big brown bat, spotted bat, and canyon bat, because these species have broad foraging habitats and can forage throughout the project area¹. Crevice roost sites utilized by greater western mastiff and spotted bats in mountainous terrain could be disturbed if partial or full removal of turbine foundations occurs near a roost site.

- 132 **Recommendation:** We recommend BLM and the project developer consider decommissioning turbine foundations in rocky outcrops and mountainous terrain during parts of the year when bats are scarce in order to minimize potential roost disturbances.

Active Monitoring for White-Nosed Syndrome(WNS)

While WNS has not been detected in bat populations in the Southwest thus far, this threat to bat populations could potentially be transferred to bat populations in the project area within the project's lifespan.

- 133 **Recommendation:** If WNS is detected in the region of the project area at any time, subsequent surveys of a minimum of three years should be initiated to inform appropriate adjustments to mitigation measures and adaptive management.

¹ <http://www.renewableenergymagazine.com/articulo-interviews-17832-54-interviews/len/en> 2011.11.9

Responses Continued

131 BLM understands using current and statistically valid methods during post-construction wildlife monitoring is important to make decisions on mortality estimates. See response 122 regarding post-construction mortality monitoring and using adaptive management strategies based on monitoring results. Surveys will not be conducted away from turbines because data have consistently shown the majority of bat fatalities are located within a distance equivalent to 50 percent of the maximum height the turbine.

132 The BLM, Reclamation, and BP Wind Energy would decommission turbine foundations to minimize potential roost disturbances. As stated on page 4-34 in Section 4.5.2.4 of the Draft EIS, “Decommissioning turbine foundations in rocky outcrops and mountainous terrain during parts of the year when bats are scarce would minimize potential roost disturbances.”

133 Current known and suspected colonies infected by White-Nosed Syndrome are restricted to the eastern United States, with the most western record occurring in west-central Oklahoma. See response 122 regarding post-construction mortality monitoring and using adaptive management strategies based on monitoring results.

Comments on the Mohave County Wind Farm Draft EIS

4.1.3. GOLDEN EAGLE (*Aquila chrysaetos*)

Golden eagles are protected under the Bald and Golden Eagle Protection Act (BGEPA), which provides legal protection against any form of eagle take (pursuing, shooting or shooting at, poisoning, wounding, killing, capturing, trapping, collecting, molesting or disturbing). The USFWS has the ability to permit take when it is “compatible with the preservation” of the bald or golden eagle (16 U.S.C. § 668a). The 2009 USFWS Eagle Permit Rule interprets the “preservation standard” to “allow actions that are consistent with the goal of stable or increasing breeding populations”. BLM IM 2010-156 directs field offices to conduct direct, indirect, and cumulative effects analysis related to golden eagles for a particular renewable energy project and to incorporate best management practices and avian protection plans into renewable energy right-of-way permits.

- 134 [We are concerned that the DEIS does not adhere to the above laws, regulations, and guidance pertaining to golden eagles in the following ways:
- Only one year of pre-DEIS golden eagle population monitoring does not represent use of best available science and does not meet the BGEPA preservation standard;
 - Mitigation options in the DEIS are incomplete; and
 - Because the Eagle Conservation Plan has not yet been released, the DEIS does not explore all reasonably foreseeable environmental consequences of alternatives.

- 135 [Furthermore, we have several suggestions for improved siting and analysis to be incorporated into the Final EIS:
- The project proponent should use its Eagle Conservation Plan to apply for an Incidental Take Permit (ITP) for any unavoidable eagle mortalities; and
 - The final site design should use landscape and micro-scale siting to avoid and minimize collision fatalities on ridgelines and hillsides.

In order to meet the BGEPA “preservation standard,” BLM must address the current lack of population and mortality data in the Final EIS

- 136 [The DEIS does not appear to be based on the best available data with regards to eagle populations and mortality. “NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.” 40 C.F.R. § 1500.1(b). 40 C.F.R. § 1502.22, further makes clear that when there are gaps in relevant information or scientific uncertainty, the agency must make clear that such information is lacking. If the information “is essential to a reasoned choice among alternatives” and the costs of obtaining such information are not “exorbitant” the agency *shall* obtain and incorporate such information in the environmental analysis. Even when these factors are not met, the agency still must “weigh the need for the action against the risk and severity of possible adverse impacts were the action to proceed in the face of uncertainty.” *Id.*

Responses Continued

134 Consistent with BLM’s Instruction Memorandum No. 2010-156 Bald and Golden Eagle Protection Act – Golden Eagle National Environmental Policy Act and Avian Protection Plan Guidance for Renewable Energy, BP Wind Energy is required by BLM to have an Eagle Conservation Plan/ Bird Conservation Strategy (ECP/BCS) accepted by the USFWS prior to signing the ROD to demonstrate Bald and Golden Eagle Protection Act (BGEPA) and Migratory Bird Treaty Act (MBTA) compliance for NEPA. USFWS has been consulted during the NEPA process and has been actively engaged in reviewing the ECP/BCS. BP Wind Energy is following the proper procedures for golden eagle conservation and compliance with the Bald and Golden Eagle Protection Act. The results of the 2012 golden eagle surveys conducted by the applicant and the ECP are incorporated into the Final EIS.

As a result of the coordination with USFWS, under Alternative E the Agencies’ Preferred Alternative, BP Wind Energy would agree to establish a 1.25-mile avoidance/no-build area encompassing the nest and forage area west of the active nest, and to establish a curtailed operation zone (see avoidance area on Maps 2-11 to 2-13 of the Final EIS). Through coordination among the USFWS, BLM, Reclamation, and AGFD, the combined 1.25-mile eagle nest avoidance area and surrounding curtailment zone was identified. The curtailment zone extends about 1.5 miles east and about 3.3 miles south and southwest of the active nest (see Maps 2-11 to 2-13). When the golden eagle breeding area in the northwest portion of the Wind Farm Site is occupied, BP Wind Energy has agreed to shut turbines down daily from 11:00 a.m. to 4 p.m. between December 1 and March 15, and from 4 hours after sunrise until 2 hours before sunset between March 16 and (i) August 31 or (ii) two months after the date any fledgling eagles leave the nest based on golden eagle activity patterns; this is expected to correspond to the approximate peak period of golden eagle flight activity in northeastern Arizona (Tetra Tech 2012a). Eagle use survey data would determine when curtailment can be concluded in any given breeding season after being triggered, the need to adjust the spatial extent of curtailment, and the effectiveness of the curtailment program; specific details are provided in the ECP/BCS, which is appended to the POD. At least three years of eagle use data would be collected prior to considering any relaxation of the spatial extent or proposed timing of curtailment within the existing curtailment zone. In addition, BP Wind Energy has voluntarily committed to working with the USFWS to pursue an eagle take permit. A summary of the ECP/BCS is included in Appendix C of the Final EIS and the complete document is appended to the Plan of Development. In a letter dated December 18, 2012, the USFWS acknowledged the ECP/BCS as “a comprehensive, objective, state-of-the-art document that conveys strong commitment to conservation of the golden eagle.”

135 See response 134 regarding the ECP/BCS and the pursuit of an Incidental Take Permit. As noted in response 130, the specific turbine layout would be determined through micro-siting and one of the other factors considered would be biological concerns

136 The BLM relied on up-to-date and adequate inventories of the resources of the public lands when preparing the Draft and Final EIS in compliance with NEPA. The requisite “hard look” at the impacts of a proposal provides that an agency must rely on information that is of “high quality” (40 CFR § 1500.1) but does not require relevant data to be complete in all respects or to be generated if it is unavailable. Instead, a “hard look” under NEPA consists of a reasoned analysis containing quantitative or detailed qualitative information. See BLM NEPA Handbook H-1790-1 (January 30, 2008).

Consistent with BLM’s Instruction Memorandum No. 2010-156, Bald and Golden Eagle Protection Act – Golden Eagle National Environmental Policy Act and Avian Protection Plan Guidance for Renewable Energy, the Draft EIS used the best available data on golden eagles. This included information from published sources, expert opinion, and baseline surveys for the Project. The Draft EIS includes information on golden eagle occurrences based on ground surveys conducted from 2007 to 2008 and from 2010 to 2011, as well as aerial surveys conducted in 2011. Updated survey results and projected impacts are included in the ECP. The results from the ECP and 2012 surveys indicate that golden eagle use in the Project Area and its surrounding environment is low. The 2012 surveys found one active golden eagle nest within the Project Area. The location of this nest increases the potential for disturbance to nesting eagles under Alternative A. The analysis in the Final EIS has been revised to indicate that Alternative B

Comments on the Mohave County Wind Farm Draft EIS

137 The BGEPA 2009 Eagle Permit Rule interprets the “preservation standard” to “allow actions that are consistent with the goal of stable or increasing breeding populations”. Without adequate data on breeding or population trends, BLM will be unable to demonstrate whether permitting the BP Mohave Wind facility will achieve and maintain stable or increasing golden eagle populations, or whether the expected mortality can actually be offset by the available offset alternatives in the vicinity of the project area.¹ Compliance with the Eagle Permit Rule requires that information on golden eagle presence and population status in and in the vicinity of the project area must be comprehensively studied prior to alternative selection and final site design. In reference to the proposed project, there are insufficient population-level data to determine the status of the breeding population as well as inadequate project-level surveys to develop an understanding of eagle use within and around the project area and estimate take. Without adequate information at both scales it is not possible to assess compliance with the eagle preservation standard, as detailed below.

138 The DEIS states that, based on a single year of survey data, the MCWFP area has relatively low habitat value for golden eagles (DEIS 3-46). This information contradicts the Plan of Development for the project,² which specifies that two years of spring/summer bird use point counts and raptor nest surveys were performed. In any case, these general bird surveys are not sufficient to establish eagle use in the project area due to the narrow seasonal window within which they occurred. Desert populations of golden eagles can receive significant influxes of wintering migrants, which show strong fidelity to wintering areas that provide habitat and foraging opportunities essential to safeguard northern breeding populations, but habitat use of the project area by wintering golden eagles has not been explored. This is especially important since wintering populations include “floater” eagles, adults who have not yet established territories in their northern breeding range and provide a critical population buffer against loss of breeding adults.³ Another vital segment of the eagle population missed by existing surveys is juveniles; nest surveys during breeding season in late winter/early spring are needed to estimate nesting success and recruitment of juveniles into the population and determine the extent to which eagles around the project area contribute to the regional population. It is encouraging that AZGFD is now performing follow-up surveys to “provide the best known and available scientific information to be incorporated into the Eagle Conservation Plan,” (DEIS 3-46), but until those surveys are completed and analyzed, judgments about the habitat value and habitat use of the area are premature.

¹The FWS’ Draft ECP Guidance identifies power pole retrofits to reduce eagle mortality through electrocution as a favored mitigation option to offset mortality at proposed project sites. Other forms of compensatory mitigation are not currently options, meaning that in order to achieve the preservation standard under a programmatic ITP a proponent must have a very detailed understanding of expected mortality and assure FWS that there are sufficient available un-retrofitted power poles in the eagle population region for the proponent to retrofit ahead of schedule and thereby compensate for eagle mortality. For more detail see Defenders of Wildlife, February 17, 2012, Comments on the Environmental Assessment for an Application for Programmatic Take of Golden Eagles [by West Butte Wind Power, LLC].

² <http://www.blm.gov/pgdata/etc/medialib/blm/az/pdfs/energy/mohave.Par.6880.File.dat/Plan-of-Development.pdf>.

³ Kochert, M. N., and K. Steenhof. 2002. Golden eagles in the U.S. and Canada: status, trends, and conservation challenges. *Journal of Raptor Research* 36:32-40.

Responses Continued

reduces the number of turbines in areas of potential risk and increases distances to turbines compared to Alternatives A and C. The results of the 2012 golden eagle surveys conducted by the applicant have been added to the Final EIS and are included in Section 3.5.2.3; the projected impacts are included in Sections 4.5.2.7, 4.5.3.6, 4.5.4.6, and 4.5.6.

The Draft EIS and Final EIS disclose the limits of the data and the limits on the ability to estimate mortality impacts to golden eagles. The draft ECP is appended to the Plan of Development in order to inform the public as to the prescriptions and measures that are proposed by the applicant. BP Wind Energy, USFWS, and BLM recognize the uncertainty associated with the estimate of eagle fatalities; therefore, the ECP contains a detailed description of the post-construction mortality monitoring protocol and an adaptive management strategy to address the actual impacts and to ensure the correct level of mitigation. A complete draft of the ECP is appended to the Plan of Development and is summarized in Appendix C of the Final EIS. The final plan would be part of the ROD package and incorporated into the ROW grant should the project be approved. The Plan of Development can be reviewed at BLM's website and the ROD will be available on the BLM website when a decision about the Project has been made.

137 See response 136 regarding data on golden eagles.

138 See response 136 regarding data on golden eagles.

Letter Continued

Comments on the Mohave County Wind Farm Draft EIS

139 It is also important to note that assessments of the regional golden eagle population in BCR 33, which covers the Sonoran and Mojave deserts, have never been included in any of the USFWS golden eagle surveys performed since 2003.¹ These surveys represent the only robust data set for assessing golden eagles at the regional population scale, the management scale emphasized in the 2009 Eagle Permit Rule. Clearly, there is no way to uphold the eagle preservation standard in this region without initial surveys to establish status and trend.

140 Insufficient data also exist to define golden eagle habitat use in and around the project area. Although the DEIS states that “no obvious flyways or concentration areas were observed for any species, except that golden eagles were only observed using the steeper terrain in the northwest portion of the Project Area,” this interpretation was based on only four observed flight paths. This could indicate low use, but it could also indicate poorly timed surveys, inadequate protocols for observing raptors, insufficient study effort, and so on. As suggested above, raptor surveys in winter when more individuals could be present and diurnal mammal abundance is higher might provide dramatically different results that include non-resident breeders and floaters. For resident species, GPS telemetry studies² would be invaluable to collect flight path data without having to rely on sporadic, human-generated observations.

141 Similarly, the failure to incorporate golden eagle habitat use during all seasons does not adequately inform the model that was used to estimate the proposed project’s lifetime eagle mortality estimate. The DEIS states that “based on raptor fatality estimates for the Project (Thompson et al. 2011) and the proportion of golden eagles observed during baseline wildlife surveys, approximately 5 to 10 golden eagles could be killed in the Project Area during the life of the Project” (DEIS 4-49). In discussions with AZGFD, however, we have learned that ongoing follow-up golden eagle monitoring (described in the DEIS on pages 3-45 – 3-46) are resulting in findings of substantially more golden eagle individuals in the project area than were identified during the Thompson et al 2011 pre-DEIS survey, which seem likely to change the mortality estimates of the model as given in the DEIS.

142 **Recommendation:** The Eagle Conservation Plan (ECP) and any subsequent associated take permits or offset measures must incorporate the best available population *and* mortality data, including ongoing AZGFD studies and any other studies deemed necessary to fill data gaps, to allow for an accurate assessment of regional and local population status, predicted mortality, mitigation potential, and ultimate compatibility with the eagle preservation standard. All contributing studies should be made public. The completed plan should be included in the Final EIS and used to inform final site design and alternative selection.

Golden eagle mitigation options in the DEIS are inadequate.

An agency’s analysis of alternatives and environmental consequences under NEPA must include an analysis of “appropriate mitigation measures.” 40 C.F.R. § 1502.14(f); *see also* 40 C.F.R. §§ 1502.16(h), 1508.25(b). In the environmental impact statement, an agency is required to “discuss possible

¹ Nielson, R. M., T. Rintz, L. McManus, and L. L. McDonald. 2012. A survey of golden eagles (*Aquila chrysaetos*) in the western U.S.: 2011 Annual Report. A report for the U.S. Fish & Wildlife Service. WEST, Inc., Laramie, Wyoming.
² <http://katznerlab.com/eagles-in-the-california-desert>.

Responses Continued

139 The Bird Conservation Region (BCR) data from USFWS surveys were not utilized because the Project Area occurs in the interface of three BCR areas, so the trends within the Project Area may or may not follow the trends within the BCR. However, the eagle preservation or “no net loss” standard is met by applying compensatory mitigation and adaptive management to offset eagle fatalities. Details of the mitigation are outlined in the ECP and involve removal of wildlife carcasses from roadsides to offset eagle-vehicle collisions. Appendix C includes a summary of the ECP, and the complete draft ECP is appended to the Plan of Development.

140 All survey protocols were reviewed and approved by the USFWS, BLM, Reclamation, Western, and AGFD. Point count surveys for birds were conducted during all seasons of the year. Based on consultation with USFWS, at this time, the USFWS is not recommending telemetry for wind project assessment. This information is stated in the ECP Technical Appendices reviewed by USFWS in August 2012. Specifically, the ECP Technical Appendices state “...the Service discourages the use of telemetry in assessments of eagle use associated with wind energy projects; survey approaches suggested herein do not require telemetry.” Appendix C includes a summary of the ECP, and the complete draft ECP is appended to the Plan of Development. See response 136 regarding data collection on golden eagles.

141 See response 136 regarding data on golden eagles.

142 Golden eagle conservation is important to BLM, Reclamation, NPS, USFWS, AGFD, and BP Wind Energy, and the preferred alternative excludes turbine corridors in the northwest area of the proposed Wind Farm Site to avoid potential impacts to golden eagles in the Squaw Peak breeding area. As noted in responses 134 and 136, an ECP has been completed, BP Wind Energy is pursuing an Incidental Take Permit, and new survey data have been added to the Final EIS.

Chapter 2 of the Draft EIS describes how early in the project planning process, a large portion of the Project Area was excluded due to numerous resources conflicts, including biologically sensitive areas (see Section 2.9.1 on page 2-57 of the Draft EIS regarding the elimination of land east of the current Wind Farm Site from further evaluation). The impact analysis in Sections 4.5.3, 4.5.4, and 4.5.6 describes impact differences, where Alternatives B, C, and E avoid potential golden eagle nesting habitat near Squaw Peak that are included under Alternative A.

According to BLM NEPA Handbook H-1790-1 (January 30, 2008), the data and analyses in Alternatives A, B, C, in the Draft EIS and E of the Final EIS are consolidated and summarized according to the importance of the impact (40 CFR 1502.15).

Comments on the Mohave County Wind Farm Draft EIS

143 mitigation measures in defining the scope of the EIS, 40 C.F.R. § 1508.25(b) (1987), in discussing alternatives to the proposed action, § 1502.14(f), and consequences of that action, §1502.16(h), and in explaining its ultimate decision, § 1505.2(c).” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 351 (1989). [The DEIS states that “with mitigation measures proposed in the ECP for this Project, any deaths of golden eagles from this wind farm could be offset by reducing deaths from other possible sources in the region. In combination, the proposed wind farm and other past, present, and planned activities would not affect larger regional trends in the golden eagle population” (DEIS 4-183). The as-yet incomplete ECP is listed as the only eagle-specific mitigation measure in the list of Wildlife Disturbance-related mitigation measures in DEIS section 4.5.6. As the ECP has not yet been made available, it is impossible to assess the potential efficacy of mitigation measures as they apply to golden eagles.

144 **Recommendation:** The ECP should not be considered a mitigation measure in and of itself; rather, the mitigation measures (including avoidance, minimization, and offsets) informed by development of the ECP and Avian Conservation Plan should be included as individual mitigation measures in the Final EIS.

145 **Because the ECP has not yet been released, the Draft EIS does not explore all reasonably foreseeable environmental consequences of alternatives** Due to the lack of comprehensive data on golden eagles (described above), BLM’s analysis in the DEIS does not appear to consider all reasonably foreseeable impacts of the alternatives it is developing and considering. The ECP should have been included in the DEIS in order to provide sufficient data to adequately analyze the potential impacts of alternatives and to shape the designs of the alternatives themselves. [Moving forward, [the ECP should be included in the Final EIS and used to inform alternative design and selection as well as reasonably foreseeable and cumulative impacts analysis of alternatives. The Final EIS should not be completed and the ROD should not be issued prior to incorporation of the completed ECP.

146 **Recommendation:** The BLM should consider delaying the Final EIS until the ECP can be fully incorporated.

147 **Should the ECP determine that unavoidable eagle mortalities are likely to occur, the project proponent should apply for a programmatic Incidental Take Permit (ITP) from the US Fish & Wildlife Service.**

The DEIS indicates that scientific monitoring is ongoing and will be encapsulated in:

“an ECP that will follow USFWS ECP guidance. The ECP would help to offset any mortality of golden eagles caused by the Project and is part of a larger Avian Conservation Strategy (ACS) and a Bat Conservation Strategy being prepared for the Project. The ECP will contain avoidance, minimization, and compensation measures to address potential impacts on golden eagles. The ECP will also summarize the results of ongoing 2012 nest surveys and statewide surveys by AGFD.” (DEIS 4-49 – 4-50)

148 According to USFWS, however, the Draft ECP Guidance “was developed as a tool to assist wind energy developers and facility operators during the decision-making process, and describes a means by which to collect and analyze information that could lead to a programmatic permit [ITP] to authorize unintentional take of eagles at wind energy facilities” (FWS 2011, Draft Eagle Conservation Plan

Responses Continued

- 143** See response 134 regarding the availability of the ECP/BCS, and response 136 regarding survey data added to the Final EIS.
- 144** The ECP/BCS is a document where existing studies are summarized and used, along with other available research, to evaluate risks to the bird species. In conjunction with USFWS, BLM, Reclamation, Western, and AGFD, BP Wind Energy developed avoidance and minimization measures based on site-specific risk. The ECP/BCS provides guidance to minimize impact on eagles and other avian species. The mitigation measure in Section 4.5.7 in the Final EIS has been revised to state: “Develop an ECP/BCS satisfying the requirements of the BLM Instructional Memorandum 2010-156, which provides direction for compliance under the Bald and Golden Eagle Protection Act (BGEPA). Based on these requirements, the ECP/BCS must be accepted by the USFWS. Appendix I contains USFWS’s letter acknowledging consistency with the Draft Eagle Conservation Plan Guidelines. The ECP/BCS is summarized in Appendix C and will be appended to the POD, which will be a part of the ROD package and ROW grant if the project is approved. Implement the site-specific mitigation measures identified in the ECP/BCS that were developed in coordination with USFWS, BLM, Reclamation, Western, and AGFD.”
- 145** See response 134 regarding the availability of the ECP/BCS; response 136 regarding survey data added to the Final EIS; and response 142 regarding how the original proposal was revised in consideration of bird and bat concerns, and how potential impacts to eagles contributed to the selection of a preferred alternative.
- 146** A summary of the ECP/BCS is included in Appendix C of the Final EIS; the complete draft document is appended to the Plan of Development that is available on the BLM website. The final ECP/BCS and Plan of Development will be part of the ROD package and ROW grant if the project is approved.
- 147** See response 134 regarding the pursuit of an Incidental Take Permit.
- 148** See response 144 regarding how the mitigation measures in the ECP/BCS will be applied to the Project.

Letter Continued

Comments on the Mohave County Wind Farm Draft EIS

148 [Guidance, § A.1). An ECP therefore is an *assessment tool* that is designed to collect and analyze information in order to assess risks posed to eagles by a given project, and to assist in developing appropriate avoidance, minimization and mitigation measures over the life of the project. An ECP is not itself a mitigation strategy, and should not be described as such in the EIS.

149 [The DEIS does not contain any mention of plans by the BLM or BP Wind to apply for a programmatic ITP if warranted following its eagle risk assessment in the ECP. Given that the proposed project will likely implement “advanced conservation measures” (50 C.F.R. § 22.26(a)(2)) but still cause some unavoidable take of eagles, it would be appropriate for the developer to apply for a programmatic ITP rather than risk enforcement actions due to unpermitted take.

150 [Including the ECP in the Final EIS may, in consultation with USFWS, allow BP to use the project’s EIS to directly apply for a programmatic incidental take permit of golden eagles if warranted following completion of the ECP. If BP does not include a full and complete eagle assessment in the Final EIS, the company will need to work with FWS to develop a separate Environmental Assessment or EIS for their application (if warranted) for a programmatic ITP.

To obtain a programmatic ITP under BGEPA in accordance with 50 C.F.R. § 22.26, an applicant must:

1. Avoid and minimize take to the maximum extent achievable.
2. Conduct adequate post-construction monitoring to determine effects.
3. Offset through compensatory mitigation any remaining take, such that the net effect on the eagle population is, at a minimum, no change for eagle management populations that cannot sustain additional mortality.
4. Ensure that the direct and indirect effects of the take and required mitigation, together with the cumulative effects of other permitted take and additional factors affecting eagle populations, are compatible with the preservation of bald eagles and golden eagles.¹

151 [**Recommendation:** Should the ECP indicate that unavoidable eagle mortality is likely to occur, the developer should apply for an ITP from the USFWS, and seriously consider working with USFWS to use its Final EIS as the basis of an ITP application.

Use landscape and micro-scale siting to avoid and minimize collision fatalities on ridgelines and hillsides

152 [All of the DEIS alternatives propose wind turbines to be sited on ridgelines and hillsides. The DEIS Mitigation section states: “Turbines shall be configured to avoid landscape features known to attract raptors, if site studies show that placing turbines there would pose a significant risk to raptors” (DEIS 4.5.6). Golden eagles utilize the updrafts that occur along ridgelines and hillsides to soar, and the DEIS states that “golden eagles were only observed using the steeper terrain in the northwest portion of the Project Area” (DEIS 3-45). Therefore, avoiding siting turbines on ridgelines and hillsides in the northwest part of the Project Area will likely be the most effective approach to preventing golden eagle take, if

¹ FWS 2012, West Butte Programmatic Eagle Take Permit Draft Environmental Assessment, p. 6.

Responses Continued

149 See response 134 regarding the pursuit of an Incidental Take Permit.

150 BP Wind Energy is following the proper procedures for golden eagle conservation and compliance with the BGEPA. BLM, Reclamation, and Western require an ECP/BCS be approved by the USFWS before signing the ROD to demonstrate BGEPA and MBTA compliance for NEPA. Appendix I of the Final EIS contains USFWS's letter acknowledging consistency with the Draft Eagle Conservation Plan Guidelines. In addition, BP Wind Energy has voluntarily committed to working with the USFWS to pursue an eagle take permit, as noted in response 134.

151 See response 134 regarding the pursuit of an Incidental Take Permit.

152 Golden eagle conservation is important to BLM, Reclamation, NPS, USFWS, AGFD, and BP Wind Energy. Measures to mitigate for any golden eagle deaths are being developed through the draft ECP, which is appended to the Plan of Development.

In conjunction with USFWS, BLM, Reclamation, Western, and AGFD, BP Wind Energy developed avoidance and minimization measures based on site-specific risk. Once risk was minimized to the extent practicable, BP Wind Energy developed a post-construction mortality-monitoring plan to guide mitigation and additional research decision made through an adaptive management strategy. As part of this process, the analysis addresses an active golden eagle nest located during the 2012 surveys within the Project Area and highlights that Alternative B reduces the number of turbines in areas of potential risk and increases distances to turbines compared to Alternatives A and C. BLM appreciates suggestions for further mitigation measures and realizes that further developments to help reduce mortality of golden eagles and other birds currently exist and new methods could develop in the future. Further mitigation measures may be employed by the BLM, Reclamation, USFWS, and AGFD based on post-construction mortality monitoring and an adaptive management strategy to address actual impacts and to ensure the correct level of mitigation.

Alternative E, the Agencies' Preferred Alternative, was selected in consideration of consultations with USFWS and AGFD and the concerns for potential impacts to golden eagles in the Squaw Peak breeding area. Consequently, the preferred alternative excludes turbine corridors in the northwest area of the proposed Wind Farm Site, and also excludes the turbine corridors in Township 29 North, Range 19 West, Sections 17 and 18, which also followed ridge lines.

Comments on the Mohave County Wind Farm Draft EIS

ongoing and follow-up studies verify that the northwest portion of the Project Area is indeed the area most utilized by golden eagles.

152

Other targeted measures to avoid and minimize collision fatality must be pursued aggressively at individual turbine locations where GPS eagle flight path data or carcass search data indicate problems. These measures could include cut-in speed adjustments or curtailment, bird scaring devices, and potentially decommissioning or moving turbines in extreme cases.

Recommendation: The BLM should work with the project proponent to develop an alternative that does not site wind turbines on ridgelines and hillsides that are likely to be in conflict with eagles (as determined using detailed data collection procedures described above), and should identify other measures that will curb or avoid take if problems are detected.

4.1.4. AMERICAN PRONGHORN (*Antilocapra americana*)

Although the project area is not considered high-quality pronghorn habitat and this species is generally seen infrequently in the area, the EIS should consider the potential impacts of this project to this sensitive species. Pronghorn are especially sensitive to fragmentation due to roads, fences, and other man-made structures and disturbances. This project includes construction of roads and collector lines, which have the potential to adversely affect this species. The Final EIS should include a full analysis of project impacts to Pronghorn and future habitat suitability in the project area.

153

Pronghorn require large areas of unfragmented and undeveloped lands. They also require suitable movement corridors. Detrital Wash and the surrounding lands may contain forage for pronghorn and may also facilitate landscape-level movement for this species.

Analyze Project Impacts to Pronghorn and Future Habitat Suitability in the Project Area

Although pronghorn may not currently be prevalent in the project area, given the flat, open terrain in the valley, this landscape could become increasingly important for pronghorn as habitat throughout the state continues to be developed and altered. In addition, habitat restoration and enhancements could potentially improve the suitability of habitat for pronghorn in the project area.

Recommendation: Consideration of the direct, indirect, and cumulative impacts to American pronghorn should be included in the EIS. This should include an analysis of the future restoration potential in the project area, and the impact the project could have upon the future viability of the area for pronghorn.

4.2. Wildlife Movement Corridors & Habitat Connectivity

We appreciate BLM's recognizing the importance of wildlife movement corridors and habitat connectivity in the context of the proposed MCWFP. Habitat conversion and fragmentation are leading causes of species extinction. In the publication *Assessment and Planning for Ecological Connectivity: A*

Responses Continued

153 Impacts to pronghorn are analyzed in Section 4.5.2.4 of the Draft EIS in the big game section. The analysis provides summary level detail on relevant impacts to pronghorn that are reasonably foreseeable and take into consideration both disturbances and reclamation and weed control methods. The level of impacts to big game, including pronghorn, includes analyses of habitat loss, habitat degradation, and avoidance due to human presence and noise. Habitat fragmentation would fall under the category of habitat degradation. Section 4.5.2.4 of the Final EIS has been revised to address potential impacts to pronghorn, mule deer, and other game species associated with maintenance once the Project is operational; such impacts would be expected to be low. Direct habitat modifications are not expected to fragment or impact movement of big game in the Project Area. As indicated in Table 2-6, the spacing between turbines within the corridor would be about 1,000 feet to 1,900 feet apart. There would be no long, linear fences installed that could interfere with pronghorn or mule deer movements (only fencing around individual structures such as the O&M building and Project substation). To date, the long-term displacement effects of wind development on the habitats of big game species is largely unknown. Some studies suggest, however, that mule deer and other large ungulates are not displaced in the long-term during the operations phase (Arnett et al. 2007). Potential impacts to game species as a result of the operating wind farm would be minimized through the implementation of mitigation measures and Best Management Practices.

Analysis of impacts relating to disturbances associated with pronghorn and Detrital Wash were not discussed. Detrital Wash would not be impaired by the Project beyond any existing disturbances at the Materials Source that are already present, as described in Section 2.5.2.2 in the Draft EIS. Future habitat restoration potential for pronghorn in the region is speculative.

Comments on the Mohave County Wind Farm Draft EIS

Practical Guide (Beier et al. 2011¹), the ecological impacts of habitat fragmentation are summarized as follows:

The consequences of human induced fragmentation of native fauna and flora are extensive (Hilty et al. 2006). Around the globe natural landscapes are undergoing drastic change due to anthropogenic pressures; which include habitat loss and fragmentation. (Kindlman and Burel 2008, Crooks and Sanjayan 2006, Worboys et al. 2010). Natural habitats are rapidly being lost and what remains is becoming increasingly fragmented. Although species vary greatly in their response to fragmentation it is invariably destructive to natural biotas (Laurance and Bierregaard 1997, Johnson and Klemens 2005). Fragmentation decreases the size of habitat blocks and increases isolation of these patches one from another (Bennett 1999, Fisher and Lindenmeyer 2007, Kupfer et al. 2006, Johnson and Klemens 2005). Increased fragmentation dramatically alters species and landscape relationships and usually increases the risk of extinction (Fisher and Lindenmeyer 2007, Kupfer et al. 2006, Johnson and Klemens 2005). Fragmentation results in isolated populations with decreased resiliency to changes in landscapes that are either human induced or caused by a changing climate (Bennett 1999, Fahrig and Marriam 1994, Laurance and Bierregaard 1997). The long term effect of increased landscape fragmentation is the decline of biodiversity, ecosystem resilience and ecosystem services.

In order to maintain functional habitat connectivity in the context of development, the biology, including movement and dispersal tendencies, of specific species inhabiting the area should be considered and accommodated. In some instances, protecting a clearly defined wildlife movement corridor (e.g. along a desert wash) is a strategy that can accommodate the movement needs of subset of the area's wildlife. Where such multi-species movement corridors are not well-defined or modeled (as is the case for the Mohave Wind project planning area), project design that maximizes overall landscape permeability is an effective strategy that can help to avoid both short and long-term negative consequences of habitat fragmentation. In the case of the proposed MCWFP, we recommend both of these strategies be employed in the project's design and configuration. Connectivity planning should incorporate connectivity needs of the area's wildlife metapopulations and consider appropriate spatial and temporal scales:

Sufficient movement of individuals between isolated extinction-prone populations can allow an entire network of populations to persist via metapopulation dynamics (Hanski 1991, Moilanen and Hanski 2006). Connectivity conservation can be deemed successful when movement across all spatial and temporal scales is possible, for a given species or suite of species in a given landscape (i.e. the landscape is permeable). (Beier et al. 2011²⁶).

¹ Beier, P., K. Aune, J. Hilty, F. Shilling, 2011. *Assessment and Planning for Ecological Connectivity: A Practical Guide*. Wildlife Conservation Society. Available online at: <http://www.wcsnorthamerica.com/>

Comments on the Mohave County Wind Farm Draft EIS

Sonoran desert tortoise is a prime example of a species whose metapopulation structure and needs should be carefully considered in the context of project design, avoidance and mitigation.

154 [The DEIS (4.5.2.5) states: “Pronghorn, mule deer, desert tortoise and reptile movement would all be impeded during the 18 months of construction”. The impacts from new infrastructure, roads, motorized vehicle traffic and other project-related disturbances are likely to impair movement for these same species well beyond the construction phase. The DEIS does not consider or analyze the direct and indirect impacts to habitat connectivity beyond the 18 month construction period as is required under NEPA. Avoidance, minimization and compensatory mitigation measures should be employed to reduce the longer-term anticipated impacts of habitat fragmentation.

155 [The DEIS (4.5.2.5) goes on to report: “339 acres of habitat connectivity would be impaired in the long-term where facilities exist on the landscape”. While we appreciate the BLM’s attempt to quantify the acreage of land where connectivity may be impaired, we anticipate the acreage of lands impacted by the proposed facilities is likely to be significantly greater than reported because edge effects of such facilities extend well beyond the actual footprint of infrastructure. In addition, depending upon location and configuration, such infrastructure may impair effective habitat connectivity at the landscape scale. Acreage by itself is not an informative metric for habitat connectivity. Other metrics that estimate habitat connectivity should be employed, and can be found in the scientific literature from the fields of Landscape Ecology and Conservation Biology.

The entire MCWFP area is identified in the Arizona’s Wildlife Linkages Assessment (ADOT, 2006¹) as a “habitat block”. Habitat blocks are defined in this assessment as:

“an area of land that consists of important wildlife habitat and can reasonably be expected to remain wild for at least 50 years. Habitat blocks are primarily comprised of lands within National Forests, National Parks, National Wildlife Refuges, large military reservations, tribal lands and lands managed by Bureau of Land Management or Bureau of Reclamation. Although some of these lands contain bombing ranges, barracks, reservoirs, and other non-natural elements, they still have a longterm prospect of serving as wildlife habitat”

156 [While the 2006 assessment did not identify any potential wildlife linkages within the project area, it does note the importance of maintaining habitat connectivity *across* habitat blocks. The BLM should consider employing a strategy to maintain habitat connectivity across this habitat block (habitat block “FID 6” in the Arizona Wildlife Linkages Assessment GIS shapefile).

157 [The western end of the project area is within several miles of a “potential linkage zone” identified in the 2006 assessment which connects Mount Tipton and Mount Perkins. We recommend consulting with AZGFD to ensure that the integrity of this potential linkage zone is not negatively impacted by the project and its associated operations.

¹ Arizona Wildlife Linkages Workgroup (ADOT et al), 2006. Arizona Wildlife Linkages Assessment. Available online at: http://www.azdot.gov/inside_adot/OES/AZ_WildLife_Linkages/assessment.asp

Responses Continued

154 The Draft EIS used the best available data with respect to wildlife movement corridors, habitat connectivity, and habitat fragmentation in Section 4.5.2.5. The baseline conditions in Section 3.5 and impact analyses were developed in consultation with BLM, Reclamation, Western, NPS, USFWS, and AGFD. The use of disturbed acres is an appropriate metric to evaluate habitat connectivity in the region. Section 4.5.2.5 on page 4-40 of the Draft EIS discusses habitat connectivity and wildlife movement corridors and wildlife movement was also analyzed in Section 4.5. As stated on page 4-40 of the Draft EIS, “Impacts from disturbance and infrastructure would affect about 3 percent of the available habitats in the Project Area during the long-term, which could minimally impair wildlife movement in the long-term. No regionally important wildlife movement areas would be impacted. The information was sufficient for the BLM and Reclamation to determine the Project’s impacts to wildlife movement and to allow decision makers to make reasoned decisions about the Mohave County Wind Farm Project.

155 See response 154 regarding habitat connectivity and metrics used in the impact assessment. As described in Section 4.5.2.5 of the Draft EIS, “impacts from disturbance and infrastructure would affect about 3 percent of the available habitats in the Project Area during the long term, which could minimally impair wildlife movement.”

156 See response 154 regarding habitat connectivity. No regionally important wildlife movement areas would be impacted.

157 The AGFD has been involved throughout the NEPA process. No issues have been raised concerning the linkage zone in question. The Project Area and project facilities under all of the action alternatives do not encroach upon this linkage zone. The major influence upon this linkage is the presence of US Highway 93, which is a barrier to the movement of bighorn sheep.

Comments on the Mohave County Wind Farm Draft EIS

158 [Lastly, Detrital Wash is an important natural habitat connectivity feature within the project area that should be avoided and buffered in order to maintain its functionality for wildlife use and movement. We recommend a delineating a minimum of a 1 km development-free buffer on each side of this wash (2 km total) in order to maintain the functionality of this important landscape feature.

Recommendations:

- 159 [• Design the project to maximize overall landscape permeability, with particular consideration given to Sonoran desert tortoise (i.e. strive to maintain habitat connectivity across the habitat block in which the project is proposed).
- 160 [• Analyze the long-term direct and indirect impacts to habitat connectivity (beyond the 18 month construction period). Consider the habitat connectivity needs of the area's wildlife metapopulations at appropriate spatial and temporal scales.
- 161 [• Re-analyze the acreage of lands that habitat connectivity would be impaired in the long-term where facilities exist on the landscape to include edge effects and loss of connectivity at a landscape scale. Consider using more informative metrics to quantify projected loss of habitat connectivity.
- 162 [• Consult with AZGFD to ensure that the integrity of the potential linkage zone connecting Mount Tipton and Mount Perkins is not negatively impacted by the project and its associated operations.
- 163 [• Protect a multi-species wildlife movement corridor along Detrital Wash with a 2 km development-free buffer zone.

4.3. Biological Mitigation

To be effective, the BLM's approach to mitigation must include efforts to avoid impacts to wildlife and natural resources first, seek ways to minimize any negative effects second, and finally effectively compensate for any unavoidable impacts of a particular project or multiple projects. Successful mitigation should result in a net conservation benefit for sensitive and special status species. Key elements of a comprehensive mitigation framework to fulfill such an approach include:

- working at the landscape level in space and time,
- establishing adequate baseline ecological data,
- determining conservation/wildlife management impacts, objectives, and priorities,
- incorporating consideration for climate adaptation, and
- monitoring and evaluating mitigation performance in order to adapt as needed.

We appreciate BLM choosing a project location that appears to avoid adverse impact to listed threatened or endangered wildlife species and for incorporating substantial minimization measures in the form of best management practices and design features (as detailed in the DEIS section 4.5.6). However, we have concerns regarding the level of specificity of the mitigation/minimization requirements, and regarding the lack of compensatory measures to offset unavoidable adverse impacts on non-ESA listed, special status species.

Responses Continued

158 BLM appreciates comments regarding further conservation measures to Detrital Wash. Maps of the Project Area in Chapters 2 and 3 indicate that Detrital Wash would not be impaired by turbines and related infrastructure; the Wind Farm Site is approximately 0.8 mile east of Detrital Wash at the closest point. The closest wind turbine corridor would be about 1.2 miles east of this wash. As is described in Chapter 2, an existing borrow pit would be used as a materials source and the Project access road from US 93 both incorporate a highly disturbed part of Detrital Wash. This area was disturbed from previous sand and gravel mining in the same disturbance footprint.

159 Local resource agencies were consulted on the occurrences of wildlife movement corridors in the project vicinity in determining the effects of the Project on sensitive wildlife species such as the desert tortoise. As discussed in Draft EIS and Final EIS Section 4.5, Impacts to Biological Resources, the Project would not directly affect habitat within wildlife movement corridors and would not conflict with desert tortoise recovery goals and objectives.

Considerable coordination occurred between the BLM, U.S. Army Corps of Engineers, and AGFD on the best options for avoiding impacts to desert washes and ultimately avoiding impacts of the Project on regional desert tortoise connectivity and movement. These alternatives were analyzed in the Draft EIS and Final EIS. With culvert crossings under access roads, the BLM, Reclamation, and AGFD concluded that adequate opportunities would remain for desert tortoise movement and connectivity within the BP Wind Energy Project Area.

160 See response 154 regarding habitat connectivity. Habitat connectivity impacts for the Project construction, operation, and decommissioning phases are analyzed in Section 4.5.2.5 of the Draft EIS in aggregate, because these impacts would not change during the life of the project. As discussed in Section 4.5.2.5 of the Draft EIS, “impacts from disturbance and infrastructure would affect about 3 percent of the available habitats in the Project Area during the long-term, which could minimally impair wildlife movement.”

161 See response 154 regarding habitat connectivity.

162 See response 157 regarding linkage zones.

163 See response 158 regarding the Detrital Wash.

Comments on the Mohave County Wind Farm Draft EIS

Need for Greater Specificity in NEPA Analysis of Wildlife and Special Status Species Mitigation Measures

An agency's analysis of alternatives and environmental consequences under NEPA must include an analysis of "appropriate mitigation measures." (40 C.F.R. § 1502.14(f); see also 40 C.F.R. §§ 1502.16(h), 1508.25(b)). In the environmental impact statement, an agency is required to "discuss possible mitigation measures in defining the scope of the EIS, (40 C.F.R. § 1508.25(b) (1987)), in discussing alternatives to the proposed action, § 1502.14(f), and consequences of that action, §1502.16(h), and in explaining its ultimate decision, § 1505.2(c)." (*Robertson v. Methow Valley Citizens Council*, 490 U.S. 351, 352 (1989)). "It is not enough to merely list possible mitigation measures." (*Colorado Env'tl. Coal. v. Dombeck*, 185 F.3d 1162, 1173 (10th Cir. 1999)). "Detailed quantitative assessments of possible mitigation measures are generally necessary when a federal agency prepares an EIS to assess the impacts of a relatively contained, site-specific proposal." (*San Juan Alliance v. Stiles*, 654 F.3d 1038, 1054 (10th Cir. 2011)).

164 Unfortunately, the MCWFP DEIS does not adequately satisfy the above requirements with regards to
quantifying mitigation measures and outcomes. The minimization measures listed in section 4.5.6 are
largely a list of "possible mitigation measures," none of which are quantitatively assessed (for example,
by providing expected reductions in mortality of individual or groups of special status species as a result
of the use of particular mitigation measures). See *id.* Indeed, section 4.5.7 on Unavoidable Adverse
Impacts explicitly fails to quantify impacts and mitigation measures upfront, by stating that "Post-
165 construction monitoring will be necessary to quantify the actual turbine-related impacts on these
species [birds, including golden eagles and other raptors, and bats] from this Project." While we are
concerned about impacts to all sensitive and special status species, including pronghorn, mule deer,
desert tortoise, and bats, we are particularly concerned with the need to gather specific impacts data for
golden eagles, as described in section 4.1.3.

For example, it is possible that ongoing follow-up golden eagle monitoring (described in the DEIS on pages 3-45 – 3-46) could result in findings of more golden eagle individuals in the project area than were identified during the Thompson et al 2011 pre-DEIS survey, which would change eagle mortality predictions. Without complete data on potential golden eagle, desert tortoise, and other sensitive species impacts, it is difficult to assess the appropriateness of proposed mitigation measures under the various alternatives.

Need to Incorporate Appropriate Mitigation Measures for Unavoidable Impacts Upon Sensitive and Special Status Species

166 Despite the BLM's efforts to choose a site location with minimal impacts to threatened, endangered, and special status species, unavoidable adverse impacts remain to certain sensitive and special status species of wildlife. We encourage the BLM to not only further avoid impacts to these species, but also to manage them for net conservation benefit, by careful turbine micro-siting, as well as by considering broader siting alternatives such as avoiding ridgelines within the project area.

Responses Continued

164 The statement regarding “Recommended mitigation measures” in Section 4.5.6 of the Draft EIS has been corrected in Section 4.5.7 of the Final EIS to: “Biological mitigation measures follow:.” This revision does not result in a change to the comparison of impacts between alternatives in the Draft EIS. As discussed in the Draft and Final EIS the annual fatality rates corresponding to these conservative model estimates could result in up to 1.65 eagle golden eagle fatalities over a 5-year period and up to 9.9 fatalities over the anticipated 30-year life of the Project (TetraTech 2012a). The fatality estimates are conservative and the actual number of fatalities could vary from these projections.” BP Wind Energy has prepared an Eagle Conservation Plan/Bird Conservation Strategy (ECP/BCS) that follows USFWS Eagle Conservation Plan guidance. The ECP/BCS calls for 2 years of post-construction mortality monitoring after commercial operation with additional post-construction mortality monitoring occurring at 5-year intervals. The results of the monitoring would be compared against thresholds that are tied into an adaptive management strategy, including seasonal curtailment of specific turbines to minimize or mitigate impacts. Monitoring and adaptive management strategies are included in BP Wind Energy’s Eagle Conservation Plan, Bird Conservation Strategy, and the Bat Conservation Strategy. The ECP/BCS developed for the Project meets the requirements of the BLM Instructional Memorandum 2010-156, which provides direction for compliance under the Bald and Golden Eagle Protection Act (BGEPA).

165 See responses 107 and 122 regarding post-construction monitoring for biological species.

166 BLM is working with BP Wind Energy in the micro-siting process to avoid adverse impacts to environmentally sensitive resources, including special status species of wildlife. Also see response 130 regarding micro-siting.

Comments on the Mohave County Wind Farm Draft EIS

DEIS section 4.5.7 on Unavoidable Adverse Impacts identifies likely unavoidable impacts (including mortality) to a number of sensitive vegetation communities and individual sensitive species including silverleaf sunray, Las Vegas bear poppy, Gila monster, and most specifically, birds (including golden eagles and other raptors) and bats. It is also possible that Sonoran desert tortoise (an ESA candidate species) will be impacted by turbine placement on hillsides and ridgelines within the project area. The BLM manual establishes objectives and policies for the management of Special Status Species (SSS/6840) on BLM lands. The objectives of the SSS/6840 policy are twofold:

- To conserve and/or recover ESA-listed species and the ecosystems on which they depend so that ESA protections are no longer needed for these species;
- To initiate proactive conservation measures that reduce or eliminate threats to Bureau sensitive species to minimize the likelihood of and need for listing these species under the ESA.

To achieve these goals, BLM should manage for a net conservation benefit for all special status resources and species, going beyond avoidance and minimization measures to include compensatory mitigation where necessary. These measures¹ may be required following consultation with FWS regarding endangered species, see 16 U.S.C. § 1536(h)(1)(B), and are necessary to achieve the golden eagle incidental take permit (ITP) standard of zero or a reduction of ongoing net take, plus a stable or increasing breeding population (see section 4.1.2). 50 C.F.R. § 22.

Recommendation: BLM should incorporate all best available data on potential wildlife impacts within the project area, including ongoing AZGFD studies and any other studies deemed necessary to fill data gaps, to allow for an accurate assessment of regional and local population status, predicted mortality, and mitigation potential into the design of any mitigation program in the Final EIS. Mitigation measures should be specific to the anticipated impacts and quantifiable in terms of their expected benefits to the species. Finally, the BLM should utilize all aspects of the mitigation hierarchy, including compensatory measures or take offsets, to ensure a net conservation benefit to special status species and compliance with ESA and BGEPA.

167

5. Visual Resources

While the Project Area is located with the Visual Resource management (VRM) Class IV area, visual impacts are a consideration for this project and it is near National Park Service proposed wilderness. Due to the size, color, movement, and lighting of the wind turbines, they present a strong visual contrast to the surrounding landscape. The BLM must address how this project will affect the viewshed and how that impact can be reduced.

168

The visual impacts of the project will be especially significant from the Temple Bar Road and for visitors to the Lake Mead National Recreation Area (NRA), particularly in the afternoon when the turbines would

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¹ Additional mitigation measures may potentially include bat mortality measures such as seasonal shut-downs, changing cut-in speeds, and turbine re-siting if AZGFD bat surveys determine there are turbine conflicts for collision-prone species such as free-tailed or mastiff bats; pronghorn-friendly fencing; and desert tortoise mitigation measures to prevent disruption of habitat connectivity from ridgeline turbines.

Responses Continued

167 BLM realizes the importance of developing mitigation measures that are designed to lessen or eliminate impacts to the targeted resource or species. BLM is implementing mitigation measures consistent with its programmatic EIS for wind developments, similar wind development projects, and the level of impacts for this specific project. BP Wind Energy has continued consultation with USFWS in the preparation of the ECP, which is appended to the Plan of Development. The mitigation measures contained in the ECP have been approved by USFWS, BLM, Reclamation, and AGFD.

168 The viewshed analysis is addressed in Section 4.12.1.3 of the Draft EIS with an analysis of specific Key Observation Points described in Section 4.12.1.4. The mitigation measures that have been and would be applied are described in detail in Section 4.12.7 in the Final EIS. See response 172 for a discussion on the Mount Wilson Wilderness Area and proposed wilderness within Lake Mead National Recreation Area (NRA).

169 BLM agrees that the contrast would be strong along Temple Bar Road for visitors travelling to and from the park as stated on page 4-120 of the Draft EIS. Contrast of views from the Lake and surrounding uplands would vary based on topography and distance as stated on page 4-121 of the Draft EIS.

Letter Continued

Comments on the Mohave County Wind Farm Draft EIS

169 [be both front lit and backlit and at a time when most visitors will be leaving the Lake Mead NRA. (See DEIS at 4-120.) They will also be visible from the Lake and surrounding upland areas.

170 [We have significant concerns about the visual impacts of lighting associated with turbines, particularly at night. The DEIS indicates that the turbines will have synchronized flashing red aviation obstruction warning lights. (DEIS at 4-120) These will present especially strong contrast in this landscape and can be seen for a very long distance. The Perrin Ranch Wind Project located near Williams, Arizona, has similar lights which can be seen all the way from the Grand Canyon's North Rim. We ask that this project, subject to final approval by the Federal Aviation Administration, include the Audio Visual Warning System with the lighting that is activated by aircraft in the area. The developers of the Perrin Ranch Wind Project have agreed to this.

171 [It is difficult to determine from the DEIS what the impacts are relative to the turbine siting on the Bureau of Reclamation administered lands. While we understand that BOR does not have any management objectives or plans for those lands, it still is incumbent upon BLM to assess and evaluate the impacts and include them at a minimum, as part of the cumulative impacts analysis.

172 [Wilderness provides the opportunity for solitude and to experience nature without all of the intrusions of the developed world. While wilderness areas may have fewer visitors than a more developed area, the visual impacts to those who visit wilderness can be more intense. Visual impacts of human-made structures are more expected in areas that are more developed. [According to the DEIS, "Consideration was given to establishing a KOP within the proposed wilderness northeast of the Project Area that is administered by NPS; however, in coordination with NPS staff, it was decided that because the number of viewers would be few, the KOPs from Lake mead NRA would focus on the more frequently visited areas for recreational visitors." (DEIS at 4-110.) We think that is inappropriate to dismiss the potential visual impacts of this project to the National Park Service proposed wilderness areas and to the Mount Wilson Wilderness Area. Both of these should have been considered in the DEIS and should be evaluated in the EIS.

Alternative B would have fewer wind turbines and also fewer visual impacts on the Lake Mead NRA, especially from the Lake and the surrounding upland areas. Because there are fewer turbines, particularly in the northeast portion of the Project Area, there would also be less of a visual impact from Temple Bar Road as visitors would travel a longer distance before encountering the turbines. (See DEIS at 4-127.) The impacts from Alternative C are similar to Alternative B, although with additional turbines, there is likely to be additional visual impacts.

173 [We encourage the BLM to pursue the use of different colors for the wind turbines to reduce the contrast with the surrounding landscape.

174 [To reduce the visual impacts of the collector lines, we encourage burying those lines and co-locating them with any roads to both limit ground disturbance and additional visual impacts. Consideration of burying the overhead transmission interconnect lines should also be considered to reduce visual impacts as well as impacts on avian wildlife.

Responses Continued

170 BLM agrees that the contrast of the flashing lights is generally strong. An Audio Visual Warning System is discussed in Section 4.12.6 of the Draft EIS under the subheading “Obstruction Lighting.” Use of this system has not yet been approved by the Federal Aviation Administration (FAA), but this system has been discussed with the Project proponent.

171 The BLM visual inventory included the land managed by the Bureau of Reclamation as shown on Map 3-10 on page 3-102 of the Draft EIS. The impacts on the visual values on lands managed by Reclamation were considered along with impacts to the BLM managed land; however, Reclamation does not officially address land use direction for managing visual values. BLM visual management objectives, which result from the BLM Resource Management Plan (RMP) process and involve other resource considerations, do not extend beyond BLM administered lands.

To clarify the analysis of Reclamation land, the first sentence under 4.12.1.1 of the Final EIS was revised to state, “Indicators used to measure potential impacts to visual resources that could result from the Project include:

- The level of visual contrast created by the Project on both BLM and Reclamation land
- Changes in VRI class, including component VRI in values (scenic quality, visual sensitivity, and distance zones) that was inventoried for both the BLM and Reclamation land
- Conformance with existing VRM objectives for only the BLM land.”

172 Map 4-1, Visual Resources, has been revised in the Final EIS to include BLM and NPS existing and proposed wilderness. In addition, the following analysis has been added to the Final EIS.

The last part of the first paragraph of Section 4.12.1.4 in the Final EIS was revised to state: “No KOPs were established in the BLM-administered Mount Wilson Wilderness Area or the NPS proposed wilderness in Lake Mead NRA. It was assumed that views from Mount Wilson and Wilson Ridge would focus on the dominant landscape features of Lake Mead and Lake Mohave to the north and west, opposite of the Project location. Consideration was given to establishing a KOP within the proposed wilderness northeast of the Project Area that is administered by NPS; however, in coordination with NPS staff, it was decided that this was not required because the number of viewers would be few, and the KOPs from Lake Mead NRA would focus on the more frequently visited areas. Nevertheless, potential impacts on the existing and proposed wilderness areas are analyzed under the action alternatives.”

The Visual Contrast discussion in Section 4.12.2.2 of the Final EIS was expanded to include: “The boundary of the Mount Wilson Wilderness along the existing electrical transmission line is 4 to 5 miles from the three outermost turbine corridors proposed with Alternative A. Recreationists within the wilderness are assumed to have high visual sensitivity and would be able to see turbines from 68 percent of the wilderness (16,493 out of 24,235 acres) (refer to viewshed on Map 4-1). The closest designated trail is west of the electrical transmission line approximately 5.9 miles from the Project Area. Viewers on the Missouri Spring Trail, the east slopes of the Black Mountain, and Mount Wilson looking southeast would see the Project in the background zone, and would see the electrical transmission line, paved Temple Bar Road, and the night-lighted park entrance station in the foreground-middleground or background zones, depending on location. Overall visual contrast of form, line, color, and texture of the Project under day and night conditions would be strong to moderate depending upon the location and elevation of the viewer.

“The portion of the proposed wilderness in Lake Mead NRA that would be closest to the Project Area is a corner that is just west of Temple Wash and south of Squaw Peak Road. This area would be 1.8 to 2.0 miles from the two turbine corridors closest to the northeast corner of the Project Area (Map 2-2). All recreationists within the Lake Mead NRA are assumed to have high visual sensitivity. Visitors would be able to see turbines from 26 percent of the Lake Mead NRA proposed wilderness (69,886 out of 265,877 acres) within the 20 mile radius of the Project Area. The closest designated trails in the proposed wilderness are west of US 93, 13 miles from the Project Area. Viewers looking southwest, south, and southeast would see the Project and an existing electrical transmission line, dirt and paved roads including

Responses Continued

US 93, the lighted park entrance station, lighted NPS recreation facilities at Temple Basin and possibly Willow Beach, and scattered residences in the foreground-middleground or background zones depending on location. Overall visual contrast of form, line, color, and texture of the Project under day and night conditions would be strong to weak depending upon the location and elevation of the viewer.”

The Visual Contrast discussion for Alternative B in Section 4.12.3.2 of the Final EIS was revised to add, “Under Alternative B, the distance from the Mount Wilson Wilderness Area to the closest turbine would be 5.5 miles compared to 4.0 miles with Alternative A. All views from the Wilderness would be in the background zone. Impacts would be similar to those in Alternative A. The distance from the Lake Mead NRA proposed wilderness to the closest turbine would remain the same, however Alternative B would have less impact on the proposed wilderness than Alternative A, particularly because the Wind Farm Site for Alternative B would exclude some of the turbines located on ridgelines that would appear more dominant from views within the proposed wilderness.”

For Alternative C, Section 4.12.4.2 of the Final EIS under the subheading was revised to add, “Under Alternative C, the distance from the Mount Wilson Wilderness Area to the closest turbine would be 5.0 miles, 1 mile farther than Alternative A, and 0.5 mile closer than Alternative B. The visual impacts would be similar to Alternatives A and B. While the distance from the Lake Mead NRA proposed wilderness to the closest turbine would remain the same as Alternatives A and B, the number of turbines in near proximity to the proposed wilderness with Alternative C would be similar to Alternative B and less than Alternative A.”

173 As noted in Section 2.6.1 of the Draft EIS, two turbine colors are being considered. Since the preparation of the Draft EIS, however, the FAA has advised BLM that it is in the process of rewriting the FAA Obstruction Lighting Advisory Circular AC 70-7460-1K to provide more clear guidance and better consistency in turbine visibility rules. While BLM is still considering two color options for the turbines, the shade of gray turbines has been revised to comply with the darkest acceptable color for wind turbines that will be allowed by FAA, which is RAL 7035 (light gray on the RAL standardized color chart) or equivalent. The Final EIS has been revised at Section 2.5.2.3 and 2.6.1 to reflect the anticipated FAA guidance and the allowable color options. Neither of the colors being considered would require daytime strobe lighting.

174 Section 2.5.2.5 of the EIS notes that collector lines connecting turbines within a corridor would be placed underground; these collector lines would be located within the temporary roadbed to eliminate additional ground disturbance. It is anticipated that most collector lines leading to the substation would be buried, but consideration would be given to putting the collector lines aboveground on wood poles to span rugged terrain and environmentally and culturally sensitive areas as this may have less environmental impact.

Transmission lines from the substation to the switchyard would be energized to 345 kV or to 500 kV, depending on which transmission line is used to tie into the electrical power grid. The cost to bury high-voltage transmission lines, the heat generated by high-voltage lines, and the maintenance issues were considered along with the potential visual and biological impacts; at this time, aboveground transmission lines are proposed. In the Final EIS, Section 2.9.9 has been added to document that underground transmission lines were considered, but were eliminated from further analysis.

Comments on the Mohave County Wind Farm Draft EIS

- 175 [While alternatives B and C would result in more limited visual impacts to the Lake Mead NRA, the BLM should consider a modified alternative that includes fewer wind turbines on the higher elevation areas and that are placed at a greater distance from the Lake Mead NRA, particularly the proposed wilderness areas.] This could be a reduced footprint alternative that unfortunately, was not analyzed in the DEIS.
- 176 [The BLM should consider removing the Bureau of Reclamation lands from the proposal to address significant visual impacts to the viewshed for visitors to Lake Mead NRA and also better analyze the visual impacts on wilderness in the EIS.

Recommendation: We encourage the BLM to consider the suggestions and comments listed in the above section.

5.1. Noise

- 177 [Similar to visual impacts,] the BLM must also consider the noise impacts of the wind turbines and impact mitigation. Outdoor recreation, particularly quiet recreation, is the major attraction for many public lands visitors, especially visitors to wilderness areas. People visit public lands to relax, view wildlife, hike, walk and camp. These wind turbines generate noise in frequencies from 20–3,600 Hz. The frequencies vary with the speed of wind, the pitch and speed of the blades. How noticeable or annoying the wind turbine noise will be depends on the level of ambient noise.¹
- 178 [The noise limits guidance for the Lake Mead NRA is 35dBA and the Proposed Action, Alternative A, exceeds that guidance for portions of the NRA. Siting turbines farther from the Lake Mead NRA such as in alternatives B and C will help to mitigate noise impacts. According to the DEIS, this is one of the few mitigation strategies for noise associated with the turbines themselves. (See DEIS at 4-158.)

Recommendation: We encourage the BLM to consider the suggestions and comments listed in the above section.

6. Cumulative Impacts

Under NEPA, BLM is required to consider the cumulative impacts of this proposed action. See 40 C.F.R. § 1508.25. A cumulative impact is defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” *Id.* at § 1508.7. “The point [of a cumulative impacts analysis] is that a large overview should be maintained toward the magnitude of environmental effects, both of the immediately contemplated action and of future actions for which the proposed action may serve as a precedent or have a cumulatively significant impact.” *Natural Resources Defense Council v. Callaway*, 524 F.2d 79, 88-89 (2d. Cir 1975).

- 179 [As it considers permitting this second wind project on public lands in Arizona, the BLM should particularly consider the unique nature of renewable energy cumulative impacts on wildlife and other biological resources. According to the RDEP Reasonably Foreseeable Development Scenario, the Mohave

¹ Alberts, Daniel J., *Addressing Wind Turbine Noise*, Revised October 2006.

Responses Continued

175 Alternatives B and C both result in turbines being placed at a greater distance from Lake Mead NRA and the proposed wilderness area than Alternative A. The objective of reducing visual impacts, as noted during scoping as a concern and which resulted in refinements to the project footprint, would be achieved with Alternatives B and C. BLM is not considering another alternative that would further reduce the number of turbines on higher elevations and at a greater distance from Lake Mead NRA and the proposed wilderness area. An alternative to further reduce the project footprint, as well as its generating capacity, was evaluated and dismissed from consideration as described in Section 2.9.8 of the Draft EIS.

176 Scoping comments from Lake Mead NRA contributed significantly to the development of Alternatives B and C. As described on page 2-39 in Section 2.6 of the Draft EIS, “To respond to scoping comments and to reduce disturbance-related impacts, BLM has identified two additional action alternatives for analysis. Alternative B reduces the Wind Farm Site footprint and has fewer turbines than Alternative A to reduce visual and noise impacts primarily on Lake Mead NRA and secondly on private property. Alternative C also reduces the Wind Farm Site footprint and has fewer turbines than Alternative A to reduce visual and noise impacts primarily on private property and secondly on Lake Mead NRA.” The potential direct and indirect impacts on wilderness and visual resources are described in Section 4.8, Land Use and, Section 4.12 of the Draft EIS, respectively. The preferred alternative identified in the Final EIS is similar to Alternative B and would exclude most of the turbine corridors on Reclamation land.

177 Section 3.8.4.2 of the Draft EIS indicates that BLM manages the project area as an extensive recreation management area where recreation is non-specialized, dispersed, and does not require intensive management or developed facilities. The existing recreation setting in the project area is associated with a semi-primitive motorized objective. The concentration of visitors is low, but the evidence of other area users is present.

The Project Area is not specifically managed for primitive or quiet recreation. Beyond the boundaries of the Wind Farm Site, noise from turbine operations would not change the existing recreation setting or experience for semi-primitive motorized recreation.

In general, operational noise would be less than 45 dBA Leq beyond the Wind Farm Site, with noise diminishing in magnitude to less than 35 dBA Leq within about a ½ mile of the Wind Farm Site boundary (see Maps 4-2 and 4-3 in Section 4.15.2.2 on pages 4-150 and 4-151 of the Draft EIS for the projected operational noise levels for Alternative A and the noise effects on Lake Mead NRA). For Alternatives B and C, operational noise is anticipated to be less than 35 dBA leq before reaching the Lake Mead NRA boundary (see Maps 4-4 through 4-7 on pages 4-154 through 4-157 of the Draft EIS).

Depending upon meteorological conditions and topography, at some distance over which the sound travels, the Project noise level would become indistinguishable from other sound sources that comprise the “quiet” ambient outdoor sound level. Mount Wilson Wilderness and proposed wilderness lands within Lake Mead NRA are far enough from the Wind Farm Site that the turbine noise would be expected to be less than 35 dBA Leq for Alternatives A, B, C, and E when the prevalent wind is flowing from the north or from the south (as shown on Maps 4-2 through 4-7).

As described in Section 3.15.1.2 under the “Lake Mead National Recreation Area” subheading on page 3-114 of the Draft EIS, with reasoning discussed further in Section 4.15.1, the 35 dBA nighttime Leq threshold was adopted as an impact indicator for Lake Mead NRA land exposed to Project noise in acknowledgment of potentially impacted visitor experiences, such as overnight camping. Wind turbines do generate noise in the 20 to 3,600 Hz spectrum, and manufacturer-supplied sound data, including consideration of factors such as blade and wind speeds, were used to predict the operational noise level for the wind turbines analyzed in this Draft EIS. The analysis was performed at octave-band center frequency resolution, with center frequencies coinciding with those in the afore-stated 20 to 3,600 Hz range, resulting in A-weighted levels that are shown as location-specific predicted values in Table 4-26 and as isopleths or contours on the associated Maps 4-2 through 4-7. Ambient sound level is indeed an important factor in determining whether or not Project construction or operation noise is likely to be

Comments on the Mohave County Wind Farm Draft EIS

179 County Wind Farm may be the precursor to as much as 820 MW of wind power in Arizona over the next 13 years (AZ BLM 2012, Arizona Restoration Design Energy Project Draft EIS, p 2-45). The Final EIS should incorporate an analysis of the likely wind energy-specific cumulative impacts of this and other reasonably foreseeable wind developments, particularly on wildlife impacted by wind turbine strikes or habitat displacement at the population scale.

180 Cumulative impacts analysis plays a critical role in informing monitoring and mitigation plans for proposed actions. For sensitive resources threatened by cumulative impacts related to the MCWFP and other past, present and reasonably foreseeable actions, it is critical that the BLM add to the Final EIS and any other associated plans (such as the Eagle Conservation Plan) specific, clear monitoring thresholds, as well as mandatory, robust management changes if thresholds are exceeded. Key sensitive resources in the area include but are not limited to golden eagles, BLM sensitive plants and wildlife species, Sonoran Desert tortoise, and protected Arizona Native Plants.

Experience with mitigation plans for energy development has taught us that specific, clear monitoring thresholds, with associated required management changes if thresholds are exceeded, are critical to successful plans.

Without these elements, while mitigation and monitoring may be ongoing, a failure to actually change management (e.g. by requiring additional mitigation measures, or stopping, decreasing or slowing the amount of additional development in an area) will result in continued declines in ecosystem health or failures to meet other management goals. The ongoing declines in air quality and mule deer populations in the Pinedale area exemplify the challenges of omitting or delaying commitments to action and failing to define strong actions that will be taken if monitoring shows development is harming other resources. Another potential problem with monitoring and adaptive management plans is the incentive for land managers to adjust the models used to predict future conditions when thresholds are exceeded, rather than changing management. Again, this practice does not comply with mitigation requirements and does not result in meeting management goals.

181 **Recommendation:** The BLM should include in the Final EIS specific, clear monitoring thresholds for cumulative impacts and mandatory, robust management changes if thresholds are exceeded. Appendix 17 of the Coordinated Activity Plan for the Jack Morrow Hills provides a good example of these types of thresholds and required changes (Appendix II).

Thank you for considering these comments:

Signatures:

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Responses Continued

audible at a particular location or distance from the Project. While ambient sound varies with location and meteorological influences, as described on pages 3-115 and 3-116 in Section 3.15.3 of the Draft EIS, ambient sound at representative locations in the vicinity of the Project was measured and reported. Additionally, and as presented in Table 4-24 on page 4-144 and explained in Section 4.15.1 of the Draft EIS, ground level ambient sound is shown to rise with increasing hub height wind speed when turbines are expected to operate. The other important factor for helping to determine audibility or annoyance is the level of Project construction or operation noise predicted at a given location and compared with the ambient. For instance, Maps 4-2 through 4-7 illustrate that Project operation noise diminishes with distance even under two prevalent wind directions and speeds. Beyond the 35 dBA contour, Project noise would continue to decrease with increasing distance. Thus, with increasing distance from the Project, the likelihood of non-project background sound exceeding or “masking” the Project noise also increases because the same Project vicinity wind speeds that would provide conditions for turbine operation are the same winds that, per Table 4-24 of the Draft EIS, would contribute to project vicinity ambient sound in a manner that does not diminish with distance from the Project.

178 Based on the noise analysis and as described in Section 4.15.2.2 of the Draft EIS, the Lake Mead NRA would experience a greater than 35 dBA Leq guidance-based goal only for the south-to-north wind scenario for Alternative A (Map 4-3). However, the noise levels for the two representative Lake Mead NRA locations would not experience a greater than 35 dBA Leq on the north-to-south wind scenario (Map 4-2). Section 4.15.6 includes mitigation measures that would be applied under all alternatives to reduce impacts from noise associated with the Project.

179 The Draft EIS considered past, present, and reasonably foreseeable future actions that are expected to have a cumulative impact, by resource and by alternative, in Section 4.16 starting on page 4-159 of the Draft EIS. Table 4-27 provides cumulative impact analysis area by resource, and Table 4-28 provides a list of past, present, and reasonable foreseeable future actions and projects that were considered, including the Western Wind Energy Project.

180 The Draft EIS describes a number of plans that would comprise the Compliance and Monitoring Plan; these plans are now appended to the Plan of Development, which is available for review with the Final EIS. The Plan of Development appendices include the draft ECP, which incorporated input from BLM, Reclamation, NPS, AGFD, and USFWS. Standards, limits, thresholds, and similar measures are employed to determine success and progress in attaining the resource goals and objectives. In Section 4.5 of the Draft EIS, qualitative thresholds were used to analyze potential effect on wildlife and sensitive species.

181 The Jack Morrow Hills EIS is a RMP amendment, which functions to establish planning level decisions and set thresholds. The NEPA portion of such a document analyzes the alternatives of these various decisions and thresholds. This is beyond the scope of a project level EIS to establish programmatic threshold levels to evaluate project-level impacts. The beginning of Section 4.5 of the Draft EIS includes the qualitative thresholds used to determine levels of impacts. The draft ECP (appended to the Plan of Development) and Appendix B of the Draft and Final EIS include BMPs that are consistent with the BLM programmatic Wind Power EIS.

Letter Continued

Comments on the Mohave County Wind Farm Draft EIS

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Appendix I: Mohave REDA Due Diligence Report

PREPARED FOR THE ARIZONA SOLAR WORKING GROUP

**Mohave County Proposed Renewable
Energy Development Area**

Due Diligence Report

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Note about the Author

Ian Dowdy is a graduate of Arizona State University with a B.S. in Urban Planning and Masters in Business Administration. His experience in urban planning includes work for the Town of Buckeye as a planner during the housing boom of the 2000s and as a consultant on a variety of master-planned communities throughout Maricopa County. Ian has also achieved the American Institute of Certified Planners (AICP) title administered by the American Planning Association. Among other principles, the AICP certification represents a commitment to a fair and transparent planning process and an obligation to retain the public interest as first priority in any project or action. To learn more about the AICP code of ethics please visit: <http://www.planning.org/ethics/ethicscode.htm>.

About the Arizona Solar Working Group (ASWG)

The Arizona Solar Working Group (AZSWG) is composed of a variety of stakeholders representing non-governmental organizations and the solar industry, including those from the conservation arena, power utilities, solar developers, and renewable energy interest groups. The purpose of the group is to work collaboratively toward identifying and resolving potential conflicts between solar development and land conservation and to provide mutually agreeable comments to the Restoration Design Energy Project (RDEP) EIS for the Bureau of Land Management.

About the Arizona Wilderness Coalition

The mission of the Arizona Wilderness Coalition (AWC) is to protect and restore wild lands and waters throughout Arizona. A key component of this mission is to advocate for responsible and sustainable policies toward a clean energy future without compromising key wildlife habitat and opportunities for primitive and unconfined recreation. AWC also actively advocates for pragmatic new conservation measures including appropriate designations for wilderness, National Conservation Areas, and Wild & Scenic Rivers to ensure a sustainable future for coming generations of Arizonans. The Arizona Wilderness Act of 1984, Arizona Desert Wilderness Act of 1990, and the Fossil Creek Wild & Scenic River designation of 2009 are among the Arizona Wilderness Coalition's many achievements. To learn more please visit www.azwild.org.





Figure 1: The lands in and around the proposed Mohave County Renewable Energy Development Area (REDA) contain high levels of naturalness and scenic character.

Table of Contents

Introduction.....	5
Background.....	5
Purpose and Intent.....	5
Methodology.....	6
The Proposed Mohave REDA.....	7
Evaluation.....	8
Site Conditions.....	8
BP Wind Energy.....	8
Environmental.....	9
Proximity to Protected Areas.....	9
Wildlife Habitat.....	9
Historic and Cultural.....	10
Market and Viability.....	10
Proximity to Transmission.....	10
Proximity to Substation.....	10
Market Potential.....	10
Regulatory Framework.....	10
Planning and Zoning.....	10
Evaluation Factors and Recommendations.....	11
Known Issues of Concern - BP Wind Energy.....	11
Recommendations.....	12
Mitigation.....	12
Collocation of Energy Facilities.....	12
Conclusion.....	12
Bibliography.....	13
Appendix I: Site Evaluation Route and Photos	
Appendix II: Communication	
Appendix III: Information from Mohave County	

Introduction

Background

Alternative energy has long been considered a critical component of a sustainable future for the nation. Advocates have articulated the advantages of having greater energy independence and the environmentally friendly benefits that wind, solar, geothermal, and biofuels provide. In response to a growing number of applications for renewable energy development on federal lands, the Bureau of Land Management (BLM) has initiated two processes that will guide the future of solar energy on Arizona's public lands. The first is the Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States (Solar PEIS), which is designed to guide primarily utility scale projects on BLM lands. The Solar PEIS identifies 3.4 million acres of AZ BLM lands that would be available for solar development applications, including two Solar Energy Zones (SEZs) totaling 6,500 acres that would be priority areas for development while "limiting the required scope and effort of additional project-specific NEPA analyses."¹ The Supplement to the Draft Solar EIS also outlines procedures for identifying new SEZs, which in Arizona is likely to occur due to their currently limited number and size. The Solar PEIS, aside from its authorization and protocol for the identification of new SEZs, is outside the scope of this assessment. For more information regarding the Solar PEIS, please visit www.solareis.anl.gov.

The second solar planning process is unique to Arizona and forms the basis of this assessment. The Restoration Design Energy Project (RDEP) is intended "to conduct smart, statewide planning to foster environmentally responsible production of renewable energy and to allow the permitting of future renewable energy development projects to proceed in a more efficient and standardized manner. The RDEP would amend land use plans to identify geographic areas best suited for renewable energy, establish land reuse goals, and identify design features to protect resource values and uses."² The project utilizes a wide variety of environmental, archeological, hydrological and other constraints to screen out areas inappropriate for renewable energy development. RDEP identifies two major classifications of lands that will be available for development; the Agua Caliente SEZ in eastern Yuma County, and Renewable Energy Development Areas (REDAs) which will likely fulfill variance requirements for a subset of lands identified in the Solar PEIS. The REDA in Mohave County is one of these potential development areas and is the focus of this assessment report. The Draft EIS for RDEP provides six alternatives that identify up to 321,500 acres of BLM lands for potential renewable energy development, including three action alternatives for the designation of the Agua Caliente SEZ. A wide variety of stakeholders around the state have looked on the RDEP process with optimism, hoping that it can both encourage responsible solar development while limiting most of the conflicts to wildlands and wildlife habitat that have hindered or prevented other projects from coming to fruition.

Purpose and Intent

The intent of this report is to evaluate stakeholder perspectives, opportunities, and constraints regarding the proposed REDA in Mohave County and to communicate these findings to the Arizona Solar Working Group (AZSWG) and member representatives. Research of the Mohave County REDA was accomplished by utilizing a diverse range of sources, including interviews with a variety of stakeholders to identify, quantify, and analyze their perspectives; the goal is to provide a transparent and thorough understanding of the site conditions and constraints. Information gathered is provided within this report and appendices for thorough examination. Ideally, the critical merits and concerns of the Mohave County REDA can be understood after reading this document, allowing the Arizona Solar Working Group (AZSWG) to reach a defensible conclusion regarding the viability of responsible solar development on the subject property. Additionally, this assessment analyzes the effectiveness of RDEP's screening process that removes potential conflict areas from the REDA portfolio.

¹ Supplement to the Draft Solar PEIS, Chapter 2-20

² Draft RDEP EIS, Chapter ES-2

Mohave County Proposed REDA | Due Diligence Report | May 4, 2012

Arizona State Director Ray Suazo, in his letter introducing the RDEP EIS states that the Restoration Design Energy Project aims to “amend BLM land use plans to identify lands across Arizona that may be suitable for renewable energy development and to establish a baseline set of environmental protection measures for such projects. The BLM is proposing to identify Renewable Energy Development Areas that may be suitable for the development of utility-or distributed-scale solar and wind facilities³.” With this stated intention, an analysis of the Mohave REDA, which represents the largest contiguous REDA on BLM lands, for its renewable energy development suitability may provide a good understanding of the overall likelihood that other REDAs throughout the state may also be appropriate. In short: This analysis of the Mohave REDA will serve as a test of the screening criteria that was developed to ensure that lands with high environmental, social, recreation, cultural, or other values are not subjected to development.

REDA Lands Assessed for Potential Solar Energy Zone (SEZ)

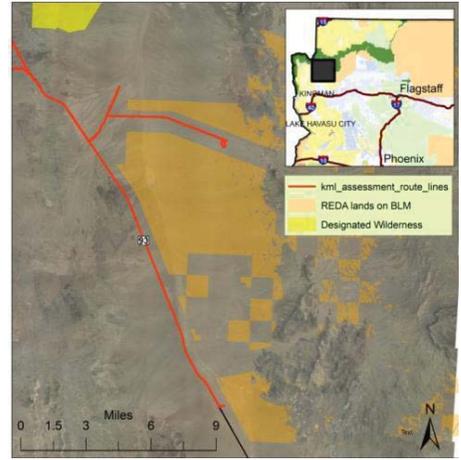


Figure 2: The Mohave REDA is in two major contiguous areas including approximately 20,000 acres in the northern area and 4,300 acres in the southern area. The red line shows the route that was taken on a site visit.

Stakeholders Contacted Regarding Agua Caliente SEZ	Name
Arizona Game and Fish Department	Ginger Ritter, Trevor Buhr
Grand Canyon Wildlands Council	Kim Crumbo
Mohave County Planning Department	Kevin Davidson, Christine Ballard, John Montgomery
Defenders of Wildlife	Matt Clark
Sierra Club	Sandy Bahr
Lake Mead National Recreation Area	Jim Holland
Clean Line Energy	Keith Sparks
BLM	Kathy Pedrick, Kevin Grove
Archaeology Southwest	Andy Laurenzi
Trust for Historic Preservation	Rebecca Schwendler
Grand Canyon Park	John Reber
BP Energy	Todd Eagleston
Hualapai Tribe	Jack Ehrhardt
Western Area Power Administration	Todd Rhoades

Table 1: List of stakeholders contacted regarding the proposed Mohave REDA.

Methodology

A list of major stakeholder groups was compiled with input from the AZSWG and each was approached to discuss aspects of the Mohave County REDA. Table 1 contains a list of those that were solicited for input, although not all

³ (Bureau of Land Management, 2012, p. 1)

returned phone calls or had substantive information to provide. Detailed notes of these conversations are included in Appendix II.

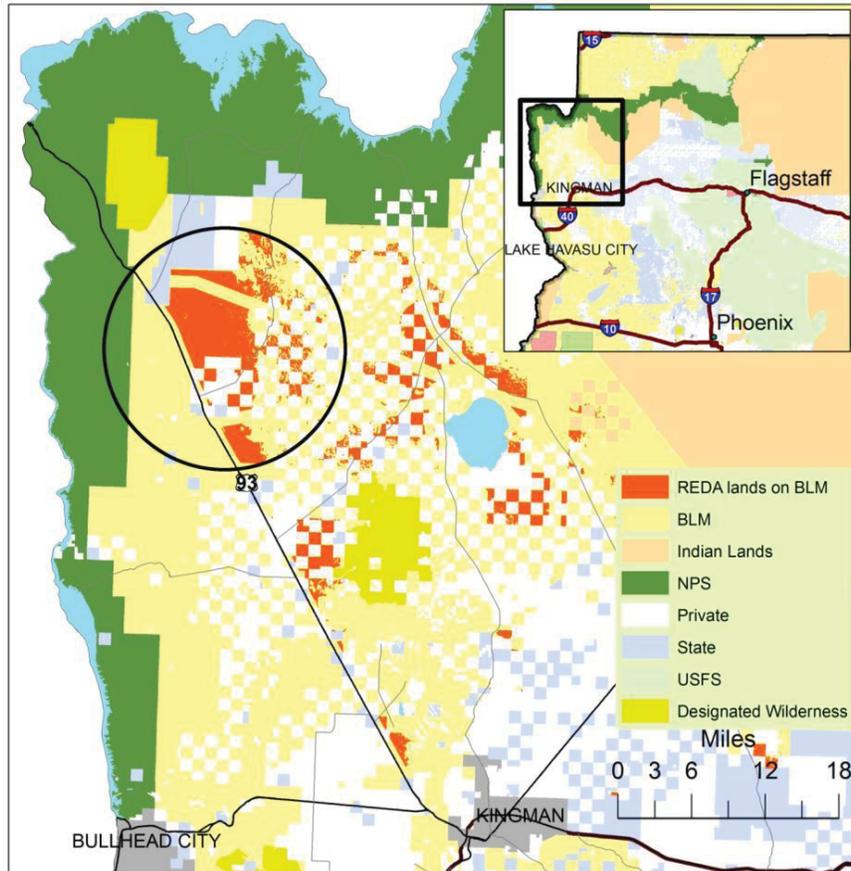


Figure 3: Mohave REDA lands subject to this evaluation.

The Proposed Mohave REDA

For purposes of this report, the evaluation of land in the Renewable Energy Development Area (REDA) in Mohave County (Mohave REDA) comprises approximately 31,000 acres of BLM lands arranged in two disjunctive areas. The north unit is approximately 22,000 acres, with the smaller south unit totaling 4,300 acres. Although there are significant private and Arizona state lands identified as REDA in the vicinity of this subject property, they will not be evaluated in this report for a variety of reasons. The Mohave REDA is virtually identical in four of the RDEP alternatives including Alternatives 1, 2, 4, and 6. In Alternatives 3 and 5 the lands have not been included as they do not meet the criteria established for consideration. In Alternative 3 they are not close enough to load centers

and in Alternative 5 they are not subject to disposal⁴. For purposes of this evaluation, the Mohave REDA as is displayed in Alternative 6 will be the focus of these due diligence efforts as the test of the success of the RDEP screening process (Figure 3).

Evaluation

Site Conditions

The Mohave REDA lands are located in unincorporated and rural areas of Mohave County, situated between the US-93 on the west, White Hills on the east, lands managed by the Arizona State Land Department (ASLD) and Bureau of Reclamation (BOR) on the north, and the White Hills on the south. The City of Kingman is located approximately 45 miles south of the site, while Boulder City lies 35 miles to the northwest (see Figure 3). The vast majority of the Mohave REDA is undeveloped desert of the Mohave Basin and Range vegetative community characterized by creosote and bursage shrubs and low-lying plant communities. Unlike the Sonoran Desert, this region contains few trees save for the iconic Joshua tree, broadly scattered across the landscape. (See photos in Appendix I) Generally the topography is flat with gentle slopes down toward the Detrital Wash that drains the area into Lake Mead. A visual assessment showed that the lands have moderate to high scenic character and few encumbrances save for a major transmission line and a low density of unimproved roads. There are signs of cattle grazing in the area, concentrated near the large xeroriparian area of Detrital Wash. Generally the site is in excellent condition from an ecological perspective, providing habitat for a variety of species including antelope, Sonoran desert tortoise, mule deer, and other species. Fragmentation has occurred as a result of the electric transmission lines, a few dirt roads, an aggregate operation, and some developed thoroughfares, though overall the landscape retains a level of naturalness that compares to some of the most scenic viewsheds in Arizona (Figure 1).

BP Wind Energy

Lands to the north of the proposed Mohave REDA are currently subject to an application by BP Wind Energy to develop a large wind-powered generation facility. A meeting with Mohave County Planning officials revealed that a good portion, approximately two-thirds of the REDA, is a part of this preexisting application. This facility is proposed to generate between 400 and 500MW at full capacity and is moving forward with the required approvals before development. The project plan is to connect to either the 345kv Liberty-Mead or the 500kv Mead-Phoenix transmission line with a developed substation on the site to accommodate the connection. The complete plan of development made available on the BLM website is included in Appendix II. The impacts of this development on the REDA may be significant in limiting or removing the possibility of large-scale solar development. If built, solar may be interspersed between wind turbines or confined to the south unit or lands encumbered by the Detrital

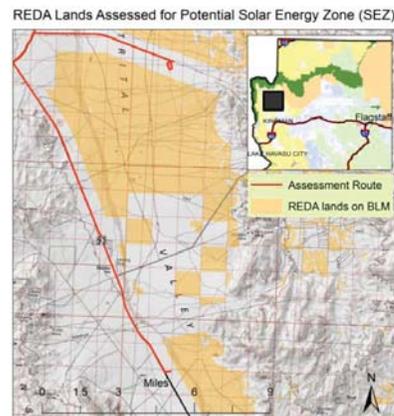


Figure 4: The topography of the proposed Mohave REDA is very flat sloping toward the Detrital Wash on the west edge of the site.

⁴ There are some BLM lands near to the Mohave REDA that are a part of Alternative 5, situated in a checkerboard pattern and surrounded completely by private lands. As this land totals approximately 1,200 acres and is not a part of the two large contiguous lands that comprise the majority of the REDA, it has not been considered as a part of this evaluation.

wash. The Draft EIS for the BP Wind Energy project is expected to be released to the public in late spring. The project may be in operation as soon as late 2013.

In a discussion with Kathy Pedrick of the Arizona BLM office, the BP Wind Energy project will retain permitting precedence as it precedes the RDEP process. The BLM has not determined how to best collocate and/or accommodate solar development and wind energy on the same site although there could be the possibility of such practices in the future.⁵ BP has not considered siting solar development in the project but recognizes the possibility for solar energy to complement the wind facility.⁶

Environmental

The evaluation of the Mohave REDA site focuses on known or potential conflicts with environmental and cultural resources including wildlife habitat, known special status species, and known or probable cultural resource values.

Proximity to Protected Areas

The proposed Mohave REDA is directly between two wilderness areas which provide valuable wildlife habitat and opportunities for primitive and unconfined recreation in Mohave County. The Mt. Wilson wilderness is only five miles to the northwest of the edge of the proposed REDA while the Mt. Tipton Wilderness is approximately 10 miles to the southeast. The location and proximity of these important conservation lands should be considered as the REDA lands could contribute wildlife connectivity, scenic values, and other features to the wilderness experience.

Wildlife Habitat

Wildlife experts with knowledge of the lands in the Mohave REDA were interviewed to discover any likely or potential conflicts between solar development and wildlife habitat. No significant conflicts were reported although the following known wildlife activity has been documented including:

- Desert tortoise has been documented in the mountainous areas to the north of the REDA. These animals are likely of the Sonoran subspecies and are unlikely to be in the developable REDA area.⁷
- Periodically, antelope are seen in the REDA area, although the area is not considered high quality habitat. The only concern raised was in regard to the necessity of a wildlife corridor around the Detrital wash to accommodate passage of animals.⁸
- In areas near the Lake Mead National Recreation Area, bald eagles are known to winter and may be impacted by wind generation developments although the likelihood and degree of such events are difficult to quantify.⁹
- The Arizona Game and Fish Department has provided a list of species that may be within the Mohave REDA as well as those likely to be within five miles of the site. This list is included in Appendix II.¹⁰



Figure 5: The approximate boundary of the proposed BP wind energy site (black line) over the proposed REDA (gray shading). (Staff, 2012)

⁵ (Pedrick, 2012) As a comment to this report Ms. Pedrick noted: "It would not be the responsibility of the BLM to determine how to collocate wind and solar. If a proponent submitted a proposal we would evaluate it as part of the project specific process."

⁶ (Eagleston, 2012)

⁷ (Eagleston, 2012) (Grove, 2012) (Staff, 2012)

⁸ (Ritter, 2012) (Buhr, 2012)

⁹ (Holland, Park Planner, NPS, 2012)

¹⁰ (Ritter, 2012)

Based on interviews and topical review of known wildlife in proximity to the Mohave REDA, development of the area for its solar potential is not expected to have significant impacts on species of recreational or economic value, nor on species of special concern.

Historic and Cultural

There are no known historic or cultural resources within the proposed Mohave REDA although more research should be performed prior to development. The Hualapai tribe, the closest Native American stakeholder group, has not returned phone calls or emails that solicited input.

Market and Viability

The viability of alternative energy generation facilities is incredibly hard to determine except by experts in the field. For purposes of this assessment the following have been considered: proximity to transmission, substation, and possible market potential.

Proximity to Transmission

Two transmission lines are currently in operation through the northern portion of the Mohave REDA including the Liberty-Mead 345kv line, and the Mead-Phoenix 500kv facility. The proposed BP Wind Energy project has an interconnection request for both lines. The available capacity on either of the lines is unknown at this time.

The planned Centennial West transmission line, a 500kv facility, is proposed to go through the southern portion of the REDA, allowing up to 500kv of energy capacity to facilities in the area. Keith Sparks of Clean Line Energy seemed friendly toward accommodating transmission needs for facilities in the Mohave REDA area.¹¹

Proximity to Substation

There is no current substation within close proximity to the Mohave REDA. The proposed BP Wind Energy project proposes to develop a substation adjacent to the existing transmission corridor on the northern edge of the REDA.

Market Potential

Market potential for solar energy from the Mohave REDA is difficult to ascertain at this time.

Regulatory Framework

Planning and Zoning

Mohave County seems to have positioned itself to accommodate utility-scale alternative energy projects. They have developed a process to facilitate development and have several projects in various stages of the process, from entitlements to operation.

The proposed Mohave REDA is entirely within the jurisdiction of Mohave County and is not within or adjacent to an incorporated area, nor is it within the planning area of any municipality. The land is currently designated Rural Development Area in the Mohave County Comprehensive Planning and zoned under a rural designation. According to the staff of the Mohave County Planning Department, regardless of the land use and zoning designation, an application for minor Comprehensive Plan Amendment to a Renewable Energy overlay district and a rezoning application to an Energy Overlay Zone will be required prior to the development of any alternative energy facility. This process is expedited to take approximately 120 days including at least one neighborhood meeting and a public hearing before the Board of Supervisors.¹²

¹¹ (Sparks, 2012)

¹² (Staff, 2012)

retained hope that should the RDEP be approved, there could be a future process whereby a Solar Energy Zone (SEZ) may be established in the REDA, adding to what some feel is a deficient SEZ portfolio in Arizona. With the discovery of the size and scope of the BP Wind Energy project, it may be that the Mohave REDA will not have the size and scale to be recommended for a SEZ, although there is still adequate land in the REDA to accommodate viable solar energy development, including the 4,300 acre southeastern parcel, about 2,500 acres directly south of the BP Wind Energy project, and some lands around the Detrital wash.

Recommendations

Mitigation

Although this evaluation has discovered no significant concern regarding environmental issues in the Mohave REDA, the landscape is of high natural and scenic character and retains some value for wildlife connectivity and habitat. Mitigation measures should be implemented as the site develops to preserve key wildlife corridors, slopes, and the Detrital wash.

Collocation of Energy Facilities

The presence of the BP Wind Energy project, which may appear to be a hindrance to large-scale solar energy development, may provide an opportunity for the collocation of wind and solar facilities which may have benefits to balancing energy risk and load to customers. The BLM should consider policies that would facilitate the sharing of REDA and SEZ sites between different methods of renewable energy generation.

Conclusion

The evaluation of the Mohave REDA has provided valuable insight into the likelihood that much of the 230,000 acres identified by the RDEP EIS are potentially suitable for renewable energy development. No major environmental conflicts have been found within the REDA, suggesting a successful application of screens that removed high or moderate conflict areas. While these findings may provide some comfort to Arizonans that are concerned about the loss of critical habitat and ecological resources throughout the state, each individual site should receive careful scrutiny prior to development to ensure site appropriateness and to evaluate mitigation measures that should be implemented to limit impacts. Although much of the land identified as REDA areas in the RDEP EIS retain high natural character, there should still be an emphasis on lands that are previously disturbed to limit unforeseen effects on wildlife, vistas and recreation opportunities on public lands throughout Arizona. If the Mohave REDA is any indicator, the RDEP process has been successful at identifying areas that have few known environmental conflicts, leaving the potential development of renewable energy on public lands in a stronger position to move forward.

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**Appendix II: Appendix 17 of the Coordinated Activity Plan for
the Jack Morrow Hills**

APPENDIX 17—IMPLEMENTATION, MONITORING, AND EVALUATION PROCESS

Proposed changes in the Bureau of Land Management (BLM) management direction based on the review of public comments and the incorporation of new information has resulted in reformulation of the implementation strategy for the Jack Morrow Hills Coordinated Activity Plan (JMH CAP) planning area. As a result of this review, the implementation strategy has been modified to include a more traditional monitoring and adjustment approach.

The approach to timing and sequencing of the activities in the JMH CAP has been modified to recognize valid existing rights of oil and gas lessees. Adaptive management, as it relates to timing and sequencing of the development of existing oil and gas leases, and future oil and gas leasing, has been dropped from consideration. A more traditional approach (where many of the decisions are made up front and would require plan modification to change) has been adopted in the JMH CAP. Some flexibility is maintained where possible for the other resources, and field data still plays an important role in impact analysis and in measuring progress toward the various goals. Timing and sequencing of resource activities other than oil and gas leasing and development will be used where appropriate and required to attain the management vision.

This appendix provides detail on the revised resource management strategy to be used in the JMH CAP planning area. The appendix discusses how the various surface use activities and their interactions with other planning area resources will be addressed. Greater detail is provided for oil and gas exploration and development activities because these are the most foreseeable resource use and are anticipated to have the greatest immediate impact. Data collected in the planning area will be used to support decision changes, evaluate the effectiveness of specific practices or policies, and measure progress toward the goals adopted for the planning area.

MANAGEMENT VISION

In general, resource management in the JMH CAP planning area will allow multiple use activities and sustained yield while minimizing undesirable impacts or enhancing certain identified aspects of the area. All types of surface activities are anticipated, including oil and gas exploration and development, recreational use, livestock grazing, rangeland improvement, rights-of-way, solid mineral exploration and development, and alternative energy production. In addition, the area will continue to be recognized for its ability to support big game and other wildlife. Important historical and cultural resources will be identified and managed for future study and enjoyment. Special management areas (such as Wilderness Study Areas [WSA] and Areas of Critical Environmental Concern [ACEC]) will continue to safeguard the unique values within the planning area. The public will be kept informed of the activities, impacts, and decisions concerning the JMH CAP and will be provided opportunities for feedback and comment. Local, tribal, state, and federal governments will be involved in the realization of the vision.

SUPPORTING RESOURCE OBJECTIVES

Numerous resources will be managed in the JMH CAP planning area. Each has individual objectives that support the overall management vision. The administration of the various resources is an important component in the total JMH CAP management strategy. Properly combined, the objectives for managing the resources listed below will result in the multiple use management vision being achieved.

- **Land and Water Resources Management:** To maintain or enhance land and water resources using ecological principles and science-based performance criteria.

- **Fire Management:** To use prescribed fire as a management tool to help meet multiple use resource management goals and to provide cost-effective protection from wildfire to life, property, and resource values.
- **Watershed Management:** To stabilize and conserve soils; increase vegetative production; maintain or improve surface and ground water quality; and protect, maintain, or improve wetlands, floodplains, and riparian areas.
- **Wild Horses Management:** To protect, maintain, and control viable, healthy herds of wild horses at Appropriate Management Levels (AML) in the Great Divide Herd Management Area (GDHMA) while retaining their free-roaming nature; provide adequate habitat for free-roaming wild horses through management consistent with principles of multiple use and environmental protection; and provide opportunity for the public to view wild horses.
- **Livestock Grazing Management:** To improve forage production and ecological conditions for the benefit of livestock use while providing for other resource values.
- **Vegetation Management:** To maintain or enhance vegetation community health, composition, and diversity to meet watershed, wild horse, wildlife, and livestock grazing resource management objectives and to provide for plant diversity (desired plant communities).
- **Wildlife Habitat Management:** To maintain, improve, or enhance the biological diversity of wildlife species while ensuring healthy ecosystems; restore disturbed or altered habitat, with the objective of attaining desired native plant communities, while providing for wildlife needs and soil stability; and to the extent possible, suitable wildlife habitat and forage would be provided to support the Wyoming Game and Fish Department (WGFD) strategic plan population objectives.
- **Heritage Resources Management:** To expand the opportunities for scientific study, and educational and interpretive uses of cultural and paleontological resources; protect and preserve important cultural and paleontological resources and/or their historic record for future generations; resolve conflicts between cultural/paleontological resources and other resource uses; and foster opportunities for Native Americans to use heritage resources.
- **Travel, Access, and Realty Management:** To manage the public lands to support the goals and objectives of other resource programs, respond to public demand for land use authorizations, and acquire administrative and public access where necessary.
- **Recreation Resources Management:** To ensure the continued availability of outdoor recreational opportunities sought by the public while providing for other resource values, meet legal requirements for the health and safety of visitors, and reduce conflicts between recreation and other types of resource uses.
- **Mineral and Energy Resources Management:** To maintain or enhance opportunities for mineral exploration and development while providing for other resource values.
- **Visual Resources Management:** To maintain or improve scenic values and visual quality and to establish priorities for managing the visual resources in conjunction with other resource values.
- **Special Management Areas Management:** To maintain or enhance the resource values and characteristics for which the area was designated as a special management area.

In the case of competing resource objectives, the one providing the greatest assistance to achieving the management vision will be chosen. Attempts will be made to meet all resource objectives to the greatest extent possible to maximize the combined outcome.

GENERAL APPROACH

The vision and objectives are best achieved through adjusting to the planning area resource conditions and user demand. Many types of surface-disturbing or disruptive activities are expected throughout the planning area. Grazing, recreation, rangeland improvement, rights-of-way, and minerals extraction will be allowed as long as the activity conforms to the land-use classification. For example, WSA management will follow prescriptions established by law and regulation, and ACEC management (Chapter 2) will safeguard those values being recognized with the ACEC designation. Outside the special designation areas, use restrictions will be employed to control impacts where and when necessary. The amount of activity allowed at any specific location in the planning area naturally depends on, among other factors, the type of associated surface disturbance, activity impact on other resources, conditions in the planning area, and alignment of the activity with the resource management objectives.

The adopted approach recognizes valid rights (such as oil and gas leases) and needs (such as grazing) involving public lands as well as the need to maintain or enhance the natural values in the planning area. To this end, the planning area is divided into three regions that represent the relative importance of the contained resource values. Surface disturbing or disruptive activities will be tightly controlled where the most overlapping sensitive values are located. The planning area division allows differing policies or practices to be adopted, their effectiveness judged, and needed changes made to increase their effectiveness in achieving the resource objectives and the management vision.

Determining the effectiveness of practices or policies requires information. Therefore, data collection is part of the JMH CAP management strategy. In addition, the data is necessary to assess the condition and level of use of the various resources to allow for better decision-making. The measurements and observations will provide information for numerous tasks, including impact analysis, project or proposal evaluation, and development of the most effective mitigation measures. Data collection and its use are fully discussed below.

BLM will act in concert with state, tribal, and local governments. Though BLM remains the final decision maker on the use of public lands, the varied viewpoints represented by a diverse group of users will help to develop and maintain an appropriate management approach. Outside agencies will be called upon as necessary for their particular expertise in data analysis and resource knowledge. To aide BLM in the management of the planning area, a JMH CAP Working Group will be formed. This non-Federal Advisory Committee Act (FACA) chartered group will act in an advisory capacity and provide better access to outside sources of data or expertise. The public will also have a role in the management of the planning area. See the Communication and Participation section of this appendix for further detail on the JMH CAP Working Group and BLM plans to disseminate planning area information and use feedback.

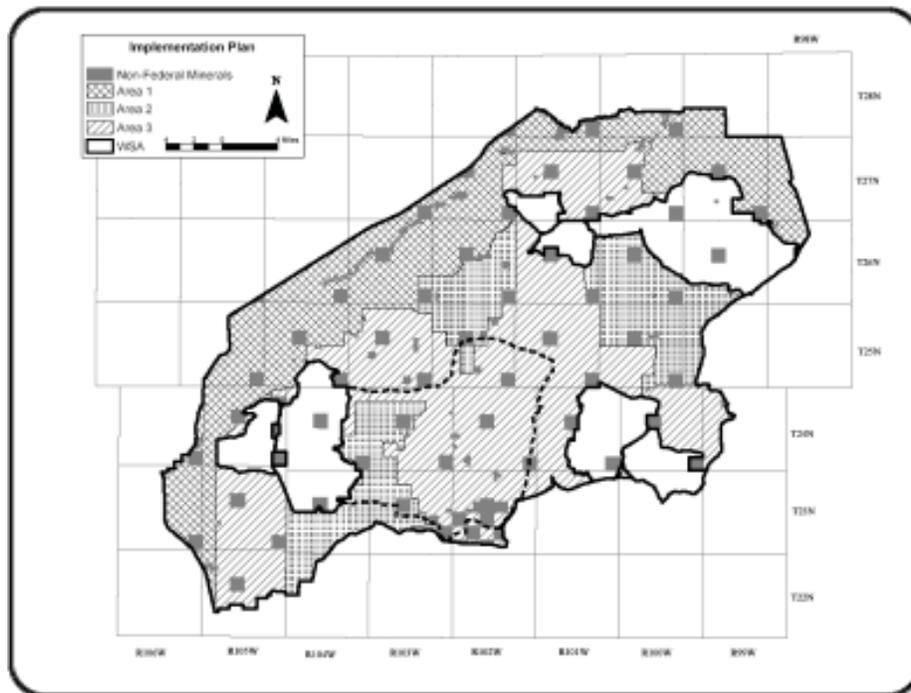
JMH CAP DECISIONS

Several ways exist for achieving the multiple use management vision. The methodology selected implements a careful approach to the development and use of the various resources (especially oil and gas) while managing the associated impacts. Observing actual effects of surface-disturbing and disruptive activities is a necessary part of the approach. Limits, targets, or thresholds presented in the final EIS may be modified as information is collected, decision effectiveness is evaluated, and needed modifications are made to associated policies or practices. It is equally possible that both less or more restrictive measures could be implemented as a result of observing the effects of the management strategy.

Figure A17-1 presents the three areas of relative resource value within the planning area. Area 1, Area 2, and Area 3 have been identified to guide management analysis and decisions. The distinction between the areas is a “broad-brush” approach that combines many factors (e.g., wildlife usage, presence of crucial habitat, plant

species distribution, historic or cultural importance, and general sensitivity to the impact of surface activities) into a single quantity. The area designations provide a general guide to reviewing proposed surface use activities in the planning area. For example, Area 3 has the highest relative ranking and so proposed surface use activities located here will be subject to the most stringent mitigation.

Figure A17-1. Areas of Resource Value Within Planning Area



Oil and gas, by necessity, is a special case. Because of past leasing decisions, many valid rights exist in the form of existing oil and gas leases in the planning area. The primary control BLM maintains over the development of the leased oil and gas resources is through further leasing decisions. (Other controls such as short-term lease suspension, access, APD condition-of-approval, and lease stipulations are meant to mitigate impacts, but these do not, to a large extent, control when and where exploration and development activities take place.) Decisions specific to oil and gas are designed to minimize and attempt to control the anticipated impacts in each of the three areas.

In Area 1 the suspensions on existing oil and gas leases will be lifted 3 years from the signing of the Record of Decision (ROD) or upon the signing of an approved plan of development. New leasing will be considered in Area 1 immediately following the signing of the ROD. Leasing requests will originate from industry as provided for by the Mineral Leasing Act of 1920, as amended and supplemented (30 United States Code [U.S.C.] 181 et seq.). It is expected that exploration and development will occur within the term of the lease and that any resulting impacts related to exploration/development/production will be considered during the analysis of future leasing actions. Review of exploration, development, and leasing proposals will continue to use the current process (see Appendix 14 or contact the Wyoming BLM State Office for current information on permitting oil and gas activities) and will employ collected data, impact observations, and knowledge gained from similar activities in the planning area in the review process. Application of appropriate lease stipulations will be used to address any identified impact issues. Access for pipelines,

power lines, and roads, location of facilities, and other related surface activities will undergo similar scrutiny. Other uses (such as recreation, grazing, and rangeland improvement) will employ resource-specific review processes and will also rely heavily on field data and observations to make informed decisions. Stipulations, restrictions, and modifications to proposals will be used to manage impacts of any surface disturbing or disruptive activities.

Area 2 existing oil and gas leases will have their suspensions lifted 3 years from the signing of the ROD or upon the signing of an approved plan of development, the same as Area 1. New leasing will be considered immediately upon signing of the ROD. BLM may require potential lessees to share data (such as reservoir data or geologic data) or plans related to the development of the potential oil and gas resource prior to leasing. The information will be used to ensure that impacts resulting from development of the Area 2 area of interest would remain within the acceptable level of impacts analyzed in this document. Consideration of leasing may rely heavily on field data, the condition of the planning area resources as determined through monitoring of sensitive resource indicators, the understanding of the associated impacts, and other pertinent information available. Future impacts resulting from the development of the lease interest area in conjunction with other foreseeable surface uses will also be considered. Fluid mineral resource development and protection of surface resource values will be attained through lease stipulations and/or site-specific conditions of approval. Due to the greater number of sensitive resource values in Area 2, it is anticipated that use authorizations for activities such as range improvements, recreation permits, rights-of-way, and well permits would have an increased number of resources and issues to analyze at the permitting stage. As with other projects in Area 1, appropriate administrative controls (such as conditions-of-approval, use restrictions, and requiring mitigation measures) will be used to safeguard or support improvement of resource values.

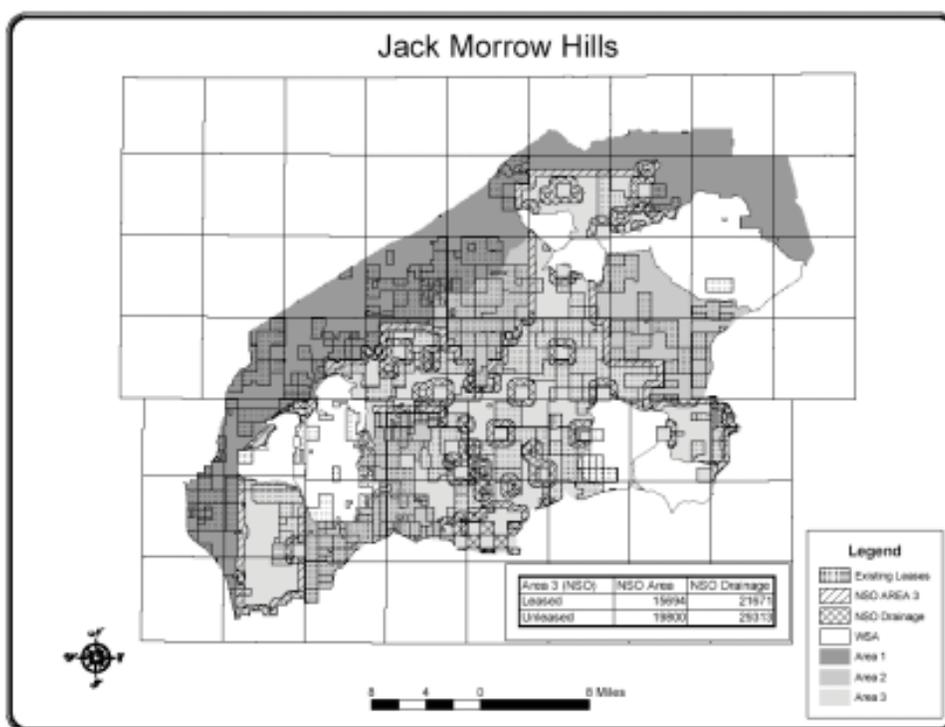
Area 3 will be closed to future oil and gas leasing, with the exception of about 35,500 acres that could be considered for leasing with a No Surface Occupancy (NSO) lease stipulation. Existing oil and gas leases in Area 3 will be handled like those located in Areas 1 and 2 (i.e., suspensions lifted 3 years from the signing of the ROD or upon the signing of an approved plan of development). As stated, no new oil and gas leasing will occur in the majority of Area 3. To the extent that laws and regulations allow, those portions of Area 3 that are closed to oil and gas leasing will remain closed to leasing of oil and gas unless BLM determines that an NSO lease is appropriate and meets management objectives. For example, an NSO lease may be offered if production on adjacent private or state lands results in a loss of federal minerals through drainage. At this time it is not anticipated that an NSO lease for these lands would extend further than one-half mile from the boundary of the involved private or state lease. However, this may change as new information and technological advances become available.

Because Area 3 contains a high concentration of sensitive resource values, proposals for all surface activity (for oil and gas activities this is limited to the existing leases) will be closely examined. Users requiring approval are charged with showing that resource development activities will result in acceptable impacts and are needed. This action may mean proposing novel methods, systems, and technologies for BLM consideration. APDs and other use approvals may require numerous revisions and have stringent conditions-of-approval to address specific issues related to impacts. Rights-of-way applications will be examined for necessity. Paralleling, consolidation, or rerouting may be necessary to minimize cumulative surface disturbance and to meet transportation planning objectives. Other surface use proposals and projects in Area 3 (e.g., rangeland improvement, grazing, access, and recreation) can expect to undergo an in-depth, comprehensive review. Field data and observations, cumulative impacts of likely and foreseeable competing uses, understanding of impacts, conditions within the planning area, and management goals will be employed during the decision-making process.

As previously discussed, Area 3 contains a special category for possible oil and gas leasing. The lands surrounding private or state oil and gas leases and those along the perimeter not bounded by a WSA or adjacent to particularly sensitive resources will be considered for leasing with an NSO stipulation. This

provides opportunities (such as by the use of directional drilling) to recover oil and gas within Area 3 from locations outside the planning area or within Areas 1 and 2 without significantly impacting Area 3 resource values. Approximately 35,500 acres would be available within Area 3 for future oil and gas leasing with the NSO stipulation (based on a one-half mile perimeter). Approximately 15,694 acres of the perimeter area is currently leased. These existing leases are subject to a variety of stipulations and are not necessarily constrained by an NSO restriction. Figure A17-2 shows the existing leases and illustrates the possible effects of one-half mile NSO leases along the entire Area 3 and private lands perimeter.

Figure A17-2. Possible NSO Oil and Gas Leasing Areas



Approval of any surface disturbing or disruptive activity anywhere in the planning area will be considered on a case-by-case basis. The analysis will consider many factors such as type and effect of future uses, surface resource impacts and recovery, planning area condition as shown by the indicator data, operational and environmental justification and potential for effective impact mitigation. The proposal review process can be expected to take longer and be more intensive when sensitive values are involved.

Wherever sensitive values exist, and particularly in Areas 2 and 3, mitigation measures commensurate with the anticipated impacts, the resource values of the area, and the degree of public concern may be considered during the review and approval process. For oil and gas projects, mitigation actions could include surface disturbance conditional requirements (Table 2-2), transportation planning before initiating any activity with the objective of managing travel in areas of crucial access, remote control and monitoring of fluid mineral production facilities to limit travel, multiple-well pads to limit surface disturbances, limiting number of pads per section in sensitive areas, use of directional drilling to minimize disturbance of sensitive areas, clustering or centrally locating ancillary facilities, shrub reclamation (e.g., containerized stock, transplanting) to restore, rehabilitate or replace habitat, application of geotechnical material for construction, and potential unitization

prior to exploration and development. Other resource projects or proposals can expect a similar in-depth consideration of mitigation measures to safeguard the affected resource values.

Oil and gas leases that expire, terminate, or in any other way return to an “unleased” status will be considered for future leasing consistent with this plan based on location. In other words, if an oil and gas lease expires in Area 3, the lands will not be considered for new oil and gas leasing within the life of the JMH CAP unless the lands fall into the special NSO lease categories as previously described.

BLM will consider requests for oil and gas lease suspensions on a case-by-case basis. Decisions to grant or deny such a request will be based upon many factors, including current regulations and Wyoming BLM policy, conditions in the planning area, and alignment with management goals.

Because of the uncertainty associated with the oil and gas resources within the planning area, the exact timing or sequence of development of this resource is not known. The implementation strategy provides the opportunity for lessees to exercise their rights within reason and consistent with the limits imposed by the JMH CAP. The sensitive nature of portions of the planning area requires a higher level of control over any surface disturbances. As stated throughout this section, projects and proposals within the planning area will be considered based on, among other factors, current and future surface uses, condition of the planning area, industry initiative in addressing impacts, effectiveness of mitigation measures, and management goals. Data will be used to evaluate and support the decisions, and increase impact understanding, prediction and mitigation.

DATA COLLECTION

Monitoring of the planning area is necessary for the implementation strategy. The constantly changing resource conditions create a challenge to management. Field data and observations will help make decisions better by—

1. Measuring factors that indicate the condition of the planning area.
2. Increasing understanding of impacts by direct observation.
3. Increasing the effectiveness of project analysis by employing actual data.
4. Aiding establishment of thresholds, trigger-points or limits specifically for the planning area.
5. Evaluating the progress toward management goals.
6. Helping develop effective and appropriate mitigation measures.
7. Providing information on the success of management practices and policies.

Early in the development of the JMH CAP, a long list of indicators was developed with the aid of the Cooperating Agencies. These were culled into a manageable number by considering data source, usefulness, quality, and quantity. The effort resulted in the resource indicators presented in Table A17-1. Note that numerous resources have common indicators, resulting from the complex, interrelated nature of the planning area. Effects of surface usage overlap and combine making it challenging to identify reactions (advantageous and disadvantageous) that merit attention to either correct a problem or benefit from an opportunity.

Table A17-1. Resource Management Indicators

Resource	Indicator
Land and Water	
Water	Standards for Healthy Rangelands; surface disturbance and disruptive activity; changes in stability of dunes; roads and trails creation; road density
Wildlife	Standards for Healthy Rangelands; elk distribution; elk population; mule deer distribution; mule deer population; pronghorn distribution; pronghorn population; lek use; sage-grouse population; surface disturbance and disruptive activity; roads and trails creation; road density
Fire	Standards for Healthy Rangelands
Livestock Grazing	Standards for Healthy Rangelands; livestock AUMs; surface disturbance and disruptive activity; roads and trails creation; road density
Wild Horses	Standards for Healthy Rangelands; wild horse AML; surface disturbance and disruptive activity; roads and trails creation; road density
Heritage	Heritage resources; Native American concerns; surface disturbance and disruptive activity; roads and trails creation; road density
Recreation	Recreation use; surface disturbance and disruptive activity; roads and trails creation; road density
Mineral and Alternative Energy	O/G leased; O/G available for leasing; O/G production; locatable mineral activity; salable mineral activity; surface disturbance and disruptive activity; roads and trails creation; road density
Visual	Visual resource management (VRM) classifications; surface disturbance and disruptive activity; roads and trails creation; road density
Special Management Areas (SMA)	Any of previous indicators as they apply to the specific SMA
Travel, Access, and Realty	No specific indicators were developed because travel, access, and realty is a support function

Table A17-2 presents more detailed information about the indicators presented in Table A17-1. From this table it is seen that BLM routinely gathers much of the desired indicator data as part of its normal monitoring and oversight duties. If additional BLM monies or manpower are required to support the developed monitoring plan, other solutions will be sought before resorting to a budgetary resolution. If it is impossible to gather all the indicator data as scheduled, a priority list will be developed and resources assigned accordingly. Management actions and surface use proposals will be analyzed using all available information.

The result of inadequate support for the monitoring strategy will be continuation of the decisions resulting from the JMH CAP assumptions with only minor, conservative modifications.

The JMH CAP management strategy also depends on data collected by other agencies. This reliance reduces the need for BLM resources (money and manpower) to monitor the effects of surface activities in the planning area. However, there is no guarantee that the quality, quantity, and availability of data will exist for the life of the JMH CAP. Already, reviews of the non-BLM information have revealed problems with a few of the statistics, methods of collection, and collection frequency. These and other issues require resolution as the monitoring strategy is implemented, but do not present insurmountable problems.

Table A17-2. Indicator Detail

Indicator	Source of Information	Measurement Location	Methodology/ Data Source	Information Indicator Provides
Elk distribution ¹	BLM	Planning area	GIS collar study; field observations	Integrity of key habitats and migratory corridors (amount of continuous land between important habitats travel pathways between key habitats)
Elk herd health ¹	WGFD	Herd unit area	Post-season counts; flight counts; other WGFD data	Population, health and security of herd
Mule deer distribution ¹	WGFD	Herd unit area	Flight counts; other WGFD data; field observations	Integrity of key habitats and migratory corridors (amount of continuous land between important habitats)
Mule deer herd health ¹	WGFD	Herd unit area	Post-season counts; flight counts; other WGFD data	Population, health, and security of herd
Pronghorn distribution ¹	WGFD	Planning area	Radio collar studies; field observations	Integrity of key habitats and migratory corridors (amount of continuous land between important habitats)
Pronghorn herd health ¹	WGFD	Planning area	Preseason counts; flight counts; other WGFD data	Population, health, and security of herd
Sage-grouse lek use ¹	BLM; WGFD	Planning area	Field observation; lek counts	Health and security of population; reproduction opportunities
Sage-grouse population health ¹	BLM; WGFD	Planning area	Preseason counts; field observation	Population changes
Livestock AUMs	BLM	Planning area	Counts; actual use reports; grazing authorizations	Amount of livestock use (+/-)
Wild Horse Population	BLM	Great Divide Basin HMA	Counts	Number of wild horses (+/- AML)
Standards for Healthy Rangelands— Standard #1 ²	BLM	Watersheds Grazing Allotments	Remote sensing ³ ; field visits	Change in rangeland and watershed health (+/-)
Standards for Healthy Rangelands — Standard #2 ²	BLM	Watersheds Grazing Allotments	Remote sensing ³ ; field visits; trend data collection	Change in rangeland and watershed health (+/-)
Standards for Healthy Rangelands — Standard #3 ²	BLM	Watersheds Grazing Allotments	Remote sensing ³ ; field visits; trend data collection	Change in rangeland and watershed health (+/-)
Standards for Healthy Rangelands — Standard #4 ²	BLM	Watersheds Grazing Allotments	Field visits	Change in rangeland and watershed health (+/-)

Table A17-2. Indicator Detail (Continued)

Indicator	Source of Information	Measurement Location	Methodology/ Data Source	Information Indicator Provides
Standards for Healthy Rangelands — Standard #5²	BLM and State of Wyoming Department of Environmental Quality (DEQ)	Watersheds Grazing Allotments	Monitoring station and visual monitoring data	Change in rangeland and watershed health (+/-)
Standards for Healthy Rangelands — Standard #6²	BLM and State of Wyoming DEQ	Watersheds Grazing Allotments	Monitoring station and visual monitoring data	Change in rangeland and watershed health (+/-)
Roads and trails creation	BLM; County	Planning area and associated hydrologic unit code (HUC) 12 watersheds	Remote sensing ² ; permits	Change watershed health (+/-), habitat fragmentation, migratory corridor integrity (amount of continuous land between important habitats)
Road density	BLM; County	Planning area and associated HUC12	Remote sensing ³	Change watershed health (+/-), habitat fragmentation, migratory corridor integrity (amount of continuous land between important habitats)
Changes in stability of dunes	BLM	Planning area	Remote sensing ² ; field visits	Habitat loss/gain, watershed health, habitat use/fragmentation/expansion, soil stability
O/G leased	BLM	Planning area	LR2000 database, management decisions	Leasing activity; opportunity taken for development
O/G available for leasing	BLM	Planning area	Management decisions; industry interest	Interest in leasing; opportunity for development
O/G production	BLM; Wyoming Oil & Gas Conservation Commission (WOGCC)	Planning area	LR2000; WOGCC database	Lease activity (+/-); resource potential
Locatable mineral activity	BLM	Planning area	LR 2000 database	Opportunity for locatable mineral activity; interest in locatable minerals
Salable mineral activity	BLM	Planning area	Permits; LR 2000	Opportunity for salable mineral activity; interest in salable minerals

Table A17-2. Indicator Detail (Continued)

Indicator	Source of Information	Measurement Location	Methodology/ Data Source	Information Indicator Provides
Surface disturbance and disruptive activity	BLM	Planning area	Remote sensing ³ ; field visits; traffic counts; permits	Change in erosion potential, habitat fragmentation/integrity, migratory corridor integrity (amount of continuous land between important habitats), soil stability, watershed health
VRM Classifications	BLM	Planning area	BLM VRM handbook; mitigation	Change in visual quality (+/-)
Recreation use	BLM; WGFD	Planning area	Surveys; traffic/visitor counts; field visits; public comment; ROS	Amount of visitors, activity and type of use, location of use (when, where).
Heritage Resources	BLM; Activity Proponents	Planning area	Cultural Resource Inventory; public comment	Whether any unusual or unanticipated resources are located compared to known data about planning area
Native American Concerns	BLM; Native American Sources; Activity Proponents	Planning area	Native American Consultation; public comment	Whether any unusual or unanticipated resources are located compared to known data about planning area
¹ Weather severity indicators will be used in the analysis of data collected on wildlife populations and health. ² Each of the six rangeland standards contains specific indicators (USDI, Bureau of Land Management, Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the State of Wyoming, August 12, 1997). See Appendix 10, Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management. ³ Remote sensing data includes aerial and satellite imagery. Consideration will be given to those occurrences outside BLM's control such as environment (weather, drought), outside agency jurisdiction and laws, socioeconomics (politics, local economics, level of interest), topography and lay of the land, location of heritage resources (site specific), location of mineral resources, and technology.				

Because of the complexity of the situation, other information may be required to complement that collected in the field. There are many public sources of data and analyses, including professional journals, publications, and research reports. These are not listed in the table but it is understood the "Source of Information" column is not all inclusive. Awareness of supplemental measures and their sources is the responsibility of the involved resource specialists.

Circumstances may arise that prompt a review of an indicator. Such actions as extensively seeking data outside the chosen sources could suggest a problem. Adding, removing, or modifying the resource indicators could address deficiencies or opportunities discovered later. Developing technologies or a better understanding of actual resource interactions may also result in changes to indicator composition or their measures. Evaluating the validity of data and its continued usefulness is part of the management strategy.

182 Table A17-3 contains information on the measures used for the resource indicators. Of particular interest is the column listing preliminary performance standards (see the columns under "Measure and Trigger"). These numbers are based on the resource specialist's best understanding and data available at present. Most, if not

Responses Continued

182 Although a table with specific disturbance thresholds similar to the Jack Morrow Hills Coordinated Activity Plan is not included in the Mohave County Wind Farm Final EIS the compliance and monitoring requirements have been defined and include some threshold metrics. For example, the ECP/BCS and Bat Conservation Strategy include mortality thresholds based on post construction surveys. The Integrated Reclamation Plan includes active mitigation until reclamation success criteria are met. Standards, limits, thresholds, and similar measures would be employed to determine success and progress in attaining the resource goals and objectives. In addition, qualitative thresholds are used to analyze potential effects on wildlife and sensitive species in Section 4.5 of the Draft EIS.

182

all, are educated assumptions that the JMH CAP management strategy intends to test and refine through observation and analysis of the indicator data. However, until completion of this task, the triggers provided in Table A17-3 will be used to guide management decisions. The upper and/or lower values are limitations that are not intended to be violated. Action will be taken before an indicator reaches a trigger point since operating outside these bounds indicates a failure of the management strategy. In such a case, it may be necessary to review the JMH CAP to determine if immediate action is required to correct the situation. It is a goal of the strategy to manage the planning area within a set of appropriate limits. Again, the values shown in Table A17-3 are a “first cut” at triggers that might be later refined to better fit the planning area.

Table A17-3. Measurement Detail

Indicator	Measure and Trigger	Trigger		Unit	Frequency
		Lower ¹	Upper ¹		
Elk distribution	Animal distribution	2	2	Location	Minimum of 4 times daily for first year (3/03–3/04); additional funding to be pursued for life of plan
	Habitat use		-15%	Acres	
	Movement	2	2	Location	
Elk herd health	Total	2	-15%	Number Calves/100 Cows	At a minimum biennially; additional funding to be pursued to increase frequency to yearly
	Calf/cow ratio	2	40		
Mule deer distribution	Animal distribution	2	2	Location	Dependent on securing sufficient funding for GPS collaring
	Habitat use		-15%	Acres	
	Movement	2	2	Location	
Mule deer herd health	Total	2	-15%	Number Fawns/100 does	At a minimum biennially; additional funding to be pursued annually
	Fawn/doe ratio	2	60		
Pronghorn distribution	Animal distribution	2	2	Location	Dependent on securing sufficient funding for radio collaring
	Habitat use		-15%	Acres	
	Movement	2	2	Location	
Pronghorn herd health	Total	2	-15%	Number Fawns/100 does	At a minimum biennially; additional funding to be pursued annually
	Fawn/doe ratio	2	70		
Sage-grouse lek use	Presence/absence	2	2	Males on leks	Annually
	Population trend			Wing barrels	
	Active/inactive			Number	
Sage-grouse population health	Bird distribution	2	2	Location	Annually
	Habitat use		-15%	Acres	
	Movement	2	2	Location	
Livestock Animal Unit Months (AUM)	AUMs used		26,830	AUM	Annually
Wild Horse Population	Total population	415	600	Animals	Biennially
Standards for Healthy Rangelands—Standard #1 ³	Refer to BLM TR-1730 and TR-1734 Series ⁴				On a continuing basis

Table A17-3. Measurement Detail (Continued)

Indicator	Measure and Trigger		Unit	Frequency
Standards for Healthy Rangelands—Standard #2³	Refer to BLM TR-1730, TR-1734, and TR-1737 Series ⁴			On a continuing basis
Standards for Healthy Rangelands—Standard #3³	Refer to BLM TR-1730 and TR-1734 Series ⁴			On a continuing basis
Standards for Healthy Rangelands—Standard #4³	Refer to BLM TR-1730 and TR-1734 Series ⁴			On a continuing basis
Standards for Healthy Rangelands—Standard #5³	Refer to BLM TR-1730 and TR-1734 Series ⁴			As needed on site-specific basis
Standards for Healthy Rangelands—Standard #6³	Refer to BLM TR-1730 and TR-1734 Series ⁴			As needed on site-specific basis
Roads and trails creation		Lower ¹	Upper ¹	Annually
	Location	5	5	
	Miles of new road			
	Miles of new trail			
	Miles of improved road			
	Number of roads			
	Number of trails			
Type of roads				
Road density	Location	5	5	Annually
	Number of roads			
	Acreage of roads reclaimed			
	Number of trails			
	Acreage of trails reclaimed			
Changes in stability of dunes	Acreage of dunes	-244	1,218	Acres in open play area
	Boundary	5	5	
O/G leased	Acres leased	5	5	Ongoing basis; annually
	Acres of suspended leases			
O/G available for leasing	Acres open to leasing	5	5	Ongoing basis; annually
O/G production	Number of wells		175 / 40 ⁶	Wells Number
	Number of APDs approved		175 / 40 ⁶	
	MMCF or BBLS production		5	

Table A17-3. Measurement Detail (Continued)

Indicator	Measure and Trigger	Unit	Frequency
Locatable mineral activity	Acreage withdrawn	5	Ongoing basis
	Number of mining claims	5	
	Acres available for location		
Salable mineral activity	Acreage open	5	Ongoing basis
	Number of active operations	5	
Surface disturbance and disruptive activity	Visual indicators of surface disturbance and reclamation success	5	Annually
	Levels and location of activity	5	
VRM Classifications	Acreage of classification	0%	Annually
		10%	
		30%	
Recreation use	Number and location of users and vehicles	5	On a continuing basis reported annually
	Type of use	5	
	Periods of use		
Heritage Resources	Prehistoric and/or historic resource number	8	Per project; on a continuing basis
	Kind/type	8	
	Density		
Native American Concerns	Respected places, TCP or sacred site number	8	Per project; on a continuing basis
	Kind/type	8	
	Density		

¹Preliminary estimates. Lower and upper values will be validated using data collected in the planning area. Revision of the numbers shown in the table is possible.

²No quantitative measure is currently applicable. The experience of the resource specialist is used in determining if the related observations are within acceptable bounds until numbers can be confidently assigned to the upper and lower bounds.

³Each of the six rangeland standards contains specific indicators (USDI, Bureau of Land Management, Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the State of Wyoming, August 12, 1997). See Appendix 10, Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management.

⁴Available at <http://www.blm.gov/nstc/library/techref.htm>.

⁵Data from these indicators do not alone trigger an action but are required in determining the cause behind changes in other indicators that might require action.

⁶The first number indicates total deep wells and the second is the number of coal bed gas wells.

⁷Refer to Proposed JHM CAP column in Table 4-1.

⁸Every discovery of cultural or historical importance causes a reevaluation of the surface use in the area of the discovery.

Consideration will be given to those occurrences outside BLM's control such as environment (weather, drought), outside agency jurisdiction/laws, socioeconomics (politics, local economics, level of interest), topography/lay of the land, location of heritage resources (site specific), location of mineral resources, and technology.

Besides collecting indicator data, BLM is responsible for summarizing and analyzing all the information and observations; including that gathered by other agencies. The assistance of the JMH working group and outside agencies might be called upon to help with proper interpretation or with particularly difficult analyses. Most resource areas listed in Table A17-1 have guidelines for the collection and analysis activities developed specifically for those resources. However for resource areas that do not have data standards and the need for such is recognized, guidelines will be developed. Following standards in the collection and analysis of field data promotes confidence in the resulting decisions or actions.

JMH CAP MANAGEMENT PROCESS

The process described in this section drives the decisions concerning resource use in the planning area. All proposals or projects that result in surface disturbance or disruption will be affected.

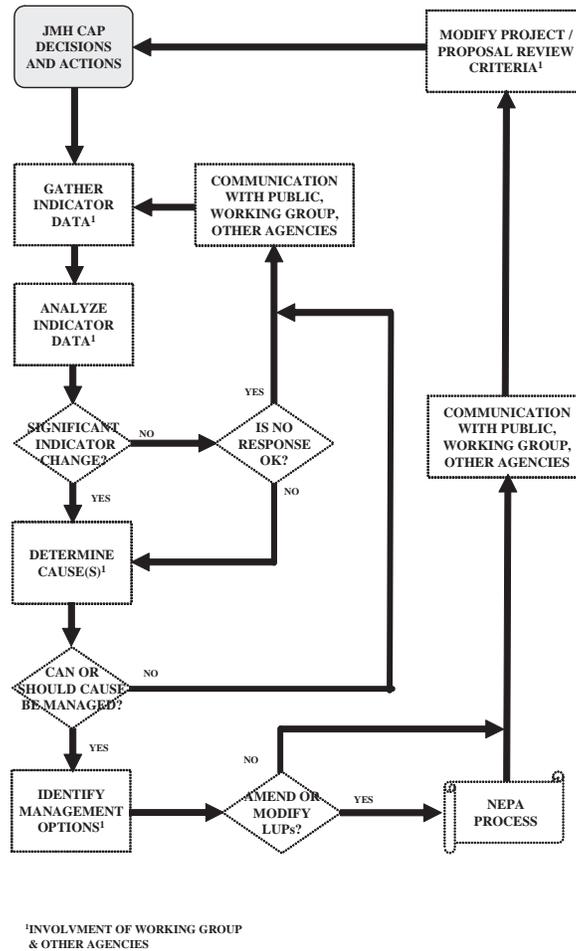
The following key elements are adopted for the planning area:

- Employing field data and observations in the evaluation of projects and proposals
- Considering the condition of all resources (as shown by the indicators) before allowing further surface disturbing or disruptive activity
- Improving understanding and ability to predict impacts associated with the uses of the various resources in the planning area
- Allowing judicious testing of assumptions, practices, policies, and mitigation measures.
- Applying best management practices, mitigation and conditions of approval developed through the monitoring and evaluation process to use authorizations.

Figure A17-3 presents a flowchart illustrating the general JMH CAP management process. It is designed to take advantage of the elements listed above while conforming to relevant laws and regulations. The following discussion of the elements in Figure A17-3 provides the detail needed to understand and work within the process.

The JMH CAP management process begins with the implementation of the initial management decisions previously described. In general, these decisions extend the suspensions on existing oil and gas leases in the planning area for 3 years unless an operation plan is approved before then, immediately opens Areas 1 and 2 to consideration of new oil and gas leasing, and closes Area 3 to further oil and gas leasing except as provided for by specific criteria. Wherever sensitive values exist, and particularly in Areas 2 and 3, other surface use activities will be evaluated based on the anticipated impacts and the resource values of the area during the review and approval process. All resulting actions, decisions, or changes in the analysis and decisions on projects or proposals published in the final EIS and ROD become part of the aggregate that makes up the “JMH CAP Decisions and Actions” box shown in the top left corner of the figure.

Figure A17-3. JMH CAP Management Process



The next box down represents the collection of the indicator data. Detail on the collection of indicator data was previously discussed and shown in Tables A17-2 and A17-3. Note again that there may be modifications to the indicators as a result of data analysis and experience gained from managing the various resources.

Data analysis is the next step shown in the figure. This can be exceedingly complex because of the data type, quantity, and quality. After the data is collected, comparison is made to the existing limits, the JMH CAP assumptions, or as a last resort, the resource specialist expectations. Summary values (such as average or standard deviation) and trends are developed at this stage.

Following the arrows, the process continues by addressing two related questions. These are illustrated as the diamonds labeled “Significant Indicator Change?” and “Is No Response OK?” The questions direct the data analysis effort when there is a positive, negative, or no (zero) change in the indicator data. Any of these states are considered important when evaluating the effectiveness of land use decisions or when developing or testing limits.

The first question concerns the magnitude or significance of an apparent change and is illustrated as the diamond labeled “Significant Indicator Change?” Data almost always contains some noise or collection errors and so requires some filtering. Use of the limits provided in Table A17-3 or their later replacements aids in the determination of significance. Knowing how close a current reading is to a trigger or threshold makes it easier to determine if a 1-unit change is a cause for concern. The experience of the resource specialist, statistical tools, input from the working group, previously collected data, and the developed or accepted limits are all used to successfully identify a significant change in an indicator. It is anticipated that in the beginning a “better safe than sorry” approach will prevail resulting in classification of most indicator changes as significant. However, as the data from the planning area increases, experience will winnow out those changes not deserving of further consideration.

The second related question is in response to the determination that an observed change in data is not significant; in other words essentially no change was measured. (This step appears in Figure A17-3 as a diamond directly to the right of the one just discussed). A “zero” or no response might be useful in evaluating the success or failure of a management practice. For example a decision is made to adopt a mitigation measure to benefit a resource but the indicator data continues to show no change. This could indicate a problem with the policy that should be further explored and, if necessary, corrected. Therefore, if a no change condition is encountered, the acceptability of this result is considered. If the lack of response in an indicator is acceptable, the process moves to the information-sharing step as shown by the arrow. (This box labeled “Communication with Public, Working Group, Other Agencies” is discussed later).

The next step in the process (the box labeled “Determine Cause(s)” in Figure A17-3) is entered by the need to identify the cause of a significant positive or negative change, or an unexpected “zero” response in the resource indicator data. This first involves the consideration of the validity of the data and its analysis, and only later attempts to identify the cause of an indicator data change. Validity should always be of the utmost concern. Confidence in all aspects of data collection and analysis is essential. Possible problems that may arise are misinterpretation, poor measurement methodology, or errors in the selection of a particular indicator. Discovering faulty information and addressing indicator problems early in the process helps avoid ineffectual decisions and wasted time.

Once assured that the data response is genuine, the effort turns to identifying the reason behind the new observations or the identified trends. This important task may require technical and investigative skills. The difficulty arises from the complex interrelationships within the planning area. Table A17-1 reveals there are few indicators unique to a single resource or a particular surface use. Therefore, a change in the collected data could be the result of a single factor, a combination of activities, or even an unanticipated agent. Hypotheses will have to be developed, tested, and discarded based on the accumulated evidence. A team approach may be appropriated to distribute the undoubtedly large workload and to allow a diversity of interpretations to be considered.

There may be cases, especially early in the term of the JMH CAP, where a definitive identification of a cause or causes is not achieved. Insufficient time may have elapsed to accumulate supporting data or a lack of experience with certain land uses activities are possible reasons. Under such conditions it is necessary to provide a way for the process to continue. It is reasonable to conclude that the cause behind the change cannot be identified and move the process to the next step, the diamond in Figure A17-1 labeled “Can or Should Cause Be Managed?” In the specific situation in which the cause could not be determined, the answer to this question is normally “No” and the process proceeds to the communications step (see below for the circumstances under which the answer might be “Yes”).

The failure to identify a cause for a recognized indicator response is not a trivial matter, and every effort will be made to avoid this outcome. This decision would have to be defensible based on the data and the cumulative experience within the planning area. Possible options to correct or prevent reoccurrence should be

considered before carrying this conclusion forward. Modification of the indicator list, changes to the data collection and analysis procedures, or other actions may be necessary to address the problem (at which point the question posed in the “Can or Should Cause Be Managed?” triangle is “Yes” as these actions require changes in the management strategy). Further, cases where causes are not initially identified should be revisited periodically so as to not allow correctable conditions to persist or opportunities to go unrealized (in actual practice, reexamination of data from the planning area will be a continuing effort to gain the maximum benefit from the expended effort).

When the cause or causes of an indicator change are identified, the process moves to an important decision that is represented by the diamond labeled “Can or Should Cause Be Managed?” Specifically, the question involves whether it is possible or desirable to manage the cause in a way that improves, maintains, or corrects the observed results as measured by the indicators. In some situations, it may be impossible for BLM to affect the cause. This determination is made by BLM with the collaboration of the working group. If BLM decides against reacting to an identified response in the indicator data, the process finishes with a communications step where the data and conclusions are made available to interested parties.

The decision to react to an indicator change requires identification of the available options. This step is shown in Figure A17-3 as the box labeled “Identify Management Options.” The development of responses to a manageable situation is expected to involve (to varying degrees) BLM resource specialists; BLM management; outside local, state, and federal agencies; and the JMH CAP Working Group. The task involves identifying and evaluating possible changes in land use or in project/proposal review procedures. Potential actions could include changing stipulations, reducing or increasing certain activity levels, allowing new uses, modifying objectives or measures, or adopting new evaluation criteria. The result is a list of possible modifications or actions that focuses on an identified condition, need, or opportunity.

The “Amend or Modify Land Use Plan?” diamond in Figure A17-3 is directed toward the decisions developed in the previous step. The question identifies those alternatives that are outside the scope of the JMH CAP. If the action was analyzed as part of the JMH CAP, BLM management has the option of immediately implementing the proposed response without further analysis. On the other hand, those decisions outside the scope of the JMH CAP, and considered to be the best response to an identified situation, will require additional action before implementation.

The conclusion that some or all of the desired solutions are not part of the JMH CAP analysis will add significantly to the process. National Environmental Policy Act of 1969 (NEPA) planning regulations are employed to insure adequate consideration of impacts, alternatives, and diverse views. The process allows for public input on significant alterations or modifications to the JMH CAP. It may require significant time and effort for a desired decision that falls outside the analyzed options to be adopted. However, if considered the best response for the situation, the effort will be expended to allow proper management of the planning area. Interim actions (within the scope of the JMH CAP) may be taken to address pressing situations. It is hoped that many of the actions supporting the management goals have been analyzed in the JMH CAP and amending or modifying the plan will seldom be necessary.

Though public and cooperator participation and communication is an integral part of the NEPA process, Figure A17-3 shows that a communications step is entered after the plan is modified or amended, or after a decision is made to take an JHM CAP allowable action. This is indicative of the importance placed on continued involvement of the public; the JMH CAP Working Group; and interested local, state, and federal agencies. A section on the subject of communication and participation is presented later in the appendix.

The final box in Figure A17-3 to be discussed represents the tie between the illustrated process and the resource and case specific review or approval processes. Labeled “Modify Project/Proposal Review Criteria” and located in the top right-hand corner of Figure A17-3, the step is the implementation of the decision

derived from the reaction to changes in the indicator data. These include such changes as revising thresholds, realigning goals, revising land use restrictions, and restructuring mitigation.

Not explicitly shown in Figure A17-3 are the procedures that relate to specific resource projects, proposals, or applications. APD, rangeland improvement, rights-of-way, and the other possible surface uses have established review and approval processes. Though tailored for the resource, all project or proposal considerations will share a common element; deliberations will take into account field observations, experience gained from observing the planning area, and the management vision. This recognizes the value of the monitoring effort by using the indicator data to predict and evaluate impacts, and employing field-tested mitigation actions.

Besides being able to better evaluate land use projects, there are other equally valuable uses for the indicator data such as refining thresholds, triggers, or performance standards. There are a number of well established standards that the JMH CAP relies on such as the Standards for Healthy Rangelands. Many other standards have yet to be developed and are expressed in the planning document as a “first cut” or an assumption. These will require verification or refinement before being widely adopted. Note that the only way to determine the reaction to resource usage is to allow such usage and observe the results. This may mean that some land use decisions will be made for testing purposes.

As described earlier, use or development of the resources in the planning area will be allowed from the beginning. Data on the impacts of surface-disturbing or disruptive activities will be collected and compared with expectations, desired outcomes, or standards. The ultimate goal of the comparison is to determine the effectiveness of current management practices, policies, and prescriptions, and make necessary changes to foster continued success, improve observed results, or further understanding. In cases in which performance standards are still essentially assumptions, the observations are initially critiqued using the values in Table A17-3 as guidelines. As data and experience increase, these may be refined into the more traditional definition of “standard” or “threshold.” In addition, the ongoing evaluation of data validity and usefulness is performed to maintain the effectiveness of monitoring resource conditions within the planning area.

Successfully developing performance standards or evaluating conditions within the planning area requires the combined effort of BLM and outside resource specialists. Other governmental agencies may have the expertise and information that enhances BLM ability to perform this task. In addition, the public has a role to play in the process. To help manage the diverse involvement, a JMH CAP Working Group will be formed. This would not be chartered under the Federal Advisory Committee Act (FACA). Membership would necessarily be restricted to full-time or permanent part-time officers of a governmental agency or elected officers of state, local, or tribal governments. The inclusion of the term “elected” means some of the members represent a constituency. These members provide a point of contact (POC) for the public. A more detailed discussion of participation and communication is presented in the next section. However, in all cases, BLM is the final decision maker involving federal surface or minerals, and this strategy does not affect that responsibility.

COMMUNICATION AND PARTICIPATION

BLM has a long standing policy to encourage the public to “participate” or involve themselves in the agency’s day-to-day activities. The implemented JMH CAP management strategy encourages and rewards this level of interest. Comments, suggestions, concerns, and issues may be provided or raised at any time. Involvement of the public, industry, and other agencies will aid in the development of successful management actions tuned to the planning area.

Communication and outreach will make use of traditional and electronic means of sharing information and gathering input. As shown in Figure A17-3, the decision evaluation process has numerous public information

steps. Such items as updates to the indicator database, management decisions, applications for land use, and decisions related to the JMH CAP will be available from links on the BLM Wyoming State Office and Rock Springs Field Office Web sites. A limited number of hard copies of this material will also be maintained at the Rock Springs Field Office to accommodate those without Internet access. Confidentiality will be observed where appropriate, but the idea is to maintain up-to-date, publicly accessible information on the management of the planning area.

Meetings are seen as a necessary and valuable component of the management strategy. These provide an excellent opportunity for BLM and public interaction, and are planned semiannually for the first 3 years. As a kickoff, an informational meeting will be held within 2 months following signing of the JMH CAP ROD. It will focus on the management approach and how it will work in the planning area. Following meetings will mainly concern information dissemination. A “town hall” format will be used to allow interested individuals to express opinions or concerns about the planning area. BLM, however, will not request or take input during these forums on pending actions or decisions in compliance with FACA. Other avenues are open for the public to more directly affect management of the planning area such as through the NEPA process (if invoked) or the JMH CAP Working Group. A record of the informational meetings will be generated for review and archiving.

With access to the Internet almost universal, BLM will expand its use of this medium to communicate and inform. Already in existence is a link on RSFO home page to JMH CAP. The information carried here will expand to include location and time of the public informational meetings, records of past meetings, use proposals, relevant resource information, changes or new management decisions, changes in resource monitoring, special notices, working group news, and general interest stories. An e-mail contact specifically for questions or comments concerning the JMH CAP planning area will be employed as an additional POC with BLM.

Information will continue to be made available through traditional routes (e.g., special mailings, radio interviews, and newspaper articles) as appropriate or required by policy or procedure. The Rock Springs Field Office will maintain public files on JMH CAP that contain the same information available via the Internet.

The most important way the public has to participate in the management of the planning area is through the JMH CAP Working Group. Certain members of the working group represent constituents and so directly represent the public. It is anticipated these members will express the views of the public and act in their interest, thus involving citizens in the management process.

The JMH CAP Working Group is involved in many facets of the management strategy, including data collection and analysis, development of management practices, and input on land use proposals. Through regular meetings, the working group can consider numerous topics affecting the planning area, including mutual goals, policy coordination, resource conditions, pending actions or decisions, and opportunities for further cooperation. The working group will also act to monitor BLM adherence to the management strategy and suggest remedies.

The following is a preliminary membership list for the JMH CAP Working Group. Other participants (that meet the restrictions) may be added later if the group so desires:

- One representative from each state agency selected by the Wyoming Governor’s office
- Three representatives from the BLM Rock Springs Field Office
- One representative from each of the three conservation districts
- One representative from the local and county governments in Sweetwater County
- One representative from the local and county governments in Sublette County

- One representative from the local and county governments in Fremont County
- One representative from each Native American tribe.

As previously stated, the non-FACA status means that all members of the JMH CAP Working Group must be full-time or permanent part-time officers of a governmental agency or elected officers of state, local, or tribal governments. Conservation districts in Wyoming meet this definition.

The exact role of the working group will have to be defined by the group itself. Developing its charter would be the main order of business at the first meeting. At a minimum, the working group would provide a POC with state and local agencies (e.g., WGFD) that can help analyze and interpret the data collected in the planning area, develop or evaluate proposed performance standards, and provide specific input to planning decisions. Certain group members (e.g., representatives from the three counties) provide avenues for direct public participation in the management of the planning area.

It will likely take several months and numerous meetings to formalize the JMH CAP Working Group depending on the commitment of the members. From the Powder River Basin Working Group experience, it is expected to take between 1 and 2 years before the group will be operational. However, the formation of the JMH CAP Working Group will not delay implementation of the described JMH CAP decisions or implementation of the monitoring plan.

LETTER

From: Arreola, Eduardo J <EArreola@blm.gov>
Sent: Thursday, May 17, 2012 5:34 PM
To: beth.defend@urscorp.com; Neckels, Jacqueline D; jandjcrockford@comcast.net
Subject: FW: Please Extend Mohave Wind Farm Comment Period

Importance: Low

FYI

From: atomicoadranch@netzero.net [atomicoadranch@netzero.net]
Sent: Thursday, May 17, 2012 1:21 PM
To: Suazo, Raymond M; Stevens, Deborah E; Shoemaker, June; Hughes, David J; Arreola, Eduardo J; BLM_AZ_KFO_Wind_Energy; BLM_AZ_KFOWEB
Cc: Brady, Ray A; Black, Steve
Subject: Please Extend Mohave Wind Farm Comment Period

Dear Mr. Suazo,

183 We would like to request that the comment period for the Mohave County Wind Farm Project be extended from 45 days
184 to 90 days. We are reviewing the Draft Environmental Impact Statement and it really contains an inadequate amount of
185 information. So far, we have encountered several unresolved issues including inadequate plant surveys and a lack of
ideas on what to do about the 36 potential golden eagle nests found within ten miles of the project. 185

183 I talked to two BLM employees about this in the Phoenix BLM office. I called the Kingman Field Office first and was referred to the Arizona BLM State Renewable Energy Coordinator. I was told that "a 45 day comment period for a DEIS is standard when there is no land use plan amendment." There is actually nothing in the National Environmental Policy Act or the NEPA handbook that requires only a 45 day comment period with no land use plan amendment. Look at neighboring Nevada which has reviewed several renewable projects with 90 day comment periods with no Land Use Plan Amendment. You may want to contact them to adopt a more public friendly policy. Nationally, BLM commonly has 90 day comment periods for projects as big as the Mohave County Wind Farm. We believe that the BLM is trying to streamline approval of this project by cutting out adequate review. While that may save you some work now, you may be sorry in the long run. We hope you have been following the news. If projects are fast tracked, streamlines or prioritized for the Interior Secretary to sign off, we run into problems later. The BrightSource Ivanpah Project ended up creating a major impact to the desert tortoise due to fast tracking and bad planning. The Genesis solar project was fast-tracked and ended up threatening a whole archeological village. The First Solar projects were run through by the BLM before the company found out that their Cadmium/Telluride PV modules perform poorly in high heat. Many of these poorly planned project wind up in litigation and end up costing the tax payer.

186 Perhaps BLM State Offices do this differently. That is not our concern. If your state office is set up so the bureaucracy requires a land use plan amendment to give the public their full 90 days to comment, then we request as public land owners that you amend the Kingman Resource Area RMP for review of the Mohave County Wind Farm.

187 The Mohave County Wind Farm is huge and will create major impacts to biological, visual, cultural, water and air quality resources. It will also hurt land owners in the area. British Petroleum would like to develop 47,000 acres. The BLM may modify that plan to 30,000 acres, but that is still a very significant size.

Responses Continued

183 The BLM provided a 45-day formal public review and comment period for the Draft EIS, as calculated from publication of the Notice of Availability of the Draft EIS in the Federal Register on Friday, April 27, 2012, to the close of the comment period on June 11, 2012. A 45-day comment period is standard for projects that do not involve plan amendments, and, as noted in Appendix A of the Draft EIS, the project was found to be in conformance with the current resource management plan so no amendment was necessary.

Though BLM did not extend this comment period, BLM nonetheless continued to accept comments after the close of the comment period, and has included and responded to these additional comments in the Final EIS. In addition, BLM held four public meetings in the vicinity of the proposed Project (in Peach Springs, White Hills, Dolan Springs, and Kingman, Arizona) during the Draft EIS comment period to further explain the Project and receive public comments on the Draft EIS. Also, as discussed in Chapter 5 of the EIS, BLM mailed a copy of the Draft EIS or notice of its availability to a wide variety of agencies, Tribes, interest groups, businesses, and people throughout the region. Finally, to ensure wide availability of the Draft EIS, BLM posted the complete Draft EIS on the BLM Web site at the beginning of the Draft EIS comment period and provided contact information at BLM for requesting a hard copy of the Draft EIS. Accordingly, BLM believes that it has provided adequate opportunities for anyone interested to review and comment on the Draft EIS, and that this approach fully complies with National Environmental Policy Act (NEPA) requirements.

184 The baseline data provided in the Draft and Final EIS are sufficient to support the environmental impact analysis. The BLM has a baseline inventory of information for the Project Area that was prepared during the development of the EIS and is updated on an ongoing basis as part of BLM's Kingman Field Office management practices. Using these baseline inventories, the BLM is able to protect and manage the public lands within the Project Area consistent with the Kingman Field Office Resource Management Plan (RMP). BLM and the cooperating agencies have determined that the survey data are sufficient to assess the Project's impacts to special-status plants, including where avoidance and other mitigation are required, and to make decisions about the Project. Project construction and operations would incorporate the Best Management Practices (BMPs) as stated in Attachment A of the Record of Decision (ROD) for the Implementation of a Wind Energy Development Program and Associated Land Use Plan Amendments as described in Section 2.4 on page 2-4 of the Draft EIS. As stated on page 2-5 of the Draft EIS, prior to ground disturbance the "locations of sensitive resources would be flagged or clearly marked in and around the Project work area to identify any possible conflicts or to distinguish areas to be avoided and/or areas requiring cultural resource, biological, paleontology, or weed monitoring." BP Wind Energy shall conduct surveys for biological resources including cacti, yucca, and noxious weed species within the Project Area once the final disturbance areas are determined. The Project would be designed to avoid (if possible) or minimize impacts on sensitive resources.

The Draft EIS used the best available data regarding the presence and location of noxious weeds and invasive plant species. Section 3.5.1.5 of the Draft EIS also includes a review of weed data that was obtained from both baseline biological surveys and records data available through the Southwest Exotic Plant Information Clearinghouse (SEPIC). The SEPIC data were reviewed in the 25-mile area surrounding the Project Area in order to capture all known infestations of non-native plants in the region. The information included in the Draft EIS provides adequate analysis for the BLM and Reclamation planning and decision making in relation to the potential environmental effects.

185 Golden eagle conservation is important to BLM, Reclamation, National Park Service (NPS), U.S. Fish and Wildlife Service (USFWS), Arizona Game and Fish Department (AGFD), and BP Wind Energy. BP Wind Energy is working with USFWS and BLM, Reclamation, and Western to apply for an eagle take permit. This is consistent with BLM's Instruction Memorandum No. 2010-156 Bald and Golden Eagle Protection Act – Golden Eagle National Environmental Policy Act and Avian Protection Plan Guidance for Renewable Energy.

Responses Continued

The development of mitigation measures to avoid or reduce impacts to golden eagles have been ongoing as part of consultation with USFWS and AGFD. Chapter 2 describes how the Project was modified during the planning process to avoid sensitive resources, including sensitive biological resources. The golden eagle nests were evaluated in the risk assessment section of the Eagle Conservation Plan (ECP). As described in Sections 4.5.3.4 and 4.5.4.4 on page 4-53 and page 4-59 in the Draft EIS, respectively, the modifications to turbine strings under Alternatives B and C reduce impacts on sensitive habitat for golden eagles near Squaw Peak. Since the Draft EIS was published, new information from the 2012 golden eagle nest surveys found one active golden eagle nest within the Project Area. The Final EIS incorporated this information into Sections 3.5 and 4.5. As described in the Final EIS Alternative B reduces the number of turbines in areas of potential risk and increases distances to turbines compared to Alternatives A and C. Alternative E would have less impact on golden eagles, other raptors and bats due to the eagle nest avoidance area. In addition, the ECP contains an adaptive management strategy designed to evaluate the actual impacts of the project on eagles. Appendix C includes a summary of the ECP; the complete draft document is appended to the Plan of Development and includes additional mitigation to reduce potential impacts on bald and golden eagles.

186 As stated in Appendix A of the Draft EIS, BP White Hills Wind Project RMP Conformance Review, the Kingman Resource Area RMP does not require amending because the proposed project was determined to be in conformance with the existing RMP. A 45-day comment period is standard for the public review of an EIS that does not involve a plan amendment.

187 While the proposed Mohave County Wind Farm right-of-way application is for more than 47,000 acres of public and Federal land, the area potentially affected during the construction phase would be about 3 percent of the land. Following reclamation efforts, less than 1 percent of the land would be subject to long-term effects from project facilities and roads. Impacts to biological, visual, cultural, water and air quality resources, as well as many other resources, are disclosed in Chapter 4 of the EIS.

Letter Continued

Public lands are important and we are very disappointed that BLM would give the public landowners an inadequate comment period length for a BP project; the same company that created a major disaster in the Gulf of Mexico.

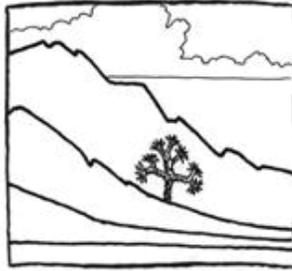
Please give us 90 days, Show us that the public opinion still matters to you!

Thank you,

Kevin Emmerich
Laura Cunningham
Basin and Range Watch
P.O. Box 70
Beatty, NV 89003

(p.s. I put a bunch on names on this list. I am not sure who this should go to.)

LETTER



Basin and Range Watch

June 9th, 2012

To: Jackie Neckels

Mohave County Wind Farm
Renewable Energy Coordination Office
One North Central Avenue, Suite 800
Phoenix, Arizona 85004-4427

E mail: KFO_WindEnergy@blm.gov

Subject: Mohave County Wind Farm

Dear Ms. Neckels,

We would like to submit the following comments for the Draft Environmental Impact Statement for the Mohave County Wind Farm [LLAZC01000.L51010000.FX0000.LVRWA09 A2310; AZA 32315].

Basin and Range Watch is a group of volunteers who live in the deserts of Nevada and California, working to stop the destruction of our desert homeland. Industrial renewable energy companies are seeking to develop millions of acres of unspoiled habitat in our region. Our goal is to identify the problems of energy sprawl and find solutions that will preserve our natural ecosystems and open spaces. We have visited the Mohave County Wind Farm Project site and are concerned about the direct and cumulative impacts that the project would have on the region.

Short Comment Period and Land Use Plan Amendment: This is one of the largest wind farm applications on public lands in the US, yet it only has a short 45 day comment period. We requested an extension of the comment period due to the fact that a project of this magnitude requires research and site visits. The BLM's reasoning for only providing a 45 day comment is that there is no land use plan amendment in the Kingman Resource Area for the wind farm. The Renewable Energy Coordinator for the state of Arizona told us that EIS documents are only required to have 45 day comment with no Land Use Plan amendment. We have followed dozens of renewable project applications on public lands over the past 4 years and projects with no Land Use Plan amendments commonly have 90 day comment

Letter Continued

periods. While NEPA and CEQ require a *minimum* of 45 days to review an Environmental Impact Statement, there is no requirement that an EIS *only* have a 45 day comment period with no Land Use Plan Amendment. Wind farms that are only one third this size have been reviewed with 90 day EIS comment periods.

Some of the high profile projects that have streamlined review are now facing litigation and other problems that are costing federal and state agencies money.

The Ivanpah Solar Electric Generating System was streamlined and resulted in litigation over the desert tortoise: <http://www.thewildlifeneews.com/2011/01/17/www-sues-to-stop-fast-tracked-ivanpah-power-plant-in-california/>

The Genesis Solar Project was streamlined for review and had to be partially shut down over the discovery of Native American Cremation sites: <http://articles.latimes.com/2012/feb/11/local/la-me-solar-foxes-20120211>

The Ocotillo Wind Express Project was opposed by about 98 percent of the people who commented on the project, yet the BLM bypassed those concerns for questionable mitigation that has not been fully developed yet. They are undergoing litigation from three groups: <http://www.wind-watch.org/news/2012/05/26/new-lawsuit-against-ocotillo-express-filed/>

188 [The BLM should amend the Kingman Resource Area Land Use Plan for this project] and [189
189 [the full 90 days to comment .] The project will have impacts that are not even fully evaluated by the BLM.
189]

Purpose and Need Statement:

190 [The Purpose and Need Statement is weak overall and does not acknowledge a “need” to preserve public resources located on public lands. While the BLM makes a general statement that they need to “respond to BP’s application”, they also include language about producing ten thousand MW of renewable energy on public lands. The goal of ten thousand MW may have been reached by existing projects either under review or already approved. The DEIS should have provided a list of approved and pending projects on public lands and add up the megawatts before they suggest that the Mohave County Wind Farm is required to be built to meet these goals.
190]

191 [The Purpose and Need Statements in many BLM big wind EIS documents reflect a need to develop so many megawatts on so many acres of public lands. All alternatives are now defined by a Need reflecting the recent Secretarial Order 3283: Enhancing Renewable Energy Development on Public Lands. The goals of Section 4 in Secretarial Order 3283 clearly state a need for environmental responsibility: “the permitting of **environmentally responsible** wind, solar, biomass, and geothermal operations and electrical transmission facilities on the public lands;
191]

The Mohave County Wind Project in its proposed location would be inconsistent with the Best Management Practices concerning the National Environmental Policy Act, the Endangered Species Act, and the Federal Lands Management Policy Act, etc and can, in no way, be considered “environmentally responsible”.

Responses Continued

188 As stated in Appendix A of the Draft EIS, BP White Hills Wind Project Resource Management Plan (RMP) Conformance Review of the Draft EIS, the Kingman Resource Area RMP does not require amending because the proposed project was determined to be in conformance with the existing RMP.

189 The BLM provided a 45-day formal public review and comment period for the Draft EIS, as calculated from publication of the Notice of Availability of the Draft EIS in the Federal Register on Friday, April 27, 2012, to the close of the comment period on June 11, 2012. A 45-day comment period is standard for projects that do not involve plan amendments, and, as noted in Appendix A of the Draft EIS, the project was found to be in conformance with the current resource management plan so no amendment was necessary.

Though BLM did not extend this comment period, BLM nonetheless continued to accept comments after the close of the comment period, and has included and responded to these additional comments in the Final EIS. In addition, BLM held four public meetings in the vicinity of the proposed Project (in Peach Springs, White Hills, Dolan Springs, and Kingman, Arizona) during the Draft EIS comment period to further explain the project and receive public comments on the Draft EIS. Also, as discussed in Chapter 5 of the EIS, BLM mailed a copy of the Draft EIS or notice of its availability to a wide variety of agencies, Tribes, interest groups, businesses, and people throughout the region. Finally, to ensure wide availability of the Draft EIS, BLM posted the complete Draft EIS on the BLM Web site at the beginning of the Draft EIS comment period and provided contact information at BLM for requesting a hard copy of the Draft EIS. Accordingly, BLM believes that it has provided adequate opportunities for anyone interested to review and comment on the Draft EIS, and that this approach fully complies with National Environmental Policy Act (NEPA) requirements.

190 BLM's multiple-use mandate under Federal Land Policy Management Act (FLPMA) requires that BLM provide for multiple use and sustained yield of the land it administers. This includes consideration of a balance of consumptive uses and preservation.

Renewable energy projects approved since 2009 involving BLM-administered public land account for 11,782.5 MW of power; this includes 7,265.5 MW of solar, 4,063 MW of wind, and 454 MW of geothermal energy. Priority projects for 2012 pending approval could add another 4,174 MW of power from renewable energy sources; this includes 3,069 MW of solar, 1,005 MW of wind (including the Mohave County Wind Farm Project), and 100 MW of geothermal energy. The Mohave County Wind Farm Project would contribute to the national goal, although not all projects pending approval may ultimately be approved and constructed for a variety of reasons. One of the alternatives evaluated for the Mohave County Wind Farm Project is the no-action alternative, in which the Project would not be constructed. Therefore, even though the Project would contribute to the national goal if it is approved, an alternative to not approve the Project is fully analyzed in the EIS.

Additional information regarding renewable energy projects is available on the BLM's website at: http://www.blm.gov/wo/st/en/prog/energy/renewable_energy/Renewable_Energy_Projects_Approved_to_Date.html and http://www.blm.gov/wo/st/en/prog/energy/renewable_energy/actove_renewable_projects.html.

191 The purpose of Secretarial Order 3283 is to facilitate the Department's efforts to achieve the goal Congress established in Section 211 of the Energy Policy Act of 2005 to approve non-hydropower renewable energy projects on the public lands with a generation capacity of at least 10,000 MW of electricity by 2015, which is included in the project's purpose and need statement. Section 4 of Secretarial Order 3283 provides the responsibilities assigned to the Assistant Secretary – Land and Minerals Management, which includes “the permitting of environmentally responsible wind, solar, biomass, and geothermal operations...”

The Mohave County Wind Farm Project was prepared in accordance with NEPA and is consistent with Best Management Practices (BMPs) for wind energy projects (see Appendix B of the Draft EIS). No federally protected threatened or endangered species are known to occur within the Project Site. Few

Letter Continued

192 The BLM's Purpose and Need statement refers to FLPMA (section 10 (c) which claims that *"public lands are to be managed for multiple use that takes into account the long term needs of future generations for renewable and non-renewable resources."* The Mohave County Wind Farm site would impact 60 square miles of public lands and cumulatively impact a region 4 times bigger than that. Public land access would be extremely limited and other land use would be impaired. It would be impossible to manage these lands for multiple use when so much of the land is sacrificed for just one use. Mandates to use renewable energy can be compensated in the distributed generation alternative we have provided in these comments. If a large project impairs the BLM's mandate to manage these lands under a multiple use philosophy, the BLM should provide a sound, environmentally friendly alternative.

193 The BLM's NEPA Handbook states that *"the purpose and need statement dictates the range of alternatives, because action alternatives are not "reasonable" if they do not respond to the purpose and need for the action (see section 6.6.1, Reasonable Alternatives). The broader the purpose and need statement, the broader the range of alternatives that must be analyzed. The purpose and need statement will provide a framework for issue identification and will form the basis for the eventual rationale for selection of an alternative. Generally, the action alternatives will respond to the problem or opportunity described in the purpose and need statement, providing a basis for eventual selection of an alternative in a decision."*

By only providing a narrow range of alternatives, the BLM appears to be attempting to bypass conservation management that would protect resources from the impacts of this project.

194 We would like to request that the Purpose and Need statement be rewritten to include mandates to protect sensitive biological, hydrological, cultural and visual resources.

Alternatives:

195 The DEIS fails to include a complete reasonable range of alternatives. The only alternatives we have to choose from are between 30,000 and 38,000 acres or the required No Action Alternative. The BLM fails to include alternatives of private lands off site, distributed generation and an alternative that designates the region inappropriate for wind energy.

A full range of alternatives should be considered in every EIS document. That is required by NEPA. This seems to be one of the biggest problems with most of them.

Following the guidelines of the National Environmental Policy Act, the final EIS should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public. In this section agencies shall:

- (a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.
- (b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.
- (c) **Include reasonable alternatives not within the jurisdiction of the lead agency.**

Responses Continued

cultural resources were identified through Class III cultural resource surveys and efforts would be made to avoid and/or mitigate for sites that may be affected. The proposed Project was determined to be in conformance with the Kingman Field Office Resource Management Plan (see Appendix A of the Draft EIS). The Project also is within the parameters of BLM's multiple-use mandate under FLPMA.

192 While the proposed Mohave County Wind Farm right-of-way (ROW) application is for more than 47,000 acres of public and Federal land, the area potentially affected during the construction phase would be about 3 percent of the land. During operations, the only areas that would be fenced to restrict public access would be around substations, switchyards, and the Operations & Maintenance (O&M) building. Following reclamation efforts, less than 1 percent of the land would be subject to long-term effects from project facilities and roads. The land would continue to be managed for multiple uses that are compatible with wind farm operations.

193 The range of alternatives addresses the purpose of the proposed action, which is to respond to BP Wind Energy's proposal to use Federal lands and the ROW applications submitted by BP Wind Energy to construct, operate, maintain, and decommission a wind energy facility and to interconnect with one of Western's transmission lines; this is described in Section 1.3.1 on page 1-7 of the Draft EIS. The alternatives also address the need for the proposed action, which is to respond to the projected demand for renewable energy and assist Arizona (or other western states) with meeting established Renewable Energy Portfolio Standards. Throughout development of the EIS, BLM has worked with BP Wind Energy to modify the Project based on comments received during scoping and from cooperating agencies; these adjustments to the Proposed Action (and Alternatives B, C, and E) have resulted in additional measures to protect resources, including avoidance and monitoring during construction.

194 The NEPA process provides for addressing and incorporating environmental concerns. Scoping comments provide guidance in the issues to be analyzed and the EIS identifies the effects on the resources such as sensitive biological, hydrological, cultural, and visual resources. These are considered in the decision to approve or deny the project.

195 The range of alternatives was established in response to the issues identified in internal and external scoping comments, as well as meeting the Project's purpose and need. In addition to the four alternatives analyzed in detail, eight other alternatives were considered but were eliminated from detailed analysis for the reasons described in Section 2.9, and a ninth alternative considered but eliminated from detailed analysis is included in the Final EIS. Alternatives considered included private lands and distributed generation. A full range of alternatives was considered.

Letter Continued

(d) Include the alternative of no action.

(e) Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.

(f) Include appropriate mitigation measures not already included in the proposed action or alternatives.

196 [We would like to request that the BLM consider the following alternatives for the Mohave County
197 [Wind Project:

196 [**1. No Action which Designates the Area Inappropriate for Wind Energy Development:** This would be more than just an exclusion of wind energy. This alternative would recognize wildlife habitat and cultural values as resources with high conservation value. A Land Use Plan amendment should be made to provide a better opportunity for conservation management of the area.

197 [**2. Private Land Alternative outside of Mohave County:** Under NEPA, the BLM is required to consider off site alternatives. The weak Purpose and Need statement in the DEIS fails to acknowledge opportunities the BLM could take to site this project on lands with lower conservation value.

The US Environmental Protection Agency has identified over one million acres of degraded lands or "brown-fields" in the United States that would be appropriate for large scale renewable energy development. <http://www.sustainablebusiness.com/index.cfm/go/news.display/id/23646>

3. Distributed Generation:

198 [British Petroleum is an energy developer. They do not specialize in wind. They seem to be developing both traditional and renewable forms of energy. The BLM should be requiring BP to examine more environmentally friendly alternatives under NEPA.

199 [Distributed generation in the built environment should be given much more full analysis, as it is a completely viable alternative. This project will need just as much dispatchable baseload behind it, and also does not have storage. But environmental costs are negligible with distributed generation, compared with this project. Distributed generation cannot be "done overnight," but neither can large transmission lines across hundreds of miles from remote central station plants to load centers. Most importantly, distributed generation will not reduce the natural carbon-storing ability of healthy desert ecosystems, will not disturb biological soil crusts, and will not degrade and fragment habitats of protected, sensitive, and rare species.

200 [Alternatives should be looked at that are in load centers, not closest to the project site. There is a need to consider the "macro" picture, the entire state, to look at maximum efficiency. A master comprehensive plan should exist before large expensive inefficient solar plants are sited and built out in the wildlands. This plan should carefully analyze the recreational and biodiversity resources on public lands. A list of assumptions should be included detailing the plan for integrating various fuels

Responses Continued

196 BLM is considering and may select the No Action Alternative through the NEPA process. Designation of the area as Inappropriate for Wind Energy Development would not be necessary for BLM to select the No Action Alternative, though the BLM has previously identified this area as viable option for wind energy development. Wildlife and cultural resources have been recognized and analyzed as part of the EIS alternatives.

As stated in Appendix A of the Draft EIS, BP White Hills Wind Project RMP Conformance Review, the Kingman Resource Area RMP does not require amending because the proposed project was determined to be in conformance with the existing RMP. As a result, designating this specific area as “Inappropriate for Wind Energy Development” is beyond the scope of the EIS.

197 BLM relies on industry to identify renewable energy technologies and general project locations and configurations that are technically and economically viable given the availability of the renewable resource (in this case wind), current market conditions, renewable portfolio standards, technological advancements, and transmission access. BLM’s purpose and need for action arises from the BLM’s responsibility under the FLPMA to respond to a ROW application requesting authorized use of public lands for a specific type of renewable energy development.

198 See responses 193 and 195 regarding the range of alternatives.

199 Distributed generation was considered as a potential alternative, but was eliminated from detailed analysis (see Section 2.9.6 on page 2-58 and 2-60 of the Draft EIS and Final EIS). This alternative was considered but eliminated from further analysis in this EIS for several reasons. First, the proposed Project location is remote and sparsely developed; therefore, this area does not have enough residential or commercial developments to generate the amount of power that could be produced by the proposed wind farm. Second, increasing energy efficiency would be beyond the ability of either BLM or BP Wind Energy to either enforce or monitor. Even with full energy efficiency compliance, the area would not conserve power at the same scale in which the proposed Project would produce power. Finally, this alternative would not satisfy BLM’s purpose and need for the Project to allow for the development of utility-scale wind energy resources to meet forecasted increased energy demands nor does it respond to BLM’s purpose and need to consider an application for the authorized use of public land for a specific renewable energy technology.

200 BLM does not dictate the location for where a development is proposed; in this case, the proposed wind farm project location was selected, in part, by proprietary information gathered by BP Wind Energy on the availability of a marketable wind resource. Other locations for the Project that had been considered and eliminated from further analysis are described on pages 2-57 and 2-58 in Sections 2.9.1, 2.9.2, and 2.9.3 of the Draft EIS.

The range of reasonable alternatives that BLM should consider in response to the applicant in this case is focused on those alternatives for which BLM and cooperating federal agencies have jurisdiction for making a decision, respond to issues raised during scoping, and meet the purpose and need to consider an application for the authorized use of public land. The suggestion to consider a master comprehensive plan related to energy facilities on a state or national level that looks at a variety of fuel mixes and technologies, and building those in cities, would not meet BLM’s purpose and need for action to respond to the ROW application and would be beyond the discretion available to BLM to consider, and thus would not be reasonable (BLM 2008, NEPA Handbook H-1790-1).

Letter Continued

200 mixes and technologies into each utility's plan, an overall state plan, and a national plan. Loads should be carefully analyzed to determine whether additional capacity is needed for peaking, intermediate, or baseload purposes. Unit size, which impacts capital and operating costs and unit capacity factors, has a direct bearing on the relative economics of one technology over another. A plan might recommend that smaller units built in cities and spaced in time offer a less risky solution than one large unit built immediately.

201 Right now there is no utility plan, no state plan, and no national plan. Large-scale central station energy projects have been sited very far from load centers out in remote deserts, with the only criterion being nearness to existing transmission lines and natural gas lines. Very little thought has been given to the richness of biological resources, the cumulative impacts on visual scenery to tourists, the proximity to ratepayers, or the level of disturbance of the site.

202 There will be a need to build many new efficient natural gas peaker or baseload plants to back up the renewable projects planned. Instead, the renewables should be distributed generation in load centers, which will provide much more efficiency, rather than inefficient remote central station plants that reduce biodiversity and require expensive transmission lines. This reduces the risk, as distributed generation is a known technology and has been proven in countries like Germany where incentive programs have been tested. Incentive programs can be designed in an intelligent manner to vastly increase distributed generation. Incentives for large remote projects are unproven to lower risk and may actually raise debt levels with runaway costs associated with poor siting and higher-than-anticipated operating and maintenance costs. Many renewable project developers have failed to consider reasonable or viable alternatives that could serve as solutions that everybody could live with. In the case of this particular project, conflicts with endangered species, cultural resources, storm water drainage erosion, views from National Parks and wilderness areas could all be avoided with a distributed generation alternative.

Affected Environment/Environmental Consequences:

203 There is an alarming lack of information located in the DEIS about mitigation and management of resources. Exact locations of roads, turbine foundations, underground transmission etc. are not even known at this point. The DEIS makes an attempt to claim that Best Management Practices would be employed, yet admits that the BLM does not even have an idea of the exact locations of disturbance.

204 Map 2-1 shows "potential turbine locations" -- the locations should be finalized now during public review so that sensitive archaeological sites or natural resources can be mapped with respect to turbine sites and not damage resources. When will final locations be determined?

205 Deferred: Weed Management Plan, Stormwater Pollution Prevention Plan, Health, Safety, Security, and Environment Plan, waste management, emergency response, spill prevention plan, sedimentation and erosion control measures, reclamation plan, Site and Grading Plan, geotechnical and soils testing, updated Plan of Development (page 2-5), Compliance and Monitoring Plan, Blasting Plan (p. 2-6). These need to be developed now for public review. "Before construction can commence" is not proper NEPA
206 review, every road, building, and turbine site placement is delayed and deferred until after public
207 review. This is unacceptable. "A week prior to construction" surveyors will walk around to identify sensitive resources to avoid is also unacceptable. This gives no ability for the public to participate or comment in what resources are identified, and how they will be avoided or mitigated. Having "relevant

Responses Continued

201 Most energy development is conducted by private parties who determine if a proposal is economically viable or not. When federal approval is required, federal agencies are responsible for identifying and disclosing the environmental impacts associated with the project, and mitigating those impacts to the extent possible.

See response 200 regarding the range of reasonable alternatives. Specifically for this Project, BP Wind Energy used four key siting criteria to locate the Project in an economical, technically feasible, and practical manner. These are described in the Draft EIS in Section 2.2.1 High Quality Wind Resource, Section 2.2.2 Available Land, Sections 2.2.3 Suitable Transmission, and Section 2.2.4 Environmental Issues.

The range of alternatives analyzed for this Project addresses the issues identified in scoping, which include avoiding land with established mineral claims, minimizing impacts on birds and bats, increasing distances from private lands, and increasing distances from areas of concern to Lake Mead National Recreation Area (NRA). The originally proposed project site has been eliminated from detailed analysis as a result of concerns identified in scoping (see Section 2.9.1) and the current range of alternatives was established in response to scoping comments.

202 See response 199 regarding distributed generation.

203 Mitigation for each resource is found in Chapter 4 of the Draft EIS and Final EIS. In addition, the BMPs are consistent with the Final Programmatic Environmental Impact Statement for Wind Energy Development on BLM-Administered Lands in the Western United States, and are provided in Appendix B. These BMPs have been implemented on numerous wind energy developments and BLM would ensure compliance with the BMPs and project-specific mitigation measures. Several supplemental plans (such as the Eagle Conservation Plan and Bird Conservation Strategy [ECP/BCS] and the Health, Safety, Security, and Environmental [HSSE] Plan) contain specific mitigation measures as applicable to their focus. Each of these plans would be strictly adhered to, and BLM would monitor Project activities to ensure compliance.

As noted in the Draft EIS Sections 2.6.2, 2.6.3, and 2.6.4 (pages 2-40, 2-45, and 2-49 of the Draft EIS), and Section 2.6.6 of the Final EIS the specific turbine layout would be determined through micro-siting, which may include analysis of the physical constraints of the landscape, the strength of the wind resource, geotechnical testing results, and avoidance of waters of the U.S. and cultural resources, among other factors. Flexibility to place turbines within the corridors allows turbine placement to address specific engineering and environmental constraints identified through this EIS and during BLM's and Reclamation's review of construction plans prior to issuance of notices to proceed with construction. The extent of potential temporary and long-term disturbance is accounted for in Table 2-7 (page 2-54 of the Draft EIS).

Details of project feature locations continue to be refined and the Plan of Development is periodically updated to reflect these types of changes. A version of the Plan of Development was submitted to BLM when the Draft EIS was released to the public and that plan is available on the BLM's project website. Another update of the plan would be expected when the Final EIS is released for public review.

Turbine corridors wider than the anticipated disturbance areas were surveyed for certain resources, such as cultural resources, to provide suitable information for the EIS and flexibility in determining precise turbine locations during final design rather than in the planning stage. As is stated in Section 2.5.1 "If Project features or construction activities are determined to extend beyond the corridors that were surveyed for cultural and biological resource concerns, no construction would begin until environmental clearances are completed."

204 See response 203 regarding micro-siting. Though cultural surveys have been conducted on the turbine corridors, and wildlife, avian, and plant surveys are conducted prior to construction, the locations of sensitive archaeological sites and natural resources are not shared with the public to protect these

Responses Continued

resources. These locations would be considered in the micro-siting process with a focus on avoidance of sensitive resources to the extent practical.

205 The Draft EIS describes a number of plans that would comprise the Compliance and Monitoring Plan; these draft plans are now appended to the Plan of Development and Appendix C of the Final EIS contains a summary of the draft plans and their associated mitigation measures. The Plan of Development appendices include the Integrated Reclamation Plan (which includes habitat restoration, weed management and native plant salvage); ECP/BCS; Bat Conservation Strategy; Dust and Emissions Control Plan; Mine (Materials Source) Plan of Operations; Transportation and Traffic Plan; and HSSE Plan. These plans have been reviewed by appropriate agencies with jurisdictional or technical expertise or regulatory responsibilities, including but not limited to BLM, Reclamation, Western, National Park Service (NPS), Arizona Game and Fish Department (AGFD), U.S. Fish and Wildlife Service (USFWS), and Mohave County.

Supporting documents related to other plans or permits would be prepared and reviewed by BLM prior to issuing the Notice to Proceed with construction; this documentation would include the Stormwater Pollution Prevention Plan; Spill Prevention Control and Countermeasure Plan; Mohave County grading permit; sedimentation and erosion control measures; Blasting Plan; and supplemental geotechnical and soils testing information.

206 BLM does not require that BP Wind Energy perform a site survey to stake out the exact location of the wind turbines, interior roads, electrical lines, substation areas, and other major Project features before a decision is made whether to approve the ROW application request. This would be an unnecessary expense if the application is denied. Final engineering is a sizable investment and typically occurs after a project proponent has greater assurance that construction of the project would be allowed. Instead, corridors were established where roads, turbines, and collector lines would be located and the environmental impact statement considered potential impacts within the corridors. This approach provides greater flexibility to avoid sensitive resources in micro-siting.

Surveys and defined locations for project features would be required prior to issuing a notice to proceed with construction if the ROW application request is approved.

207 Pre-construction surveys by qualified personnel serve to mark exclusion or protected areas and check for any changes in conditions (e.g., new burrows). The statement made on page 2-5 that an environmental inspector and agency inspectors/monitors would conduct a walk-over of areas to be affected, or potentially affected, by proposed construction activities about a week prior to the start of construction is in relation to the areas evaluated in the EIS for sensitive resources. The locations of sensitive resources are not shared with the public to protect these resources from potential collection or damage. General information on the types of resources potentially affected by each alternative is presented in the Draft EIS for public review and comment.

Letter Continued

207 [agency representatives" approve such plans later is not proper NEPA review. The public is being excluded.

208 [The Blasting Plan should be developed now for public review, as this could include public health and safety impacts.

Air Quality/Climate Change:

209 [Air quality is very difficult to mitigate. Even the mitigation using water trucks has not been able to control the fugitive dust from construction very large projects.

Removal of stabilized soils and biological soil crust creates a destructive cycle of airborne particulates and erosion. As more stabilized soils are removed, blowing particulates from recently eroded areas act as abrasive catalysts that erode the remaining crusts thus resulting in more airborne particulates.

Cumulative impacts on air quality will result from the removal so much stabilized soil and biological soil crust.

The following three photos show that there is a consistent failure of large solar and wind project developers to control and mitigate the dust emissions that have resulted from the large disturbances caused by recently approved high profile "green" energy projects. In spite of the fact that all three of these developers have promised that dust emissions would not be an issue, we are finding that they are falling short of their mitigation requirements.



Above: Ivanpah Solar Electric Generating System, California, October, 2010, just after approval

Responses Continued

208 Blasting activities may be necessary to achieve the necessary slope and gradient for interior roads or for foundation construction. As described in Section 2.5.1 on page 2-6 in this section of the Draft EIS, if blasting is required, a Blasting Plan would be prepared in advance of construction and approved by BLM and Reclamation. The Blasting Plan would identify blasting locations, safety protocol, and notification procedures when non-construction personnel or developed property may be within range of the noise or vibrations. The Blasting Plan would be appended to the Project Plan of Development and made available on the BLM website and/or at the local BLM and Reclamation offices. Blasting would be pre-engineered with each location assessed for apparatus or structures in the vicinity to determine the suitability of that location for blasting.

Public health and safety effects and mitigation measures associated with potential blasting are described in Section 4.13.2.1 on page 4-132 of the Draft EIS.

209 A project-specific Dust and Emissions Control Plan, adhering to Mohave County and Arizona Department of Environmental Quality (ADEQ) dust control regulations (see Table 1-2), has been prepared and appended to the Plan of Development. A summary of the draft Dust and Emission Control Plan is included in Appendix C of the Final EIS. The Plan of Development would be part of the ROD package and also incorporated into the ROW grants if the Project is approved; the proponent would be required to abide by the requirements in the plan.

Letter Continued



Above: Desert Sunlight Project, California, January 2012, four months after approval (photo by Donna Charpiéd)



Above: Ocotillo Wind Express Project, California, May, 2012, just 5 days after approval (photo by Jim Pelley)

- 210 We are worried that industrial construction in the region will compromise the air quality to the point where not only visual resources, but public health will be impacted.
- 211 Coccidioidomycosis (Valley Fever) is a public health threat and is a common issue that impacts desert communities when dust is stirred up. The amount of time required to build this project will cause construction to kick up dust every day for the next couple of years. A project of such massive size has the potential to threaten public health by putting people at risk for exposure to valley fever.
- 211 Removal of stabilized soils and biological soil crust creates a destructive cycle of airborne particulates and erosion. As more stabilized soils are removed, blowing particulates from recently eroded areas act as abrasive catalysts that erode the remaining crusts thus resulting in more airborne particulates.
- 212 Cumulative impacts on air quality will result from the removal so much stabilized soil and biological soil crust.
- 212 Since mitigation for dust is not fully covered in the DEIS, we would like to recommend this mitigation:

Responses Continued

210 Table 2-7 on page 2-54 of the Draft EIS lists the estimated amount of temporary and long-term disturbance associated with each alternative. Approximately 3 percent of the Mohave County Wind Farm Site would be disturbed during the 12 to 18 month construction phase. As described in Table 4-5 in Section 4.5.2.1 on page 4-26 of the Draft EIS, revegetation would restore all but about 339 acres of long-term disturbance. Most of the long-term disturbance would be associated with access roads, which would also have a gravel surface and vehicles using the roads would have a 25 mph speed limit. Section 4.2.6 of the Draft EIS (Section 4.2.7 of the Final EIS) includes the mitigation measures to reduce the generation of airborne dust, during both the construction and operational phases. Some of the concrete foundations for the turbines and O&M building would stabilize the ground surface in these long-term disturbance areas and other areas, such as the substation, the switchyard, and employee parking area, would be covered with gravel and would stabilize the ground surface.

Section 3.13.3.1 and Section 4.13.1 of the Final EIS have been revised to include a discussion regarding Coccidioidomycosis (Valley Fever). The concerns raised regarding Valley Fever will be considered in the decision-making process.

211 Blowing particulate matter resulting from areas of the site disturbed during construction would be managed through site watering and other soil stabilization measures discussed in Sections 2.5.2.2 (Production Needs), 2.5.2.10, and 4.2.6 of the Draft EIS and contained in the Dust and Emissions Control Plan. The Dust and Emissions Control Plan states site watering would be the primary method of dust control and that at least four 3,000-gallon water trucks would operate during the full length of the work shifts. Dust at the Project site would be managed so that wind erosion from blowing particulates would be minimized (see Appendix C Section 3.4). Dust abatement efforts would be monitored and documented during storm water inspections conducted on a weekly basis and after rain events (see Appendix C, Section C.2.6.2). Efforts to manage blowing dust would continue during the operating phase of the wind energy plant. The Draft EIS states in Section 4.1.2 that construction would not be considered complete until the BLM and Reclamation acknowledge that restoration efforts were complete based upon pre-approved criteria.

212 A limitation on project activity at a specified wind speed threshold is included in Section 4.2.6 of the Draft EIS. The U.S. Environmental Protection Agency (EPA) and ADEQ are responsible for enforcement of the National Ambient Air Quality Standards, and ADEQ is responsible for enforcement of the required Dust and Emissions Control Plan.

Construction activities would be monitored and if dust levels exceed acceptable standards, adaptive management strategies would be employed, which may include lowering the speed limit, increasing use of dust palliatives, limiting construction activities during certain wind conditions, and/or other strategies deemed appropriate.

Letter Continued

- 212 [2. Limit construction hours by half when temperatures climb above 100 degrees.
3. Hold BP accountable for any air quality violations. Give them steep fines if violations occur.
4. Provide a web page where the general public can monitor disciplinary actions taken by BLM to insure that developers are in compliance with conditions of mitigation. This web site should have a place for the public to report violations.

Greenhouse Gases and Climate Change:

- 213 [Transmission line upgrades and new transmission facilities will increase the use of the green house gas called SF6 is used primarily in electricity transmission - and is emitted in especially large amounts in construction of new lines – and is 24,000 times as potent as CO2 in its global warming impacts. The Environmental Protection Agency has declared “that the electric power industry uses roughly 80% of all SF6 produced worldwide“. Ideally, none of this gas would be emitted into the atmosphere. In reality significant leaks occur from aging equipment, and gas losses occur during equipment maintenance and servicing. With a global warming potential 23,900 times greater than CO2 and an atmospheric life of 3,200, one pound of SF6 has the same global warming impact of 11 tons of CO2. In 2002, U.S. SF6 emissions from the electric power industry were estimated to be 14.9 Tg CO2 Eq. ...
<http://www.epa.gov/electricpower-sf6/basic.html>

- 214 [Will commuters be driving gas powered vehicles to and from work in a rural area for the next 30 years or however long the lifespan of the project is? How much green house gas is this? Construction is taking place for the Ivanpah Solar Electric Generating System in San Bernardino County, California. At starting time and quitting time over 200 cars commute to and from work from distances up to 200 miles round trip.

- 215 [Carbon Sequestration and removal of plants, caliche layers and biological soil crust would all be removed for this project. Scientists are recommending that the offset of CO2 emissions be studied. Will the new energy plant actually offset greenhouse gases? Will the amount of CO2 offset from wind energy compensate for the removed caliche formations and organic matter?

Natural Gas Backup:

- 216 [Wind power is not emission free.]²¹⁷ Grids that have less hydro-electric power require adding natural gas plants and are therefore not emission free. The main challenge of grid operation is to supply enough capacity to meet the peak load, rather than to save fuel. Windmills do not help overcome this challenge.
217 [It doesn't matter how many windmills are built. This does not help if the wind is not blowing. The hope that wind-generated power will always be able to meet the peak from some far away wind farm is not reasonable because of transmission losses.

- 218 [**Paleontological Resources:** The DEIS states that operators will determine whether paleontological resources exist in the project area AFTER construction begins. There is absolutely no reason that the BLM cannot require BP do this research prior to approval. This gives us little faith that mitigation can protect these resources.

Biological Resources:

Responses Continued

213 Although SF6 (sulfur hexafluoride) is commonly used as an electrical insulator in high voltage equipment such as circuit breakers, gas insulated substations, and transmission switchgears, emissions of SF6 are not associated with the construction and operation of transmission lines. An evaluation of SF6 has been conducted and the information is inserted into Sections 3.2.2, 4.2.1, and 4.2.2 of the Final EIS. SF6 used in transmission facilities and equipment would be managed following both Federal and State guidelines for its use, which include recycling of SF6.

214 Section 4.2.1 on the analysis methods describes that quantitative air quality emissions were calculated using information contained in the Plan of Development and included vehicle and equipment utilization, workforce planning, transportation needs, and other factors together with published emission factors and equations.

It is likely that employees would drive gasoline powered vehicles to and from work, emitting greenhouse gases associated with fuel combustion. It is estimated that 40 employees would work at the facility during the operational phase. The use of passenger vehicles is acknowledged in Section 4.2.2.2, Operational Emissions. Commute distances cannot be estimated at this time.

215 In terms of removing emitted greenhouse gases (GHG), or in directly facilitating the cessation of GHG-emitting equipment or activities (such as an enforceable emission offset under Title I of the Federal Clean Air Act), wind energy systems do not “offset” GHG emissions. In general, and despite whether GHG emissions from wind energy plants have been defensibly quantified, the equipment that captures wind energy and converts it to electricity emits far less GHG than traditional fossil fuel-fired electrical generating equipment, on a per kilowatt basis. This is illustrated in Section 4.2.5, Figure 4-1, which shows GHG emission factors for a variety of electricity generation technologies. Thus, if wind energy provides a portion of the electrical load demand being served by power plants in that area, one could reasonably presume that the renewable energy source is “offsetting” a fossil fuel-fired source and the emissions that would have occurred. Since the location and type of electric generation replaced by the wind energy cannot always be identified, it is difficult to specifically quantify the GHG emission reduction attributable to the wind energy. The fact that a portion of the electric demand in an area would be produced using technology that emits far less GHG than traditional sources is the more important consideration.

With regard to the proposed action, the only portions of the Project that would involve deep excavation that could affect caliche layers (if they were present) are installation of wind turbine tower foundations (which would generally be located along ridges where significant caliche deposits do not normally exist), excavation for substation and switchyard foundations, excavation of cable trenches, and excavation of transmission tower foundations. Other earthmoving is expected to be limited to surficial grading to create access roads and other project facilities. All of the locations where these facilities would be installed currently have relatively low amounts of vegetation on them, typical of arid desert regions.

216 Section 4.2.5 includes a graph (Figure 4-1) that provides a comparison of the life cycle GHG emissions for a wide range of electricity generating technologies including wind generated energy and fossil fuel generated energy. The figure shows GHG emissions directly associated with the power generating equipment and more indirect emissions resulting from acquiring the fuel source (if applicable), transporting materials, constructing the facility, and decommissioning the facility. The life cycle GHG emission factor per kilowatt hour of energy produced for wind energy is shown as 5 percent and 10 percent of the GHG emission factors for future coal and natural gas fueled facilities, respectively. While the information is not project specific, it provides the public with a clear indication that wind generated electricity results in substantially less GHG emissions than fossil-fuel generated electricity.

217 The goal of this project is not to generate enough power to meet peak demand and establish a power grid that is emission free, but to reduce the reliance on non-renewable sources of power. It is recognized that renewable sources of power are less reliable in satisfying peak load requirements.

Responses Continued

218 Section 4.7.6 of the Draft EIS states that pre-construction survey and monitoring of Tertiary and Quaternary sediments would occur in areas deemed to be sensitive because some resources cannot be identified based on ground surface surveys.

BP Wind Energy is initiating pre-construction surveys in areas of potential disturbance that are most likely to yield paleontological resources. Based on the findings of the pre-construction surveys, a Paleontological Monitoring Plan would identify areas most likely to require monitoring during construction, as well as address actions that would be taken and the mitigation measures that would be applied should paleontological resources be discovered during earthwork or excavation activities. The monitoring plan would be implemented during the construction phase; BLM's approval of the monitoring plan would be required prior to the start of construction.

Letter Continued

219 [The DEIS fails to provide maps of survey areas and general maps of vegetation and wildlife.

Vegetation and Rare Plants:

220 [There is very little information provided in the DEIS on rare plants. The main surveys for rare plants took place between April, 2008 and May, 2008. Rare plant surveys that are only conducted for one month are not complete. Many plants respond to different amounts of precipitation and some are best surveyed for during the fall months. The BLM has only required BP to provide a bare bones minimum of data on rare plants. Could this contribute to the reason why no USFWS endangered, threatened or species of concern were found?

221 [No information is provided on what percentage of the project area was surveyed.

222 [The cactus *Echinocactus polycephalus* was found on the project site during surveys. Because locations of turbine sites, roads, and other facilities has been deferred until later, how will the public know whether these rare cacti will need to be moved, transplanted, or salvaged? What Salvage Plan has been developed?
223 [All cacti individuals should be mapped and turbine sites exactly mapped to avoid destruction. Similar maps for other salvage-restricted cacti and yucca species should be made up.

Wildlife:

224 [Wildlife Movement Corridors: p. 3-47. The project should not be approved until a wildlife corridor analysis is completed for bighorn sheep, mule deer, pronghorn antelope, desert tortoise, and other wildlife species.

225 [The DEIS identifies the area between the Mt. Tipton and Mt. Wilson Wilderness Areas as wildlife movement corridors, but also states that bighorn sheep are not found in the project area. The DEIS fails to discuss how the BLM and BP will mitigate the massive blockage of wildlife linkage habitat by this industrial project.

226 [**Golden Eagles (*Aquila chrysaetos*):** The DEIS identifies 36 potential golden eagle nests within 5 miles of the project area. Wind farms are known to kill golden eagles and little mitigation is available that has been proven effective. There is no avian monitoring plan available and the DEIS indicates that BLM and the Fish and Wildlife Service have no idea how this will be mitigated. Will BP be required to get a Take permit? How many golden eagle kills will be deemed appropriate?

227 [There is no indication of any type of mitigation to protect eagles. We see nothing in the DEIS that even suggests that BP will install avian radar or attempt to slow down the speed of the turbines to prevent mortality. Why is BLM being so weak on this issue? How will this project be in compliance with the Bald and Golden Eagle Protection Act?

228 [California Condor (*Gymnogyps californianus*): The DEIS claims that California Condors would be “unlikely” in the area of the project site. This conflicts with recent personal communications with Fish and Wildlife Service biologists who are concerned because this project is being built within the range of the re-established population of 76 condors in the state of Arizona. Condors can soar and glide up to 50

Responses Continued

219 All survey protocols were reviewed and approved by the USFWS, BLM, Reclamation, Western, and AGFD. The Draft EIS includes maps of vegetation and bat roosts (see Draft EIS Maps 3-6 and 3-7 on pages 3-32 and 3-39, respectively). Pages 3-48 and 3-49 in Section 3.5.3.2 of the Draft EIS disclose results of special status plant surveys conducted in the Project Area. Project construction and operations would incorporate the BMPs listed in Attachment A of the *Record of Decision for the Implementation of a Wind Energy Development Program and Associated Land Use Plan Amendments* as described in Section 2.4 on page 2-4 of the Draft EIS. As stated on page 2-5 of the Draft EIS, prior to ground disturbance the “locations of sensitive resources would be flagged or clearly marked in and around the Project work area to identify any possible conflicts or to distinguish areas to be avoided and/or areas requiring cultural resource, biological, paleontology, or weed monitoring.” BP Wind Energy shall conduct surveys for biological resources including cacti, yucca, and noxious weed species within the Project Area once the final disturbance areas are determined. The Project would be designed to avoid (if possible) or minimize impacts on sensitive resources.

The Draft EIS and Final EIS were prepared consistent with the guidance in BLM’s NEPA Handbook H-1790-1 (January 30, 2008) and 40 CFR § 1500.1. The Draft and Final EIS rely on quantitative data where possible, and detailed qualitative data under other circumstances. The BLM may rely on the best available information if it is sufficient to allow a reasoned analysis of particular impacts. Data and other information relied upon in preparing the Final EIS are identified in the individual resource sections as well as in Chapter 6, References.

220 See response 219 regarding species surveys. The baseline data provided in the Draft and Final EIS are sufficient to support the environmental impact analysis. The BLM has a baseline inventory of information for the Project Area that was prepared during the development of the EIS and is updated on an ongoing basis as part of BLM’s Kingman Field Office management practices. Using these baseline inventories, the BLM is able to protect and manage the public lands within the Project Area consistent with the Kingman Field Office Resource Management Plan. The survey data were sufficient for the BLM and Reclamation to determine the Project’s potential impacts to special-status plants, and that avoidance and other mitigation measures are required. This guides the agency decisions about the Mohave County Wind Farm project.

The Draft EIS used the best available data regarding the presence and location of special status plant species. The Integrated Reclamation Plan describes the plant salvage plan for Arizona native plants including salvage restricted cacti and yucca species. Appendix C includes a summary of the Integrated Reclamation Plan and the complete draft plan is appended to the Plan of Development.

221 See response 219 regarding species surveys.

222 The location of the turbines, roads and other facilities considered the presence of cotton top cactus (*Echinocactus polycephalus*) during project design and analysis. The draft Integrated Reclamation Plan, which is appended to the Plan of Development, describes the plant salvage plan for Arizona native plants including salvage restricted cacti and yucca species. See response 219 regarding flagging sensitive resources so they may be avoided.

223 See response 219 regarding species mapping as well as flagging sensitive resources so they may be avoided.

224 The Draft EIS used the best available data with respect to wildlife movement corridors, habitat connectivity, and habitat fragmentation. Existing literature and baseline data, as evaluated in Section 4.5.2.5 of the Draft EIS, do not indicate that habitat connectivity would be compromised for wildlife resources. Access roads would not block movement for big game, desert tortoises, or other wildlife. No reviewed studies indicate that operating wind turbines would reduce movement of terrestrial species through the Project Area. The baseline conditions and impact analyses were developed in consultation with BLM, Reclamation, Western, NPS, USFWS, and AGFD. The information was

Responses Continued

sufficient for the BLM and Reclamation to determine the Project's impacts to wildlife movement and to make reasoned decisions about the Project.

For the requisite "hard look" at the impacts of a proposal, an agency must rely on information that is of "high quality" (40 CFR § 1500.1) and does not require relevant data to be complete in all respects or to be generated if it is unavailable. Instead, a "hard look" under NEPA consists of a reasoned analysis containing quantitative or detailed qualitative information. See, BLM NEPA Handbook H-1790-1 (January 30, 2008).

225 See response 224 regarding wildlife movement corridors. The presence of US 93 is a barrier to the movement of bighorn sheep.

226 The comment incorrectly suggests that 36 potential golden eagle nests were identified within 5 miles of the Project Area. Section 3.5.2.3 of the Draft EIS states that during aerial raptor nest surveys in 2011, 36 potential golden eagle nests were documented at 26 different locations within about 10 miles of the Project boundary. None of the 36 surveyed nests were occupied or active during the 2011 surveys (Thompson et al. 2011). However, active golden eagle nests were identified in 2012 surveys, as documented in Section 3.5.2.3 of the Final EIS.

Golden eagle conservation is important to BLM, Reclamation, NPS, USFWS, AGFD, and BP Wind Energy. BP Wind Energy has voluntarily committed to working with USFWS, BLM, Reclamation, and Western to apply for an eagle take permit. This is consistent with BLM's Instruction Memorandum No. 2010-156 Bald and Golden Eagle Protection Act – Golden Eagle National Environmental Policy Act and Avian Protection Plan Guidance for Renewable Energy. The eagle take permit process will follow the Eagle Conservation Plan Guidance (USFWS 2013), which provides specific in-depth guidance for conserving Bald and Golden eagles in the course of siting, constructing, and operating wind energy facilities.

Measures to avoid impacts to golden eagles have been ongoing. Section 2.9.1 of the Draft EIS describes how the project was modified during the planning process to avoid sensitive resources, including sensitive biological resources. The eagle preservation or "no net loss" standard is met by applying compensatory mitigation and adaptive management to offset eagle fatalities. Details of the mitigation are outlined in the ECP and involve removal of wildlife carcasses from roadsides to offset eagle-vehicle collisions. Appendix C includes a summary of the ECP, and the complete draft plan is appended to the Plan of Development. Alternative E, the Agencies' Preferred Alternative identified in the Final EIS, excludes turbine corridors in the northwest area of the proposed Wind Farm Site to avoid potential impacts to golden eagles in the Squaw Peak breeding area.

227 BP Wind Energy is following the proper procedures for golden eagle conservation and compliance with the Bald and Golden Eagle Protection Act. The ECP/BCS developed for the Project meets the requirements of the BLM Instructional Memorandum 2010-156, which provides direction for compliance under the Bald and Golden Eagle Protection Act (BGEPA). To date, although radar systems have been discussed as a potential tool for avoiding turbine/eagle collisions, this technology has not been proved effective. Concerns that have been raised regarding the use of radar systems include evaluating if radar can accurately identify a golden eagle compared to other species (e.g., turkey vulture), determining if local topography will offset its usefulness because the radar only works in the line-of-sight, and evaluating if radar can detect an eagle in enough time for curtailment to be effective. Also, to date, there have been no studies that evaluate if slower turbine blade speeds have any impacts on the fatality rates of birds. The results of the 2012 golden eagle surveys conducted by the applicant and the findings in the ECP have been incorporated into the Final EIS in Section 3.5.3.3; the projected impacts are included in Sections 4.5.2.7, 4.5.3.6, 4.5.4.6, and 4.5.6 as updates in the Final EIS.

Monitoring and adaptive management strategies are captured in BP Wind Energy's ECP/BCS, and the Bat Conservation Strategy. Further mitigation measures may be employed by the BLM, Reclamation, USFWS, and AGFD based on post-construction mortality monitoring and an adaptive management

Responses Continued

strategy to address actual impacts and to ensure the correct level of mitigation. A summary of the ECP/BCS is included in Appendix C of the Final EIS and the complete document is appended to the Plan of Development. In a letter dated December 18, 2012, the USFWS acknowledged the ECP/BCS as “a comprehensive, objective, state-of-the-art document that conveys strong commitment to conservation of the golden eagle.” As a result of the coordination with USFWS, under Alternative E the Agencies’ Preferred Alternative, BP Wind Energy would agree to establish a 1.25-mile avoidance/no-build area encompassing the nest and forage area west of the active nest, and to establish a curtailed operation zone (see avoidance area on Maps 2-11 to 2-13 of the Final EIS). Through coordination among the USFWS, BLM, Reclamation, and AGFD, the combined 1.25-mile eagle nest avoidance area and surrounding curtailment zone was identified. The curtailment zone extends about 1.5 miles east and about 3.3 miles south and southwest of the active nest (see Maps 2-11 to 2-13). When the golden eagle breeding area in the northwest portion of the Wind Farm Site is occupied, BP Wind Energy has agreed to shut turbines down daily from 11:00 a.m. to 4 p.m. between December 1 and March 15, and from 4 hours after sunrise until 2 hours before sunset between March 16 and (i) August 31 or (ii) two months after the date any fledgling eagles leave the nest based on golden eagle activity patterns; this is expected to correspond to the approximate peak period of golden eagle flight activity in northeastern Arizona (Tetra Tech 2012a).

Letter Continued

- 228 | miles per hour and travel 100 miles or more per day in search of food. Condors inhabit the Vermillion Cliffs and the Grand Canyon. There is a confirmed sighting of a condor near Gold Butte, Nevada.

The below quote comes from the Arizona Game and Fish Department:

“Status:

California condors are one of the most endangered birds in the world. They were placed on the federal endangered species list in 1967. In Arizona, reintroduction was conducted under a special provision of the Endangered Species Act that allows for the designation of a nonessential experimental population. Under this designation (referred to as the 10(j) rule) the protections for an endangered species are relaxed, providing greater flexibility for management of a reintroduction program.

As a result of the continued downward spiral of the condor population in the 1980's, one of the longest wildlife recovery efforts ever attempted began. The U.S. Fish and Wildlife Service began a captive breeding program in 1980, teaming with the Los Angeles Zoo and the San Diego Wild Animal Park. In 1987, a controversial decision was made to bring all remaining condors (22 individuals) into captivity and the last wild bird was captured on April 19, 1987.” http://www.azgfd.gov/w_c/california_condor.shtml

While the Fish and Wildlife Service will not issue Take permits the experimental population under 10J, it is very sad that the BLM would undermine the successful recovery of this species by speculating that it would not be likely that a condor would ever use the area in the next 30 years. One of the goals for condor recovery is to have the species expand their range. The BLM will be limiting their range if this project is approved.

- 229 [Again, what is the mitigation going to be for this species??

- 230 [**Burrowing owl** (*Athene cunicularia hypugaea*) Burrowing owls are seeing a decline in parts of their range. Wind farms have contributed to this. Wind projects disturb burrowing owl habitat, block linkage and are responsible for direct kills of owls. See here: Burrowing Owl Mortality in the Altamont Pass Wind Resource Area-

https://www.biologicaldiversity.org/campaigns/protecting_birds_of_prey_at_altamont_pass/pdfs/Burrowing_Owl_Fatalities_APWRA.pdf

[How will burrowing owl mortality be mitigated?

Reptiles:

- 231 [For Sonoran desert tortoise (*Gopherus morafkai*), population surveys, density estimates, and maps of individuals and sign should be completed now for public review, not released later.
- 232 [Please make a Gila Monster (*Heloderma suspectum*) translocation Plan for any lizards dug up or found during construction.

Responses Continued

228 As described in Section 3.5.3.3 on page 3-49 of the Draft EIS, the reintroduced population in Arizona is categorized as an experimental, non-essential population that is managed as a threatened species outside the reintroduction area under rule 10(j) of the ESA. BLM, Reclamation, and Western recognize the 10(j) listing and will continue consultation with USFWS regarding the species and manage special status species in accordance with BLM Manual 6840, Special Status Species Management.

The Draft and Final EIS considered potential impacts to California condors in Section 4.5.2.7. As noted in that section of the document, “While reintroduced California condors have been expanding their foraging range to the north and northeast of their release site near the Grand Canyon, they have not utilized areas south of the Grand Canyon since about 2000 (USFWS 2010b). USFWS determined that no animal species Federally listed as threatened or endangered or designated critical habitat would be affected by the Project (Werner 2011). No impact on the California condor or other animal species currently listed as Federally threatened or endangered is anticipated during the life of the Project.”

229 See response 228 regarding California condors.

230 BLM understands that there has been much information disseminated on impacts from the Altamont Pass Wind Resource Area. However, the Altamont Pass wind site is not a good analog for the Mohave County Wind Farm Project. The landscape, habitats, turbine types, number of turbines, and sizes of raptor populations are not comparable.

As discussed on page 2-5 of the Draft EIS, prior to ground disturbance the “locations of sensitive resources would be flagged or clearly marked in and around the Project work area to identify any possible conflicts or to distinguish areas to be avoided and/or areas requiring cultural resource, biological, paleontology, or weed monitoring.” However, as with other avian species, burrowing owls are protected under the Migratory Bird Treaty Act; therefore, BLM will require relocation if necessary. The BLM Sensitive Species discussion in Section 4.5.2.7 of the Final EIS has been revised to document that pre-construction surveys for burrowing owls would be completed prior to commencement of construction activities in accordance with AGFD’s “Burrowing Owl Project Clearance Guidance for Landowners” (AGFD 2008). In accordance with AGFD (2008), a 100-foot radius buffer, excluding all heavy machinery and foot traffic would be set around all active burrows during construction. If burrowing owls or active or potentially active burrows are located within the Project permanent disturbance boundaries, further mitigation may include excluding owls from disturbed burrows prior to construction and/or providing artificial burrows on-site or in an off-site location if suitable habitat is not available on-site. Mitigation measures in Section 4.5.7 of the Final EIS that would reduce potential impacts on burrowing owls and their habitat includes:

- BP Wind Energy shall determine the presence of active raptor nests (i.e., raptor nests used during the breeding season). Measures to reduce raptor use at a project site (e.g., minimize road cuts maintain either no vegetation or non-attractive plant species around the turbines) shall be considered.
- Conduct vegetation clearing during the non-breeding bird season.
- If the bird breeding season cannot be avoided, conduct bird nest surveys in areas to be cleared and flag a non-disturbance area to avoid destroying active nests.
- Turbines shall be configured to avoid landscape features known to attract raptors, if site studies show that placing turbines there would pose a significant risk to raptors.
- Avoid or minimize impacts on burrowing owls by following AGFD *Burrowing Owl Project Clearance Guidance for Landowners* (AGFD 2009b), to survey for burrowing owls and to institute the appropriate conservation measures for burrowing owls that occupy burrows in or near the construction footprint.

Therefore, burrowing owl mortality over the life of the Project is projected to be very low.

231 BLM manages desert tortoise according to IM AZ-2012-031, Desert Tortoise Mitigation Policy, and IM AZ-91-16, Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona. The desert tortoise surveys conducted by BP Wind Energy provide an adequate basis for assessing impacts of the Project and BLM concurs with the characterization of the Project site as having low tortoise densities. BLM’s data indicate the Project Area contains Category III desert tortoise habitat. Section 3.5.3.3, Special Status Wildlife, and Sections, 4.5.2.7, 4.5.3.6, 4.5.4.6, and 4.5.6 of the Final EIS were revised to reflect the desert tortoise habitat categories and the potential impacts in the Project Area.

Letter Continued

233 [**Visual Resources:** The Mohave County Windfarm will be located close to the Nevada border. The DEIS does not evaluate the visual resource impacts from Nevada recreation areas such as Gold Butte, Nevada. Visual resource disturbances do not stop at state boundaries.

Conclusion:

The Arizona Bureau of Land Management has the dubious honor of writing one of the worst environmental impact statements we have ever read! Almost every mitigation plan is deferred. We would also like the BLM and the Interior Department to take a good look at the photos on the bottom of this letter. Remember the Gulf of Mexico? Remember what the British Petroleum oil spill did to that region? Why on Earth would the Interior Department reward BP with a 38,000 acre ROW after the Gulf oil spill???

234 [Please at least re-write this Draft Environmental Impact Statement to include more information. In 2008 and 2009, the BLM promised us that review of these big renewable projects would not bypass important issues. And the BLM hired many new people. Several new "Renewable Energy" positions all over the west were created to expedite energy project development on public lands. We were promised that all of these new positions would insure that no corners were cut in review of these projects. Ironically, we have never seen such a poor quality of work coming from then BLM. When we look at the DEIS for the Mohave County Wind Farm, we have to wonder how much worthy effort was put into the review of this project.

Thank you,

Kevin Emmerich

Laura Cunningham

Basin and Range Watch

P.O. Box 70

Beatty, NV 89003

Responses Continued

The Arizona Interagency Desert Tortoise Team (AIDTT) released their Recommended Standard Mitigation Measures for Projects in Sonoran Desert Tortoise Habitat in 2008. The mitigation measures recommended (e.g., fencing, construction monitoring by qualified desert tortoise biologist) “may only be appropriate in areas of moderate to high tortoise density, Category I or II habitats, or Sonoran Desert Management Areas.” The Mohave County Wind Farm Project is not located within areas classified as Category I or II habitat or a Sonoran Desert Management Area.

232 Mitigation measures included in the Section 4.6 on page 4-62 of the Draft EIS include “Develop and present an ecological awareness training program to Project personnel, construction contractors, and guests to the Project Area that discusses biological conservation measures, impact minimization, and acceptable BMPs.” Section 4.5.2.7 BLM Sensitive Species of the Final EIS includes reporting and mitigation protocols in accordance with Nevada Department of Wildlife’s (NDW) “Gila Monster Status, Identification and Reporting Protocol for Observations” (NDW 2007).

233 The study area of a 20-mile radius from the Project boundary included parts of Nevada to the north and west. Analysis was considered for common and/or the sensitive viewing areas in the Project viewshed within the 20-mile radius. Gold Butte is approximately 5 miles beyond the 20-mile radius and 10 miles beyond the end of the BLM Background Zone. Based on the viewshed out to the 20-mile radius and the topography between Gold Butte (elevation 5,052 feet above sea level, north of Lake Mead NRA) and the Project Area, views from the peak to the turbines would probably be blocked by Bonelli Peak (elevation 5,331 feet above sea level).

In the Final EIS, part of Section 3.12.1 was revised to state, “According to BLM distance zones, distances greater than approximately 15 miles are considered ‘seldom seen’; however, a 20-mile analysis radius was used because of the large acreage of the Project and the nearly 500-foot high turbines with rotating blades.”

234 BLM, Reclamation, Western, and other cooperating agencies initiated the NEPA process in 2009 and have invested substantial efforts by the local and regional offices to thoroughly evaluate the potential effects. The process has included numerous opportunities for public input to identify issues of concern and the comments identified through the scoping process have been addressed in the Draft EIS; issues identified by the public during the review period on the Draft EIS are addressed in the Final EIS.

In accordance with CEQ’s NEPA regulations, BLM is required to prepare an Supplemental EIS if there are: (1) “substantial changes in the proposed action that are relevant to environmental concerns,” or (2) “significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” 40 CFR § 1502.9(c)(1)(i)-(ii); see also BLM’s H-1790-1 “National Environmental Policy Handbook” at 29 (Jan. 2008). Supplementation is required if new circumstances or information would result in significant effects outside the range of effects already analyzed. There is new information regarding species, which BLM has added in Sections 2.5, 4.5, and 4.16 of the Final EIS, and BLM also has added a new alternative that is a hybrid of Alternatives A and B. However, BLM has determined that the changes to the FEIS and additional information identified do not constitute “substantial changes” or “significant new circumstances or information” because this new information is within the spectrum of effects analyzed in the DEIS and does not substantially change the analysis of the proposed action.

Letter Continued



Letter Continued



BP Wind Energy



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June 11, 2012

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VIA EMAIL

Mr. Sanchez;

BP Wind Energy North America Inc. ("BP Wind Energy") offers the following comments on the Draft Environmental Impacts Statement dated April 2012 (the "Draft EIS") for the proposed Mohave County Wind Farm Project (the "Proposed Action").

BP Wind Energy appreciates the work of the staff in the Department of the Interior – Bureau of Land Management ("BLM"), Department of the Interior – Bureau of Reclamation ("Reclamation") and other agencies represented by the Draft EIS, and believes that the Draft EIS fulfills BLM's and Reclamation's mandate under the National Environmental Policy Act (16 U.S.C. Section 1531 *et seq.*, "NEPA") to prepare a detailed environmental analysis of the Proposed Action. The comments in this letter are offered in order to clarify and strengthen that analysis.

As background to BP Wind Energy's comments, we offer the following context for BLM's and Reclamation's review of the Proposed Action under the Federal Land Policy and Management Act (43 U.S.C. Section 1701 *et seq.*, "FLPMA") and 53 Stat. 1187, Section 10. Under FLPMA,

Letter Continued

BLM is guided by Congress' "multiple use mandate," under which BLM is charged with managing federal lands "and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people." 43 U.S.C. Section 1702 (c). Among the uses specified by Congress for which BLM may issue rights-of-way under FLPMA are "systems for generation, transmission and distribution of electrical energy." 43 U.S.C. Section 1753 (a) (4).

BLM's stated purpose for its implementing regulations with regard to rights-of-way include the prevention of "unnecessary and undue degradation to public lands." 43 C.F.R. Section 2801.2 (b). Although Part 2800 of the Code of Federal Regulations does not define "unnecessary and undue degradation", elsewhere in its implementing regulations for FLPMA BLM defines the term as "conditions, activities or practices" that "[f]ail to comply" with applicable regulatory performance standards, terms and conditions of BLM approvals, or other state or federal laws "related to environmental protection and protection of cultural resources", or "[a]re not reasonably incident" to the activity permitted by the BLM approval. 43 C.F.R. Section 3809.5.¹ As applied to the Proposed Action, therefore, unnecessary and undue degradation would consist of activities or conduct failing to comply with applicable laws, regulations or permit conditions, or not reasonably incident to the construction, operation and reclamation of the Proposed Action. Thus, consistent with BLM's multiple use mandate, the unnecessary and undue degradation standard incorporates a recognition that some disturbance of the existing resources is permissible provided that it is reasonably incident to the permitted activity.

Reclamation authorizes the use of federal lands under its jurisdiction pursuant to Congress' direction to approve uses

¹ Found in 43 C.F.R. Part 3800, with respect to Mining Claims Under the General Mining Laws.

Letter Continued

when, in the judgment of the Secretary, their exercise will not be incompatible with the purposes for the lands . . . are being administered, and shall be on such terms and conditions as in [the Secretary of the Interior's] judgment will adequately protect the interests of the United States and the project for which said lands . . . are being administered.

53 Stat. 1187, Section 10 (b). The adopted regulatory standards for such approvals state that

Reclamation will "consider the following criteria . . . :

- (a) Compatibility with authorized project purposes, project operations, safety, and security;
- (b) Environmental compliance;
- (c) Compatibility with public interests;
- (d) Conflicts with Federal policies and initiatives;
- (e) Public health and safety;
- (f) Availability of other reasonable alternatives; and
- (g) Best interests of the United States.

43 C.F.R. Section 429.14.

NEPA does not impose a different, or higher, standard on BLM or Reclamation with respect to their management of federal lands. NEPA mandates that federal agencies "prepare a detailed environmental analysis [an EIS] for major Federal actions significantly affecting the quality of the human environment." An EIS must include consideration of "the environmental impact of the proposed action", "any adverse environmental effects which cannot be avoided should the proposal be implemented" and "alternatives to the proposed action." 43 U.S.C. Section 4332 (2) (C). However, NEPA does not mandate that a federal agency disapprove, modify or condition its approval of a proposed action due to the analysis in an EIS. *Mineral Policy Center v. Norton*, 292 F.Supp.2d 30, 33 (D.C. Cir. 2003), citing *Grand Council of Crees (of Quebec) v. F.E.R.C.*, 198 F.3d 950, 959 (D.C.Cir. 2000), *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 333 (1989) and *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 371 (1989).

Letter Continued

Thus, informed by the analysis of the Proposed Action and the Alternatives provided in the Final EIS, BLM's and Reclamations decisions with regard to the imposition of environmental conditions must be balanced with consideration of non-environmental factors set forth in each agency's statutory and regulatory sources of authority, as well as Executive and Congressional direction to both agencies regarding the use of federal lands for the production of renewable energy, and state direction regarding the use of renewable energy. See, e.g., Draft EIS, p. 1-4.

1. Shadow Grey Turbine Color Option Involves Financial Burdens and May Constitute Unwarranted Precedent Burdening Wind Energy Development on Federal Lands

235

With regard to the analysis of visual impacts, the Draft EIS analyzes a "project option" for potential inclusion in Alternatives B and C to 1) require that the turbines be painted "shadow gray" rather than the manufacturer and industry standard of non-reflective white or off-white, which would in turn 2) very likely necessitate the installation and continuous daytime operation on an estimated minimum of 65% of the proposed turbines of synchronized, pulsed white strobe lights that are 10 times stronger in intensity than the standard nighttime lighting (20,000 candelabra for non-standard daytime strobe lighting vs. 2,000 for standard nighttime lighting).

236

The Draft EIS states:

Although the interpretation of impacts resulting from day-lighting of non-white turbines is challenging using static simulations, it is assumed that such lighting would be obvious and would attract the attention of the casual observer. It is assumed that a small variation in color choice may prove more successful **for this and other turbine locations**, and that Shadow Gray may be more successful against different landscapes.

Draft EIS, p. 4-129 (emphasis added). This language is ambiguous, and could be read to address the potential requirement of non-standard turbine color and constant daytime operation

Responses Continued

235 The Federal Aviation Administration (FAA) is in the process of rewriting the FAA Obstruction Lighting Advisory Circular AC 70-7460-1K to provide more clear guidance and better consistency in turbine visibility rules. It is anticipated that the new guidance will indicate that only white or off-white paint on wind turbines will be allowed to provide adequate daytime conspicuity. The preferred white paint color for wind turbines is RAL 9010 or equivalent. The darkest acceptable off-white paint color for wind turbines is RAL 7035 (light gray on the RAL standardized color chart) or equivalent. FAA is no longer including provisions to allow for dark paint colors and white strobe lights for daytime marking/lighting, as had been allowed at the time the Draft EIS has been prepared (Patterson 2012). The Final EIS has been revised at Sections 2.5.2.3 and 2.6.1 to reflect the new FAA guidance and the allowable color options, which include white and a light gray. Neither of these colors would require daytime strobe lighting and the turbine colors now being considered are within the anticipated FAA guidelines, thereby eliminating the uncertainty of FAA approval for the light gray (RAL 7035 or equivalent) turbine option.

236 The FAA has eliminated the option of dark turbine colors with daytime lighting, and several EIS sections have been rewritten to address the change. The paragraph referred to in Section 4.12.6 of the Draft EIS has been rewritten and inserted into the Final EIS Sections 4.12.1.9 and 4.12.2.4 to say, “The contrast rating analysis indicated that a strong contrast in form, line, color, and texture would result from wind turbines as proposed. At distances of greater than 5 miles, contrast with the smooth texture of the turbines against the coarse texture of the surrounding environment would be reduced to moderate and weak levels; however, the bold white color of the turbines would contribute substantially to the persistence of strong contrast in form, line, and color across greater distances.” A design option being evaluated is to paint the wind turbines the darkest shade that is expected to be approved by the FAA, which is RAL 7035, “Light Grey.”

Based on one example of sidelit white and light gray turbines (see Section 4.12.3.4 in the Final EIS), the light gray turbines appeared to have a stronger contrast for color than white turbines against a light blue sky and against white clouds. The light gray turbines appeared to have less of a contrast than the white turbines when seen surrounded by the various colors of landforms and vegetation. Contrast in form, line, color, and texture of white and light gray turbines would be expected to vary with distance, lighting, and other circumstances.

236

of strobe lighting on all wind turbines proposed for BLM and Reclamation administered federal lands.²³⁷ In addition, it is not clear that the analysis of either Alternative B or C, or the “project option” of requiring non-standard turbine color and constant daytime operation of strobe lighting on all wind turbines includes consideration of 1) the substantial additional uncertainty introduced in obtaining Federal Aviation Administration (“FAA”) permits for Alternative B or C (or any approved project that incorporates the shadow gray option, and 2) the feasibility of these requirements for the Proposed Action, including from an economic standpoint. BLM NEPA Manual, p. 50.

237

Per the FAA, no wind farm has yet sought or obtained the additional permissions required in order to install turbines painted other than the standard, manufacturer applied non-reflective white or off-white.² Thus, there is no existing process to address such requests, standardized criteria for approval, or typical conditions of approval. This uncertainty alone subjects any wind farm required to seek such approvals to a significant additional level of regulatory uncertainty regarding both process and outcome, as well as imposing a substantial risk of further delay. Given the lack of precedent for such a request, it can be conservatively assumed that continuous, daytime strobe lighting would be required to be installed on a minimum of 65% of the turbines proposed (*i.e.*, all turbines identified as requiring nighttime lighting). Note that this assumption does not preclude the possibility that strobe lighting may be required on more than 65% of the turbines. In addition, such analysis should take into account not only the increased costs of obtaining turbines in a non-standard color, but also the costs of strobe light installation and constant, day-time operation over the life of the proposed wind farm. These costs are estimated to include approximately \$7,340/turbine including parts, labor, and installation, which equates to a total additional cost ranging from \$2.1M for Alternative A (maximum of 283

² The manufacturer standard colors have already been approved by the FAA.

Responses Continued

237 See response 235 regarding new FAA guidelines on allowable turbine colors, none of which would require daytime lighting.

237

turbines) to \$1.5M for Alternative B or C (maximum of 208 turbines). In addition, it should be noted in our preliminary conversations with FAA about this issue, they noted they have received numerous complaints from other type of structures with daytime white lighting that would likely be required for turbines painted gray.

238

BP Wind Energy requests that the Final EIS clarify the intent of the impacts analysis for the non-standard color and constant day-time strobe lighting project option, and that this analysis incorporate considerations of feasibility including the regulatory uncertainty and economic factors outlined above.

2. Noise Analysis

The Draft EIS’s analysis of potential noise impacts on portions of the Lake Mead National Recreation Area (the “LMNRA”) adjacent to the northwest boundary of the proposed right-of-way area is generally based upon wind data at turbine hub height for the area of the Proposed Action nearest to the LMNRA and noise as well as wind speed data at ground level provided by the National Park Service (“NPS”). From these data sets, BLM’s consultant, Tetra Tech, has analyzed the degree to which ambient noise within the LMNRA is correlated with wind speed at the site of the Proposed Action. In summary:

- The Draft EIS used a standard calculation widely accepted within the industry for establishing ambient noise in connection with analyzing potential impacts from wind farm projects. NPS has suggested using an alternative methodology (the 10-minute L70 of 10-second L90 sound level) with the goal of eliminating transient, man-made noise sources (*i.e.*, to ensure that the calculated background noise level exclude the majority of actual, existing man-made noise

Responses Continued

238 See response 235 regarding changes in the Final EIS pertaining to turbine color.

Letter Continued

sources). Using either methodology, there is a strong correlation between increasing wind speed at turbine height within the area of the Proposed Action and increasing ambient noise within the LMNRA, as shown in Attachment 1.

- The alternative calculation suggested by NPS is not standard for noise analyses or wind turbine noise assessments and has the potential to significantly overstate impacts. In addition, NPS's own data suggests that man-made noises (*e.g.*, aircraft) are actually present up to 90% of some daytime hours. Therefore, the actual, existing background noise level within the LMNRA includes both natural and man-made noise, as is appropriate for an analysis by BLM and Recreation under NEPA.
- The alternative calculation, however, is useful for analytical purposes in that it strengthens the finding of a strong correlation between increasing wind speeds and increasing background noise levels. When wind speeds are sufficient for the turbines to operate, the higher ambient noise levels resulting from the increase in wind speeds in the LMNRA will contribute to masking any increase in ambient noise attributable to the turbines. Elevated levels of background noise due to wind-induced natural sounds would act to reduce or preclude the audibility of the Proposed Action, while low levels of natural noise would permit operational noise from the turbines to be more readily perceptible. For a broadband noise source the audibility of and potential impact from the new noise is a function of how much, if at all, it exceeds the actual, pre-existing background level – including from pre-existing anthropogenic sources.
- In addition, Tetra Tech has analyzed the monitoring data to determine how frequently 1) wind speeds at turbine hub height were sufficient for the turbines to operate, while 2) wind is non-existent at ground level. This condition occurred

Letter Continued

over the course of the monitoring period during 12% of day-time hours and 22% of nighttime hours.

Thus, under the majority of prevailing meteorological conditions, substantial evidence in the records, including the data collected by NPS supports that there would be no perceptible (3 dBA or greater) increase in noise from turbine operations within the LMNRA even with implementation Alternative A.

With respect to the standard used in the Draft EIS for potential impacts to the LMNRA, 35 dBA L_{eq} , the Draft EIS states that “There is no quantified noise threshold in Lake Mead NRA policies with respect to the assessment of potential noise impacts on recreational visitors and uses from noise sources external to park lands.” Draft EIS, p. 3-114. This is because NPS has no jurisdiction over uses proposed for lands entirely outside the boundary of the LMNRA.³ NPS Management Policies state that NPS will “seek the cooperation of others in minimizing the influence of impacts originating outside parks by controlling noise and artificial lighting . . .” NPS Management Policies 2006. The Draft EIS incorporates NPS’s input regarding the Proposed Action consistent with BLM’s and NPS’s duties as, respectively, lead and cooperating agency, consistent with the Council on Environmental Quality’s regulations for implementing NEPA. 40 C.F.R. Section 1501.6 (a). The Draft EIS very conservatively characterizes the potential noise impacts of the Proposed Action and Alternatives on the LMNRA. BP Wind Energy notes, however, that as NPS has no jurisdiction over the Proposed Action, the appropriateness of any environmental restrictions imposed on the Proposed Action, and the analysis of alternatives, are properly governed by BLM’s and Reclamation’s statutory and

³ BP WIND ENERGY notes that development on private lands in the vicinity of the LMNRA would be subject to the Mohave County standard of 55 dBA. Draft EIS, pp. 3-111 through 3-113.

Letter Continued

regulatory sources of authority outlined above (including Executive, Congressional and state policies and direction regarding renewable energy), informed by the analysis in the Final EIS.⁴

3. *Jurisdictional Waters Delineation and Impacts Analysis*

As noted in the Draft EIS's discussion of potential impacts to jurisdictional waters of the United States, the preliminary identification of 93.8 acres of jurisdictional waters within the area of the Proposed Action was pending approval by the US Army Corps of Engineers (the "USACE") as of February 2012. Since the release of the DEIS, the USACE subsequently issued a Jurisdictional Determination on June 8, 2012, (a copy of which is enclosed as Attachment 2) as expected that indicates the USACE concurs with BPWE's proposed jurisdictional delineation of the waters in the area. The approximately 94 acres of potential jurisdictional waters described in the DEIS consist solely of ephemeral drainages. Draft EIS, p. 3-24. More than 200 separate drainages have been mapped, some of which would not be impacted at all by the Proposed Action or Alternatives. Since the time of publication of the Draft EIS, BP Wind Energy has continued to work closely with the USACE to 1) confirm the mapping of the jurisdictional waters within the area of the Proposed Action, 2) develop rough estimates of the potential impact of the Proposed Action and Alternatives B and C on jurisdictional waters, and 3) through micro-siting analysis, avoid and minimize impacts to jurisdictional waters with the intent of keeping any impacts so as to qualify for coverage under Nationwide Permits.

⁴ BPWE notes that these criteria govern BLM's and Reclamation's substantive permitting decisions, including with regard to the elements of any alternative selected for approval as well as the imposition of environmental conditions, with respect to all of the resources analyzed in the EIS, *e.g.*, including but not limited to land use, aesthetics, cultural resources, etc.

Letter Continued

As background for this approach, it is important to recognize that BP Wind Energy has applied for the rights-of-way using a “turbine corridor” approach in order to account for the degree of flexibility required for a project of this scale and complexity, given the long federal permitting timeline anticipated at the time of application (August 2006).⁵ By providing site-specific data within broad turbine corridors as well as within larger areas identified for placement of roads, transmission lines, substations and other features of the Proposed Action and Alternatives, BP Wind Energy preserves flexibility to micro-site all elements of the wind farm in order to avoid and minimize impacts identified through the NEPA and other analyses. In addition, and even accounting for the long federal permitting timeline, BP Wind Energy preserves critical business flexibility to select turbine models and layout based on the options commercially available at the time a Notice to Proceed is issued. Lastly, with respect to certain infrastructure (in particular the switchyards), the specific dimensions and layout for these elements can only be provided by the Western Area Power Administration (“Western”), a cooperating agency for the EIS, and was not yet available when the Draft EIS was published. Thus, BP Wind Energy applied for placement of certain infrastructure elements within a conservative development envelope.

239

Consistent with the turbine corridor and development envelope concept, the Draft EIS provides an extremely conservative analysis of the potential impacts to jurisdictional waters from the Proposed Action and Alternatives B and C, unrealistically (but conservatively) assuming that turbines, roads, transmission lines, substations and other elements of the wind farm would be placed anywhere within the corridors and development envelopes, rather than micro-sited to maximize opportunities to avoid and minimize impacts to jurisdictional waters.

⁵ Note that Table 1-1 in the Draft EIS (p. 1-5) lists December 2006 in connection with the development right-of-way application; however, the first development application was filed in August 2006.

239

Based upon recent work by URS in cooperation with the USACE and Western, rough calculations of potential impacts to jurisdictional waters have been very substantially reduced from those conservatively estimated in the Draft EIS. As siting of wind farm elements is still in the “rough” stage, it is anticipated by BP Wind Energy, URS, the USACE and Western that further reductions will be realized through refined micro-siting. Currently, in comparison with the estimates in the Draft EIS, impacts to jurisdictional waters are estimated as follows:

DEIS Alternative	77 to 82.5 -meter Diameter Rotor Turbine	90 to 101-meter Diameter Rotor Turbine	112 to 119-meter Diameter Rotor Turbine
A (283 turbines max)	14.95	14.76	14.34
B (208 turbines max)	13.39	13.25	12.79
C (208 turbines max)	13.49	13.38	12.92

The very conservative analysis presented in the Draft EIS amply fulfills NEPA’s mandate that agencies take a “hard look” at the potential environmental consequences of the Proposed Action and Alternatives. In addition to presenting a very conservative analysis of the potential “worst case” analysis of impacts to jurisdictional waters, the Draft EIS:

- Fully discloses the turbine corridor/development envelope concept, including that this approach “serves to disclose a greater degree of environmental impact than is likely to occur.” Draft EIS, p. 2-55.
- Accurately describes the deliberative, two-step process BP Wind Energy is undergoing with the USACE to avoid and minimize impacts to jurisdictional waters through the micro-siting process. Draft EIS, pp. 4-16, 4-20 and 4-21.

By providing an update in the Final EIS with respect to BP Wind Energy’s current work with the USACE, Western and URS, the EIS will provide a refinement to the Draft EIS’s analysis that

Responses Continued

239 As indicated by the comment, Sections 4.4.2.1, 4.4.3.1, and 4.4.4.1 of the Draft EIS contain conservative estimates of potential impacts on jurisdictional waters of the United States. Sections 2.6.2, 2.6.3 and 2.6.4 indicate that BP Wind Energy would use micro-siting and consultation with the U.S. Army Corps of Engineers (USACE) during the preparation of an individual permit.

Based on revisions to the project design after the USACE approval of the preliminary jurisdictional delineation, these sections in the Final EIS were revised to reflect the potential permanent impacts to jurisdictional waters of the United States by turbine type (size and associated disturbance area). Tables 4-4, 4-6, 4-7, and 4-8 provide the estimate of the potential permanent impacts to jurisdictional waters for Alternatives A, B, C, and E, respectively. The analysis in Section 4.4.2.1, 4.4.3.1, 4.4.4.1, and 4.4.6.1 provides adequate relevant information for the BLM and Reclamation's planning and decision making in relation to the potential environmental effects.

Letter Continued

substantially reduces the level of potential environmental impact from that disclosed in the Draft EIS.

We look forward to continuing to work cooperatively with BLM, Reclamation, Mohave County, Western, other cooperating agencies, the local community and other stakeholders through the NEPA process.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Runyan". The signature is fluid and cursive, with a large initial "D" and a long, sweeping tail.

Daniel J. Runyan,
Vice President Business Development
BP Wind Energy

Cc: Kim Wells, BP Wind Energy, Environmental Manager
Mike Rigo, BP Wind Energy, Project Counsel
Deborah Quick, BP Wind Energy Outside Counsel, Morgan, Lewis, & Bockius LLP
Jackie Neckels, Bureau of Land Management, Arizona State Office, Environmental Coordinator
Faye Streier, Bureau of Reclamation, National Environmental Policy Act Coordinator

Attachment 1 - Noise Correlation Support from Tetra Tech Analysis
Attachment 2 - USACE Jurisdictional Determination

Attachment 1

EXHIBIT 1. WIND SPEED AND SOUND LEVEL REGRESSION ANALYSIS AT 1.5 METERS AGL (GROUND LEVEL)

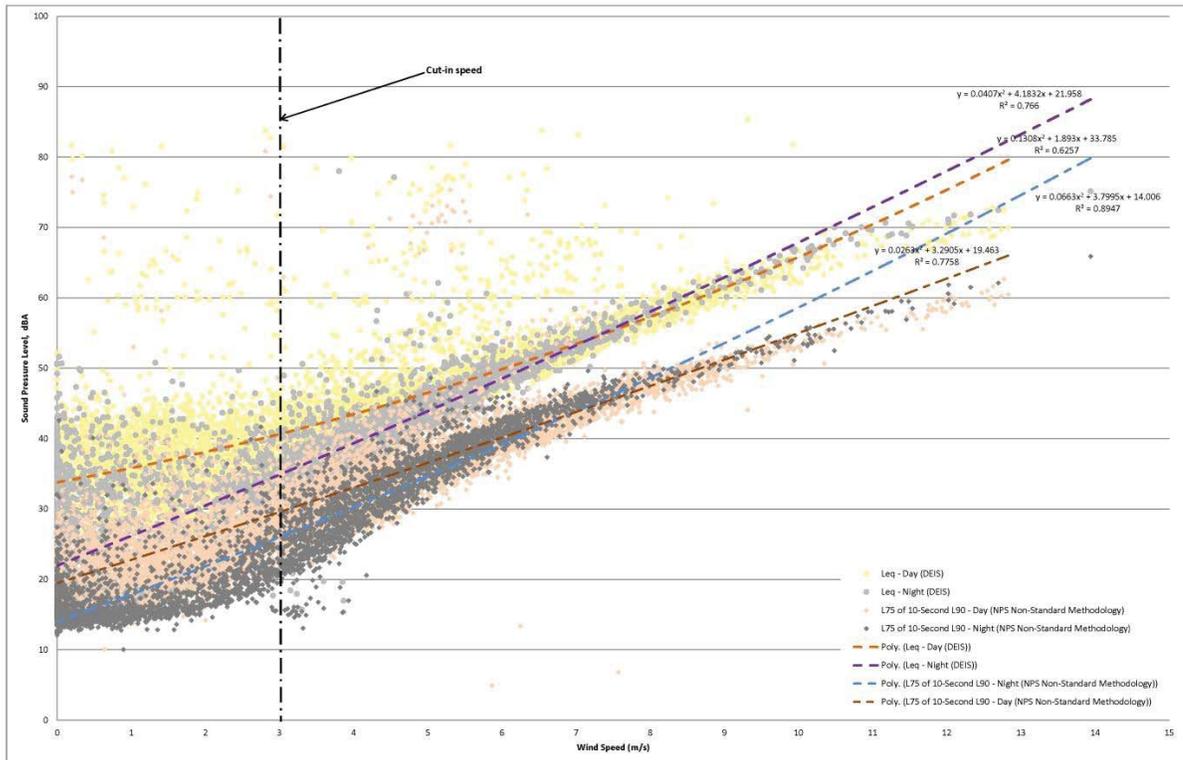
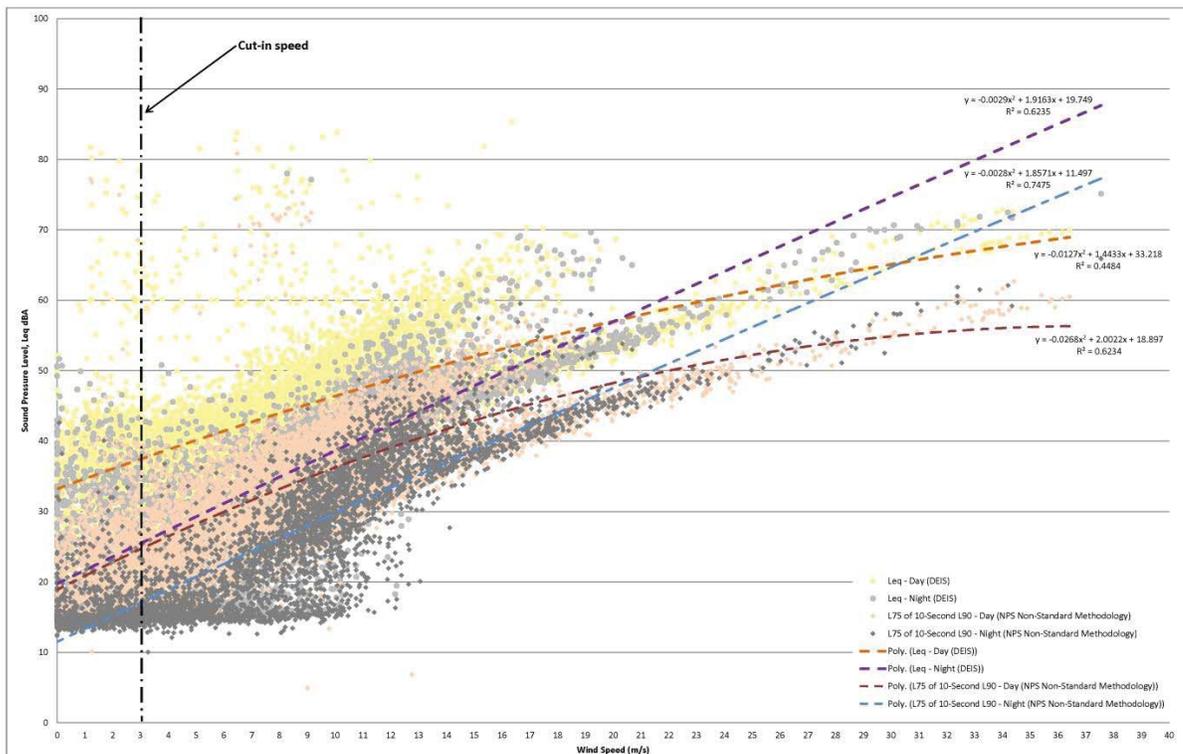


EXHIBIT 2. WIND SPEED AND SOUND LEVEL REGRESSION ANALYSIS AT 80 METERS AGL (HUB HEIGHT)



Letter Continued

EXHIBIT 3. REGRESSION ANALYSIS SOUND LEVELS AT REFERENCED WIND SPEEDS

Method	Day/Night	Noise Level at Wind Speed meters/second									
		3*	4	5	6	7	8	9	10	11	12
L _{eq} (DEIS)	Day	37	39	40	41	43	44	45	46	48	49
	Night	25	27	29	31	33	35	37	39	41	42
10-Minute L ₇₅ of 10-Second L ₉₀ (NPS Non-Standard Methodology)	Day	25	26	28	30	32	33	35	36	38	39
	Night	17	19	21	23	24	26	28	30	32	33

*Table 4-24 in the Draft EIS does not include the monitored noise level at 3 meters/second. This data is included here because this is the cut-in wind speed (i.e. the wind speed where the wind turbine generators begin operation).

Letter Continued

Attachment 2 - USACE JD



DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
ARIZONA-NEVADA AREA OFFICE
3636 NORTH CENTRAL AVENUE, SUITE 900
PHOENIX, ARIZONA 85012-1939

REPLY TO
ATTENTION OF:

June 8, 2012

Office of the Chief
Regulatory Division

Kimberly Suedkamp Wells, Ph.D.
BP Alternative Energy, Wind
700 Louisiana St., 33rd Floor
Houston, TX 77002

SUBJECT: Preliminary Jurisdictional Determination regarding presence/absence of geographic jurisdiction (SPL-2010-00864-WHM)

Dear Dr. Wells:

I am responding to your request dated January 2012, for a preliminary Department of the Army jurisdictional determination (JD) for the proposed Mohave County Wind Farm, located 40 miles northwest of the city of Kingman and approximately 20 miles southeast of Hoover Dam in Mohave County, Arizona

As you may know, the Corps' evaluation process for determining whether or not a Department of the Army permit is needed involves two tests. If both tests are met, then a permit is required. The first test determines whether or not the proposed project is located in a water of the United States (i.e., it is within the Corps' geographic jurisdiction). The second test determines whether or not the proposed project is a regulated activity under Section 404 of the Clean Water Act. As part of the evaluation process, pertaining to the first test only, we have made the jurisdictional determination below.

Based on available information, it appears waters of the United States may be present on the proposed Mohave County Wind Farm in the approximate locations noted on the enclosed drawings. The basis for the preliminary JD can be found on the enclosed "Preliminary Jurisdictional Determination Form." **Please sign and date one of the enclosed preliminary JD forms and return to our office at your earliest convenience.** Please note preliminary JDs are non-binding "...written indications that there may be waters of the United States, including wetlands, on a parcel or indications of the approximate location(s) of waters of the United States or wetlands on a parcel. Preliminary JDs are advisory in nature and may not be appealed." (33 C.F.R. 331.2.). The permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination for this site. The option to obtain an approved JD in this instance and at this time has been declined. For purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a preliminary JD will treat all waters and wetlands that would be affected in any way by the permitted activity on the site as if they are jurisdictional waters of the U.S.

Please be reminded that preliminary JDs may not be appealed through the Corps'

Letter Continued

administrative appeal process set out at 33 CFR Part 331. Preliminary jurisdictional determinations are fully explained in the enclosed Regulatory Guidance Letter 08-02, dated June 26, 2008. Further, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

This determination has been conducted to identify the extent of the Corps' Clean Water Act jurisdiction on the proposed Mohave County Wind Farm identified in your request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985.

If you have any questions, please contact William Miller of my staff at 602-230-6954 or via e-mail at William.H.Miller@usace.army.mil.

Please be advised that you can now comment on your experience with Regulatory Division by accessing the Corps web-based customer survey form at:
<http://per2.nwp.usace.army.mil/survey.html>.

Sincerely,



William H. Miller
Senior Project Manager, Arizona Branch
Regulatory Division

Enclosure

1. Preliminary Jurisdictional Determination Form
2. Preliminary Jurisdictional Delineation map(s)
3. Regulatory Guidance Letter 08-02



VIA ELECTRONIC MAIL

June 11, 2012

Bureau of Land Management
Renewable Energy Coordination Office
Arizona State Office
One North Central Avenue, Suite 800
Phoenix, AZ 85004-4427
KFO_WindEnergy@blm.gov

Re: Comments on DEIR for the Mojave County Wind Farm Project

Dear Environmental Coordinator Neckels:

These comments are submitted to the Bureau of Land Management (BLM) on behalf of the Center for Biological Diversity regarding the Draft Environmental Impact Statement for the Mojave County Wind Farm Project (BLM/AZ/PL-12/006).

Introduction

The development of renewable energy is a critical component of efforts to reduce greenhouse gas emissions, avoid the worst consequences of global warming, and to assist in achieving needed emission reductions. The Center strongly supports the development of renewable energy production, and the generation of electricity from wind power. However, like all projects, proposed wind power projects should be thoughtfully planned to minimize impacts to the environment. In particular, renewable energy projects should avoid impacts to sensitive species and habitat, and should be sited in proximity to the areas of electricity end-use in order to reduce the need for extensive new transmission corridors and the efficiency loss associated with extended energy transmission. Only by maintaining the highest environmental standards with regard to local impacts, and effects on species and habitat, can renewable energy production be truly sustainable.

Project Specific Comments

240 |

The proposal for a right of way to build a wind farm that stretches across over 47,000 acres of public lands managed by the BLM and the Bureau of Reclamation requires detailed identification of potential environmental impacts and careful analysis. Unfortunately, the Draft Environmental Impact Statement (DEIS) falls short of what is needed in order to analyze impacts for a project of this scale. The DEIS provides a purpose and need statement that is far too narrow and fails to analyze a range of alternatives that would avoid, minimize and mitigate

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Responses Continued

240 As described in BLM’s Instructional Memorandum 2011-059, National Environmental Policy Act (NEPA) Compliance for Utility-Scale Renewable Energy Right-of-Way Authorizations, “the purpose and need statement in a NEPA document for a renewable energy right-of-way application must describe the BLM’s purpose and need for action, not the applicant’s interests and objectives (BLM NEPA Handbook Section 6.2). The applicant’s interests and objectives, including any constraints or flexibility with respect to their proposal, help to inform the BLM’s decision and cannot be ignored in the NEPA process.”

The BLM considered other reasonable alternatives in Section 2.9, pages 2-57 through 2-60 of the Draft EIS. Consistent with the 40 CFR 1502.14, “Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant” (Question 2a, Council on Environmental Quality [CEQ], Forty Most Asked Questions Concerning CEQ’s NEPA Regulations, March 23, 1981).

The range of alternatives in Sections 2.6 and 2.9 of the Draft EIS considered the issues identified in scoping, which include avoiding land with established mineral claims, minimizing impacts on birds and bats, increasing distances from private lands, and increasing distances from areas of concern to Lake Mead National Recreation Area (NRA).

The originally proposed project site has been eliminated from detailed analysis as a result of concerns identified in scoping (see Section 2.9.1 on page 2-57 of the Draft EIS) and the current range of alternatives was established in response to scoping comments.

Letter Continued

240 | significant impacts from the proposed project. The DEIS for the proposed right-of-way
241 | application fails to provide adequate identification and analysis of the significant impacts to
242 | birds, bats, rare plants, other biological resources including wildlife movement corridors. 241
243 | cumulative and growth inducing impacts of the project, and lacks consideration of a reasonable
| range of alternatives. 242

The Center incorporates by reference herein the comments provided by the Sierra Club and other conservation groups and in addition highlights the following concerns.

- 244 | • The high numbers of golden eagle nests in the area indicate that this there is a high risk of mortality to eagles from this project. The DEIS fails to provide information regarding any risk assessment for eagle mortality and other information generally included in an Eagle Conservation Plan (ECP). This is a critical initial step and should have been taken at the beginning of the process and a draft ECP should have been provided to the public along with the DEIS. It is critical for the DEIS to include this information for full public disclosure. Moreover, the BLM needed to utilize this and other information regarding golden eagles in the project area to determine whether there are alternatives that could avoid or significantly reduce risk to eagle populations in this area. Because the alternatives were formulated without regard for avoiding or reducing significant impacts to golden eagles (and other resources) the draft EIS must be revised and recirculated.
- 245 |
- 246 | • Rare plant surveys are inadequate and did not include any fall survey. Rare plant surveys must be properly timed to be effective. The scant information in the DEIS regarding these surveys shows that they were likely inadequate to confirm presence or absence of many rare plants. Appropriate fall surveys should also have been conducted in this area which is subject to late summer rains.
- 247 | • Wildlife movement corridors are not mapped and are not adequately addressed.
- 248 | • Formulation of many important plans is deferred and the draft plans were not provided to the public. These include, but are not limited to the following: an avian and bat protection plan; eagle conservation plan (as mentioned above); Weed Management Plan; Stormwater Pollution Prevention Plan; waste management, emergency response, spill prevention plan; sedimentation and erosion control measures; reclamation plan; Site and Grading Plan, geotechnical and soils testing, and a Blasting Plan.

249 | BLM cannot move forward with in evaluating this proposed project without additional information; to do so would violate both NEPA and FLPMA. The fact that the BLM has failed to prepare and maintain an adequate inventory of public land resources in this area, and also failed to obtain needed information to adequately address the resources of this area in reviewing the site-specific proposal for a right of way project for a wind farm on over 38,000 acres (nearly 60 square miles) of public lands managed by the BLM is of great concern. Lack of current, updated inventories of public land resources undermines BLM's ability to protect and manage

Responses Continued

241 The Draft EIS used the best available data with respect to biological resources, including wildlife movement corridors, habitat connectivity, and habitat fragmentation. The baseline conditions and impact analyses were developed in consultation with BLM, Reclamation, National Park Service (NPS), U.S. Fish and Wildlife Service (USFWS), and Arizona Game and Fish Department (AGFD). The information was sufficient for the BLM, Reclamation, and Western to determine the Project's biological resources and to allow decision makers to make reasoned decisions about the Project.

NEPA requires the disclosure of relevant environmental considerations that were given a hard look by an agency, and thereby to permit informed public comment on the agency's proposed action and alternatives that could be pursued with less environmental harm. To take the required "hard look" at the impacts of a proposal, an agency must rely on information that is of "high quality" (40 CFR § 1500.1). Such information may include, for example, accurate scientific analysis, expert agency comments and comments resulting from public scrutiny. The requisite hard look does not require relevant data to be complete in all respects or to be generated if it is unavailable. Instead, a "hard look" under NEPA consists of a reasoned analysis containing quantitative or detailed qualitative information. See, BLM NEPA Handbook H-1790-1 (January 30, 2008). The data and analyses provided should be commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced (40 CFR 1502.15).

242 The Draft EIS considered past, present, and reasonably foreseeable future actions that are expected to have a cumulative impact, by resource and by alternative, in Section 4.16 starting on page 4-159 of the Draft EIS. Table 4-27 provides cumulative impact analysis area by resource, and Table 4-28 provides a list of past, present, and reasonable foreseeable future actions and projects that were considered.

Induced (secondary) impacts are discussed in Section 4.10 as indirect effects. Table 4-17 (Draft EIS page 4-95) provides both the induced employment and local income for construction and operations phases of the project. It is estimated that an additional 90 indirect jobs would be induced through the construction phase (Table 4-18, page 4-95 of the Draft EIS, and Table 4-22 of the Final EIS). However 10 jobs would be induced through the operations phase (Table 4-19 of the Draft EIS), and a reassessment for the Final EIS estimated 15 induced jobs (Table 4-23 of the Final EIS), which does not represent a growth inducing effect. Impacts would be temporary for housing during construction, and the projected workforce needed would be a small percentage of the total county population (see Section 4.10.2.3 beginning on page 4-98 of the Draft EIS).

243 BLM, Reclamation, and Western are the agencies that have decisions to make and believe the analysis is adequate and the effects are defined sufficiently. The analysis, together with the public input received, will be used to make a decision. In addition to the four alternatives analyzed in detail (five in the Final EIS with the addition of Alternative E), eight other alternatives were considered but were eliminated from detailed analysis for the reasons described in Section 2.9 of the Draft EIS and a ninth alternative considered but eliminated from detailed analysis is included in the Final EIS; this is a reasonable range of alternatives.

244 The Draft EIS used the best available data on golden eagles, which included information from published sources, expert opinion, and baseline surveys for the project. The Draft EIS includes information on golden eagle occurrences based on ground surveys conducted from 2007 to 2008 and from 2010 to 2011, as well as aerial surveys conducted in 2011. Ground surveys of raptor nests were conducted in spring 2008. Aerial surveys to assess breeding potential and population estimates were conducted in March and April 2011, with a follow-up aerial survey conducted in early 2012. A description of these surveys prior to 2012 and the results are described in Section 3.5 of the Draft EIS. Updated survey results and projected impacts are included in the Eagle Conservation Plan (ECP). The results from the ECP and 2012 surveys indicated that golden eagle use in the Project Area and its surrounding environment is low. However, the 2012 surveys found one active golden eagle nest within the Project Area. Based on the location of the active golden eagle nest, Alternative B reduces the number of turbines in areas of potential

Responses Continued

risk and increases distances to turbines relative to Alternative A and C. Alternative E excludes turbines within 1.25 mile of golden eagle nesting activities. The results of the 2012 golden eagle surveys conducted by the applicant are included in Section 3.5.2.3 and the projected impacts are included in Sections 4.5.2.7, 4.5.3.6, 4.5.4.6, and 4.5.6 as updates in the Final EIS. The draft ECP is appended to the Plan of Development and is summarized in Appendix C of the Final EIS. The Draft EIS and Final EIS disclose the limits of the data and the limits on the ability to estimate mortality impacts to golden eagles.

245 Consistent with BLM's IM 2010-156, Bald and Golden Eagle Protection Act – Golden Eagle National Environmental Policy Act and Avian Protection Plan Guidance for Renewable Energy, Section 2.9.1 of the Draft EIS describes an alternative that was considered during the alternative development process would have included some of the land being included in Alternative A, also included additional public and private land to the east (see Map 2-11 in the Draft EIS). As described on page 2-57 in Section 2.9.1 of the Draft EIS, this alternative was eliminated from detailed evaluation and analysis because of potential conflicts with existing mining claims and preliminary environmental studies that determined the potential for adverse impacts on bats and birds.

According to BLM NEPA Handbook H-1790-1 (January 30, 2008), the data and analyses in Alternatives B and C are consolidated and summarized (40 CFR 1502.15). The analysis included in Sections 4.5.3 and 4.5.4 of the Draft EIS provides a comparison between Alternatives B and C, which avoid potential golden eagle nesting habitat near Squaw Peak that is included under Alternative A. In addition, Alternative E, the Agencies' Preferred Alternative, avoids development within the areas of greatest potential effects to golden eagles.

246 All baseline surveys were coordinated through the BLM, Reclamation, USFWS, and AGFD. The special-status plant surveys for the Project were extensive, professional, consistent with agency protocol, and provide information that supports the analysis. Plant surveys were conducted in the Project Area in April and May of 2008, which considers the phenology of USFWS Endangered, Threatened, Proposed, or Candidate plant species, and BLM-sensitive plant species in response to moisture. The protocol and results of the surveys were reviewed by these agencies and were found satisfactory. The survey data were sufficient for the BLM and Reclamation to determine the Project's potential impacts to special-status plants and that avoidance, and other mitigation measures are required. This guides the agency decisions about the Mohave County Wind Farm Project.

The information in Section 3.5.3.2 in the Draft EIS presents the best available information for sensitive plant species. The draft Integrated Reclamation Plan, which is appended to the Plan of Development, describes the plant salvage plan for Arizona native plants including salvage restricted cacti and yucca species. Appendix C includes a summary of the Integrated Reclamation Plan and the mitigation measures to reduce potential impacts on vegetation.

247 Section 4.5.2.5 on page 4-40 of the Draft EIS discusses habitat connectivity and wildlife movement corridors and wildlife movement was also analyzed in Section 4.5. As stated on page 4-40 of the Draft EIS, "Impacts from disturbance and infrastructure would affect about 3 percent of the available habitats in the Project Area during the long-term, which could minimally impair wildlife movement in the long-term. No regionally important wildlife movement areas would be impacted." Also see response 241 regarding wildlife movement corridors.

248 The Draft EIS describes a number of plans that would comprise the Compliance and Monitoring Plan; these plans are now appended to the Plan of Development, which is available for review with the Final EIS. The Plan of Development appendices include the Integrated Reclamation Plan, which incorporates habitat restoration, integrated weed management, and native plant salvage; Eagle Conservation Plan/Bird Conservation Strategy (ECP/BCS); Bat Conservation Strategy; and Health, Safety, Security, and Environment (HSSE) plan (including emergency response and waste management). Appendix C, Section C.2 of this Final EIS provides a synopsis of the plans. These supplemental plans have been reviewed by appropriate agencies with jurisdictional or technical expertise or regulatory responsibilities, including but not limited to BLM, Reclamation, Western, NPS, AGFD, USFWS, and

Letter Continued

249

the resources of these public lands in a cohesive way and also undermines the ability of BLM to fully evaluate this proposal. See *Center for Biological Diversity v. Bureau of Land Management*, 422 F.Supp.2d 1115, 1166-67 (N.D. Cal. 2006) (discussing need for BLM to take into account known resources in making management decisions); *ONDA v. Rasmussen*, 451 F.Supp. 2d 1202, 1212-13 (D. Or. 2006) (finding that BLM did not take a hard look under NEPA by relying on outdated inventories and such reliance was inconsistent with BLM's statutory obligations to engage in a continuing inventory under FLPMA).

250

In order to comply with NEPA, an EIS must identify and analyze the direct, indirect, and cumulative effects of the proposed action. This requires more than "general statements about possible effects and some risk" or simply conclusory statements regarding the impacts of a project. *Klamath Siskiyou Wildlands Center v. BLM*, 387 F.3d 989, 995 (9th Cir. 2004) (citation omitted); *Oregon Natural Resources Council v. BLM*, 470 F.3d 818, 822-23 (9th Cir. 2006). Conclusory statements alone "do not equip a decisionmaker to make an informed decision about alternative courses of action or a court to review the Secretary's reasoning." *NRDC v. Hodel*, 865 F.2d 288, 298 (D.C. Cir. 1988).

251

NEPA also requires BLM to ensure the scientific integrity and accuracy of the information used in its decision-making. 40 CFR § 1502.24. The regulations specify that the agency "must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential." 40 C.F.R. § 1500.1(b) (emphasis added). Where there is incomplete information that is relevant to the reasonably foreseeable impacts of a project and essential for a reasoned choice among alternatives, the BLM must obtain that information unless the costs of doing so would be exorbitant or the means of obtaining the information are unknown. 40 C.F.R. § 1502.22. Here the costs to obtain information needed to complete the analysis are likely to be reasonable given the scope and extent of the project. Therefore, the BLM must ensure that the additional needed information is obtained and provide additional information and analysis in a revised or supplemental EIS. Even in those instances where complete data is unavailable, the EIS also must contain an analysis of the worst-case scenario resulting from the proposed project which was not provided here. *Friends of Endangered Species v. Jantzen*, 760 F.3d 976, 988 (9th Cir. 1985) (NEPA requires a worst case analysis when information relevant to impacts is essential and not known and the costs of obtaining the information are exorbitant or the means of obtaining it are not known) citing *Save our Ecosystems v. Clark*, 747 F.2d 1240, 1243 (9th Cir. 1984); 40 C.F.R. § 1502.22.

252

FLPMA requires BLM to "take any action necessary to prevent unnecessary or undue degradation of the lands" and "minimize adverse impacts on the natural, environmental, scientific, cultural, and other resources and values (including fish and wildlife habitat) of the public lands involved." 43 U.S.C. §§ 1732(b), 1732(d)(2)(a). Without adequate information and analysis of the current status of the resources of these public lands, BLM cannot fulfill its duty to prevent unnecessary or undue degradation of the public lands and resources. Thus, the failure to provide an adequate current inventory of resources that may be affected by the project and environmental review undermines BLM's ability to protect and manage these lands in accordance with the statutory directive.

Responses Continued

Mohave County. Plans that would be completed during final design, such as the Site and Grading Plan (which would incorporate flagging plans and construction drawings) and a Blasting Plan (if warranted) also would be reviewed by appropriate agencies with jurisdictional or technical expertise or regulatory responsibilities.

249 The baseline data provided in the Draft and Final EIS are sufficient to support the environmental impact analysis. The BLM has a baseline inventory of information for the Project Area that was prepared during the development of the EIS and is updated on an ongoing basis as part of BLM's Kingman Field Office management practices. Using these baseline inventories, the BLM is able to protect and manage the public lands within the Project Area consistent with the Kingman Field Office Resource Management Plan. The Kingman Resource Area (now Field Office) RMP was completed in 1993. Conditions in the Project Area have not been significantly modified since that time; while developments have been proposed on nearby private land, none that would influence the inventory have yet been developed.

250 The BLM has presented sufficient information and analysis to reach informed decisions concerning the direct, indirect, and cumulative effects of the proposed action. This information and analysis is detailed in Chapter 4 of the Draft EIS and Final EIS, in the discussion of impacts to each resource.

251 NEPA requires that the agency prepare an EIS for "major federal action significantly affecting the quality of the human environment" 42 U.S.C. Sec. 4332(c). The EIS is "a procedural obligation designed to assure that agencies give proper consideration to the environmental consequences of their actions." To take a hard look at the impacts of a proposal, an agency must rely on information that is of "high quality" (40 CFR § 1500.1). Such information may include, for example, accurate scientific analysis, expert agency comments, and comments resulting from public scrutiny. See response 241 regarding the "hard look."

The Draft EIS and Final EIS rely on quantitative data where possible, and detailed qualitative data under other circumstances. The BLM may rely on the best available information (even if it is not all the information that could be generated with unlimited time and funding about a resource or type of impact) provided that it is sufficient to allow a reasoned analysis of particular impacts. The BLM need not necessarily postpone its consideration of a proposal while additional data are being developed which could lead to significant regulatory delays. Data and other information relied upon in preparing the Final EIS are identified in the individual sections as well as in the References section.

Data were collected to address the issues identified in scoping. For several resources, detailed data were collected for turbine corridors (a larger potential impact area than the area that would actually be disturbed) to allow for flexibility in determining precise turbine locations during final design rather than in the planning stage. New survey data have been collected since the release of the Draft EIS and have been added to the Final EIS; examples include the incorporation of final desert tortoise Category III habitat data and 2012 golden eagle survey data.

252 See response 250 regarding the adequacy of the data used in the analysis.

Letter Continued

253 [BLM has failed to properly identify and analyze impacts to the resources including the impacts to golden eagles and other avian species. The BLM's failure in this regard violates the most basic requirements of NEPA and in addition undermines the BLM's ability to ensure that the proposal does not cause unnecessary and undue degradation of public lands. *See Island Mountain Protectors*, 144 IBLA 168, 202 (1998) (holding that "[t]o the extent BLM failed to meet its obligations under NEPA, it also failed to protect public lands from unnecessary or undue degradation."); *National Wildlife Federation*, 140 IBLA 85, 101 (1997) (holding that "BLM violated FLPMA, because it failed to engage in any reasoned or informed decisionmaking process" or show that it had "balanced competing resource values").

254 [Because the DEIS is substantively inadequate, the BLM must prepare a supplemental or revised draft EIS and recirculate that document for public review and comment.] Please add the Center contact (at the address below) to the mailing list for any notices or other documents associated with this project. We look forward to reviewing a supplemental or revised EIS in the future.



Lisa T. Belenky, Senior Attorney
Center for Biological Diversity
351 California St., Suite 600
San Francisco, CA 94104
(415) 632-5307
Fax: (415) 436-9683
lbelenky@biologicaldiversity.org

Responses Continued

253 Consistent with Section 6.8.1.2 of the BLM's NEPA Handbook H-1790-1, the Draft EIS for the Mohave County Wind Farm Project was specifically developed to identify and analyze impacts to the resources including potential impacts to golden eagles and other avian species. Additional information and the incorporation of data from additional studies are addressed through text modification in their respective sections in the Final EIS. Please refer to response 244 regarding the analysis of golden eagles and the additional data incorporated into the Final EIS.

A balanced approach consistent with the Federal Land Policy Management Act's (FLPMA) principles of "multiple use" was a key component of the analysis. BLM, Reclamation, Western, and the other cooperating agencies have evaluated all impacts to wildlife and special status species and these impacts have been summarized, evaluated, and considered in the Draft and Final EIS. Further, BLM and Reclamation are evaluating the right-of-way (ROW) application in accordance with FLPMA and the Mohave County General Plan as amended in 2012. The BLM and Reclamation will identify necessary and appropriate terms and conditions in the Record of Decision (ROD) and in any ROW granted.

254 In accordance with 40 CFR § 1502.9(c)(1), BLM is required to prepare a Supplemental EIS if "[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impact." A supplemental EIS is appropriate where new information will cause the proposed action to have a significant impact on the environment in a manner not previously evaluated and considered. Though there is new information regarding species, which has been added in Sections 3.5, 4.5 and 4.16 of the Final EIS, the Draft EIS analysis remains valid because the new information does not substantially change the analysis of the proposed action.

LETTER

From: Nikki Garelo [REDACTED]
Sent: Wednesday, June 13, 2012 8:44 AM
To: BLM_AZ_KFO_Wind_Energy
Subject: Mohave County Wind Farm Project

Good Morning.

255 | My name is David Garelo with Johnson Wind Tower. I am inquiring about the stage of the Mahove Project and to ask for any milestone dates if available.
My firm fabricates the large steel towers for the turbine manufactures and we would much appreciate the opportunity to quote our towers to who ever you select in this regard. Can you help me with this information?

I sure would appreciate any information. [REDACTED]

Thanking you in advance
Dave Garelo
V/P Sales
Johnson Wind Tower

www.towermaker.com

From: BLM_AZ_KFO_Wind_Energy
Sent: Wednesday, June 13, 2012 8:47 AM
To: Nikki Garelo
Cc: Neckels, Jacqueline D
Subject: RE: Mohave County Wind Farm Project

Dave,

Thank you for your inquiry. Although the BLM is not involved in the development process we will forward your inquiry to the proponent, BP Wind Energy.

Thank You,

Eddie Arreola, Supervisory Project Manager, BLM Arizona
One North Central Avenue, Suite 800, Phoenix, AZ 85004
602-417-9505 O, 602-417-9454 fax, earreola@blm.gov

Responses Continued

255 Eddie Arreola, Supervisory Project Manager for the Arizona BLM Renewable Energy Coordination Office, responded to the comment on June 13, 2012, with the following information: Thank you for your inquiry. Although the BLM is not involved in the development process we will forward your inquiry to the proponent, BP Wind Energy.

THE MARDIAN RANCH

May 29, 2012

Mohave County Development Services Department
Attention: Planning Division
3250 East Kino Avenue
P.O. Box, 7000
Kingman, AZ 86402-7000

RECEIVED
BLM AZ STATE OFFICE
PHOENIX, ARIZONA
2012 JUN -4 PM 2:13

RE: BP Wind Energy Project

Dear Staff, Commissioners, and Supervisors;

Please be advised that the Mardian Ranch and the Ranch at White Hills are **adamantly OPPOSED** to the BP Wind project location as shown in this application. In addition, a project of this size, magnitude, and with the numerous and varied impacts it brings to this entire region, couldn't ever, and should never be considered a Minor General Plan Amendment. The application states there are 46,976.98 acres included in this project, which is **THE LARGEST** general plan amendment and/or rezone application ever processed at one time in this County. Processing this as a Minor General Plan Amendment makes a mockery of the County's planning mandates and fails to insure the public is adequately considered. This was never the intention of the ordinances and is not acceptable.

At a minimum, it is a fact that this project has a **SIGNIFICANT IMPACT** to this region in numerous facets including; aesthetics, Scenic Corridor Views, proximity to existing residential communities and individual residences, (both existing and planned), environmental considerations including access and transportation networks, National Park impacts, etc. and in no way complies with the intent of the Minor General Plan process. In addition, the Growing Smart planning objectives are not addressed in a Minor General Plan amendment process for this monster size project. This project should only be processed and considered as a **MAJOR GENERAL PLAN AMENDMENT**.

Further, to process and consider a rezone application for wind turbines, encompassing almost 47,000 acres of property, some of which directly abuts residential lots, as well as directly abutting planned, residential communities is reckless, at best. The impacts to the National Park system to the north, the access and scenic transportation corridors to the west, the residential communities, existing homes, and development plans to the east and south, and the grazing allotment considerations would all be sacrificed without regard, should this project be considered as a Minor General Plan Amendment and standard rezone application project. This is absolutely unheard of, and is not acceptable at all.

The staff at The Mardian Ranch have followed this project for several years and have opposed it, and had, in fact, been in discussions with BP and the BLM concerning numerous BP Wind boundary locations and reconfigured project access points, viewed numerous wind proximity maps in relation to the Ranch at White Hills and The Mardian Ranch Area Plan

Letter Continued

documents, etc. The Mardian Ranch's stated goal was always to provide a buffer area for the residential areas which BP Wind did not own. It is clear that during the construction of this enormous project, the ranching operations at the Mardian Ranch will be impacted as well.

It is disturbing to know that BP Wind has shown no regard for the White Hills / Temple Bar area property Owners, of which there are hundreds in addition to us, by locating their proposed turbines along existing and planned residential areas, shown no regard for the general public in locating the turbines directly adjacent to the National park boundaries, and has failed to protect this area of the County in any fashion with this over-reaching plan of development. With a project area which broaches 50,000 acres, and includes our existing actively managed grazing allotment, there is no need or desire for turbines to be placed adjacent to these planned and existing development areas, and we are in direct opposition to the approval of these applications. It is shameful that as a result of 5 years of planning on behalf of BP Wind, that this total disregard for everyone else in the region, is the culmination of their efforts.

You are aware that the Mardian Ranch supports good development, as they have obviously processed numerous and significant project applications through the County, State, and Federal Agencies, as required for our developments. The combined Mardian Ranch and The Ranch at White Hills projects have spent in excess of \$25 Million Dollars in master planning, engineering, architecture, designing, water studies, wells and development process. These projects support the development of energy projects. Over 8400 acres of renewable energy development property have been specifically identified as a part of The Mardian Ranch Area Plan approvals and we continue to pursue viable energy development within our property boundaries. But the Mardian Ranch does so **not** at the risk, sacrifice or disregard to every other property owner in the region, as BP Wind has proposed.

256

The Mardian Ranch and The Ranch at White Hills respectfully request you ~~deny~~ these two applications and require the applicant to process these requests as a Major General Plan Amendment (which you required of us). The conjoined rezone application for this development should reflect a staged and/or phased approval after the major general plan process approval, and NEVER a single rezone approval for 47,000 acres of land in one process, which is ludicrous. Although the Mardian Ranch opposes this project because of its enormous scope, and negative impacts on the planned residential in this area, at a minimum, the modified applications should reflect a very large buffer area adjacent to all privately owned lands which abut this project, including the approved Area Plan properties within The Mardian Ranch at The Ranch at White Hills Area Plan, among others. We would appreciate your allowing us to have input on this issue.

Thank you for your time and consideration in this matter. Please feel free to contact us directly at 702-499-1010 if you have any questions or comments to our opposition.

Respectfully submitted,



Leonard Mardian
The Mardian Ranch

Responses Continued

256 Mohave County's General Plan Amendment process is beyond BLM's authority, but the objection to the application is noted. Alternatives B and C both increase the setback distance of the proposed wind farm from private property compared to the proposal identified by BP Wind Energy (Alternative A). Alternative C offers a greater setback distance from private property than Alternative B.



ZANDER ENVIRONMENTAL LLC

**905 Delaware Drive
Buffalo, Wyoming 82834
Phone: 307-217-2945
rzander01@optimum.net**



RECEIVED
BLM AZ STATE OFFICE
2012 MAY 24 PM 1:59
PHOENIX, ARIZONA

Ms. Jackie Neckels
Bureau of Land Management
Renewable Energy Coordination Office
One North Central Ave. Suite 800
Phoenix, AZ 85004-4427

Subject: Lessened Disturbance-BP Wind Farm-White Hills Area

Dear Jackie,

257

I have reviewed the subject EIS and noted that the BLM will impose Best Management Practices (BMP) as part of the Record of Decision. I noted that the proposed installation of the electrical collection system proposes the use of trenching equipment as a BMP. There is another BMP, which the BLM endorses, which should be considered, i.e., the use of a plow to do the installation.

I represent a company called SpiderPlow Services Inc. (SSI) which specializes in minimal disturbance of buried utility installation. SpiderPlow Services can install buried power cable, plastic pipe, steel pipe, various types of flexible composite pipe and fiber optics with minimal surface disturbance.

SSI can provide faster installation and greatly reduced surface disturbance which lessens time in the field. SSI can handle multiple runs in one pass with the plow. SpiderPlow Services can provide whatever lay pattern collector system specifications call for. SSI can provide bedding of the utility if required.

SpiderPlow Services use a rubber tired plow and a rubber tracked winch vehicle to plow in the cable. Typical daily production for electrical cable at three or four feet of cover is 10 to 12,000 feet per day depending on the situation. The complexities of a project such as a wind farm will affect this production.

Responses Continued

257 Plowing in the electrical collector lines would be considered if it is determined to be feasible based on the geotechnical conditions. Environmental effects of plowing would generally be reduced compared to those associated with trenching.



Rubber tired plow laying a 3 phase line and associated cabling.



Rubber tracked winch unit at the Chevron Casper Wyoming wind farm.

RECEIVED
BLM AZ STATE OFFICE
2012 MAY 24 PM 1:59
PHOENIX, ARIZONA

An example of work SpiderPlow Services can provide is found at the recently completed cable installation for the Spring Valley Wind Farm located on BLM lands administered by the Ely NV Field Office. In this situation, the collection system was installed in and along the road bed where traffic was continually present. With no trenching spoil pile and no trench compaction issues, traffic flow interruption was never an issue.

No clearing of top soil, vegetation removal or blading of ROWs have to occur operations. With greatly reduced disturbance the soil profile is not adversely impacted by

Letter Continued

the plow as occurs with trenching. Reclamation and weed control issues are much reduced as top soil, plants, humus and seed sources are still in place. All of these capabilities meet BLM Best Management Practices requirements. You can find additional information on the company and the plow at: www.spiderplow.com.



Minimal disturbance of soils.

Thank you for your time.

Sincerely,

Richard A Zander
Principal
Zander Environmental LLC

Representing:

SpiderPlow Services, Inc.
richardzander@spiderplow.com

RECEIVED
BLM AZ STATE OFFICE
PHOENIX, ARIZONA
2012 MAY 24 PM 1:59

Letter

From: Elno Roundy [REDACTED]
Sent: Friday, May 25, 2012 4:48 PM
To: Neckels, Jacqueline D
Subject: RE: Mohave County Wind Farm Project

Jackie,

258 [Can you tell me if the towers would be fenced and if the delivery of the electricity from each tower would be by overhead line or underground? Table 2-2 talks about up to 120 miles of collector lines but doesn't whether they are above or underground.

Thanks,

Elno Roundy
[REDACTED]

The Desert Blooms:
Mariposa Lily
Calochortus Kennedyi



From: Neckels, Jacqueline D [<mailto:jneckels@blm.gov>]
Sent: 2012-05-24 09:41

2

To: [REDACTED]
Subject: RE: Mohave County Wind Farm Project

Elno,

At this time there are no plans to fence each tower. The collector lines running between each tower within the turbine string would be buried, however there may be a need for combination of below ground and above ground collector lines so both are being analyzed. See page 2-39 and 2-40 of the DEIS. Thanks..jn

Jackie Neckels
Environmental Coordinator
Renewable Energy Coordination Office
BLM Arizona State Office
One North Central Ave., Suite 800
Phoenix, AZ 85004-4427
602.417.9262
jneckels@blm.gov

"Have the courage of patience and the strength of persistence." Dad

Responses Continued

258 At this time, there are no plans to fence each turbine.

The collector lines within the turbine corridors would be buried; however, there may be a need for a combination of below ground and aboveground collector lines where the turbine corridors are linked to the substations. For these connections Option 1 would bury all collector lines and Option 2 would have the collector lines partly above ground and partly below ground; both options are analyzed. These options are described under the Collector Line subheading in Section 2.6.1 on page 2-40 of the Draft EIS.



Mohave County Wind Farm Project



DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS) COMMENT FORM

Bureau of Land Management, Kingman Field Office / Arizona

As part of the 45-day public comment period the Bureau of Land Management (BLM) is holding public meetings to present an overview of the Draft Environmental Impact Statement (EIS) analysis. Please take a few minutes to answer the questions below and return this sheet to the sign-in table or to the address printed on the reverse side. Comments would be most helpful if received on or before the 45-day public comment period closing date of June 11, 2012.

Please provide your current mailing address and/or any additional names and addresses you think should be included on our mailing list.

Meeting Location: Hual. Cultural

Your Name: _____ Name: _____

Address: _____ Address: _____

City/State/Zip: _____ City/State/Zip: _____

Please check all that apply:

- Add my name to the mailing list for this project
- Withhold my name/address to extent allowed by law (only for persons not representing organizations)*

* All comments received by BLM become part of the public record associated with this proposed project. Accordingly, your comments (including name and address) will be available for review by any person who wishes to review the public record. At your request, we will withhold your name and address to the extent allowed by the Freedom of Information Act or any other law. However, all submissions from organizations or businesses, and individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

1. Please provide comments on the Draft EIS and/or project characteristics (i.e., project area, turbine color, transmission interconnection, etc.).

To make your comments most effective, please:

- Identify specific information that should be considered during the EIS process
- Offer a specific idea of how to address a particular concern
- Provide specific information about how a particular element of the project would affect you
- Speak to a project team member if you have any questions on project information
- Write clearly and legibly so that we can accurately record your comments

Remember: Every comment counts and any comment can make a difference.

259

The project for me as an Individual
and also a member of the Hual. Tribe.
I really am or have no interest of this
project, due to the site being chosen.

Responses Continued

259 A standardized content analysis process was conducted to analyze the public comments on the Draft EIS. Each comment letter and email message received was read, analyzed, and considered by BLM, Reclamation, and Western to ensure that all substantive comments were identified. This comment was reviewed by BLM, and Reclamation, and Western; the agencies have determined that no response is required. Your participation in the public review process is appreciated and your input will be considered by the agencies in the decision-making process.



Mohave County Wind Farm Project



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Bureau of Land Management, Kingman Field Office / Arizona

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Please provide your current mailing address and/or any additional names and addresses you think should be included on our mailing list.

Meeting Location: White Hills
Your Name: DAN BASTIAN Name: DEBBIE BASTIAN

Please check all that apply:

- Add my name to the mailing list for this project
- Withhold my name/address to extent allowed by law (only for persons not representing organizations)*

*All comments received by BLM become part of the public record associated with this proposed project. Accordingly, your comments (including name and address) will be available for review by any person who wishes to review the public record. At your request, we will withhold your name and address to the extent allowed by the Freedom of Information Act or any other law. However, all submissions from organizations or businesses, and individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

1. Please provide comments on the Draft EIS and/or project characteristics (i.e., project area, turbine color, transmission interconnection, etc.).

260 [

White Should Be The color.

261 |

There ARE MANY wild life in this area. I would love to work with the BLM to be one of the people who would be in charge of these wild life. Bob cat mountain lion, Deer, Rabbits, snakes, wild horses, badger, and more. [I also think that there should be security for this site during construction. There are so many people who ride quads and people coming up here all the time. I believe without security there will be alot of theft.] I would do this as well if there is a job for this.

To make your comments most effective, please:

- Identify specific information that should be considered during the EIS process
- Offer a specific idea of how to address a particular concern
- Provide specific information about how a particular element of the project would affect you
- Speak to a project team member if you have any questions on project information
- Write clearly and legibly so that we can accurately record your comments

Remember: Every comment counts and any comment can make a difference.

Responses Continued

260 A standardized content analysis process was conducted to analyze the public comments on the Draft EIS. Each comment letter and email message received was read, analyzed, and considered by BLM, Reclamation, and Western to ensure that all substantive comments were identified. This comment was reviewed by BLM, and Reclamation, and Western; the agencies have determined that no response is required. Your participation in the public review process is appreciated and your input will be considered by the agencies in the decision-making process.

261 Site security would be the responsibility of BP Wind Energy as described on page 2-33 in Section 2.5.2.12 of the Draft EIS and in the Plan of Development. Site security would include temporary and permanent fences and security guard patrol in the construction phase during non-construction hours.

Letter Continued

June 11, 2012

Mohave County Wind Farm
Renewable Energy Coordination Office
Attn: Jackie Neckels
One North Central Avenue, Suite 800
Phoenix, AZ 85004-4427

Re: Mohave County Wind Farm
Comments on the DEIS

My comments regarding the proposed project are presented in this letter.

My husband and I own land at White Hills, which is nearby the proposed project. We purchased the property in 2005, and did not receive any information about the proposed wind farm. Had we known, we most certainly WOULD NOT have purchased the property. The area is currently beautiful desert. It should not be converted to a heavy industrial zone by 500-foot tall wind turbines.

262 [The property has already lost value due to the downturn in the national economy, and now, if the project is built, will never be worth anything. I have researched wind farms extensively, and property values in the vicinity typically decline as much as 40 percent. Oftentimes, it is impossible to sell property near wind farms. [Will BP Wind Energy North America agree to purchase at pre-project valuations the real estate where their project has destroyed the value? This is the only “mitigation” that can be acceptable to property owners in the vicinity of the project.

263 [Furthermore, [studies have shown that under certain atmospheric conditions, wind turbines can be heard for nine miles. This means many homeowners will be negatively impacted due to loss of sleep and stress resulting from the infra-sound created by the turbines. Will BP Wind mitigate by turning the turbines off at night?

264 [The number and size of the turbines will totally destroy the view shed, thus further contributing to property devaluation. [It will also negatively impact the rural nature of the area. There is no way to ever
265 [mitigate for the loss of the view, both for people who live in the area and for those tourists who choose to recreate in the nearby mountains and at the Lake Mead National Recreation Area (LMNRA).

266 [The turbines will be visible from many parts of the LMNRA, and even from Gold Butte in Nevada. Gold Butte has been nominated for National Conservation Area status. Part of the experience of visiting LMNRA and Gold Butte is the undeveloped aspect. This area should not be industrialized for the benefit of BP Wind.

267 [The LMNRA is home to both golden and bald eagles. Raptors and turbines do not mix. One needs only check the history of turbines killing many raptors every year at both Livermore and Tehachapi, California. Wind farms should not be built in the prime habitat of raptors.

Responses Continued

262 Currently there are no plans from BP Wind Energy to purchase private property in connection to the Project. Based on comments received from the initial scoping meetings in December 2009, the Wind Farm Site was relocated to eliminate private land from consideration for the wind farm (Section 5.1.1).

On page 4-122 of the Draft EIS, Section 4.12.2.2 notes that many residential areas (although not all) would be shielded from views of the Wind Farm Site by topography and vegetation. Section 4.10.2.3, sub-section *Visual Impacts and Property Value Effects* on page 4-100 of the Draft EIS states that “numerous economic studies have analyzed the effect of wind farm development on private property values, and most have found that there is no statistical relationship between property values and proximity to wind farms. For example, a 2009 review of data on 7,500 sales of single-family homes located within 10 miles of 24 existing wind facilities in 9 US states found that there is no consistent, statistically significant effect on home sale prices with a view of wind facilities or proximity to wind facilities (Lawrence Berkeley National Laboratory 2009).”

Property owner concerns and values, as expressed through public comments, will be considered in the decision-making process.

263 Without commenting on the validity or applicability of those studies to this Project, it is believed that only an extremely rare—perhaps impossible—combination of meteorological, geographic, and listener conditions would allow the Mohave County Wind Farm turbines to be heard at a distance of 9 miles. As for the possibility of loss of sleep, Maps 4-2 through 4-7 show where predicted Project operation is expected to be less than 45 dBA Leq immediately outside of bedrooms—a threshold consistent with World Health Organization (WHO) guidelines particularly with respect to potential sleep disturbance. As the nearest residence is 1.2 miles from the closest wind turbine under Alternative A and 1.9 miles from the nearest wind turbine under Alternatives B and C, and beyond the 45 dBA Leq contour, the need for this kind of mitigation (i.e., turning off turbines) is not apparent.

264 See response 262 regarding viewshed effects and valuation effects on private property.

265 Visual resources in the Project Area are managed by BLM as Visual Resource Management (VRM) Class IV, which allows major modification of the existing character of the landscape (as described in Section 3.12.3 of the Draft EIS). The level of change to the characteristic landscape can be high. However, the following Best Management Practices (BMPs) would be applied under all alternatives to reduce visual impacts from Project components (Refer to Appendix B):

- The public shall be involved and informed about the visual site design elements of the proposed wind energy facilities. Possible approaches include conducting public forums for disseminating information, offering organized tours of operating wind developments, and using computer simulation and visualization techniques in public presentations.
- Turbine arrays and turbine design shall be integrated with the surrounding landscape. Design elements to be addressed include visual uniformity, use of tubular towers, proportion and color of turbines, non-reflective paints, and prohibition of commercial messages on turbines.
- Other site design elements shall be integrated with the surrounding landscape. Elements to address include minimizing the profile of the ancillary structures, burial of cables, prohibition of commercial symbols, and lighting. Regarding lighting, efforts shall be made to minimize the need for and amount of lighting on ancillary structures.
- Operators shall reduce visual impacts during construction by minimizing areas of surface disturbance, controlling erosion, using dust suppression techniques, and restoring exposed soils as closely as possible to their original contour and vegetation.

See Table 4-27 (Assumptions column) of the Final EIS for a list of mitigation measures that would be applied to reduce visual impacts during construction.

The Mohave County General Plan currently designates the Project Area as a Rural Development Area. This designation includes both BLM-administered and Reclamation-administered lands. The Rural Development Area designation is compatible with BLM planning and development policies (refer to

Responses Continued

Draft EIS Section 3.8.4.1). Section 3.8.2.1 of the Final EIS has been revised to incorporate the 2012 Mohave County General Plan amendment. “The Mohave County General Plan was originally adopted in 1965 and was reassessed and revised in 1995, 2005, and 2010. The Mohave County Board of Supervisors approved an amendment to the Mohave County General Plan on August 6, 2012, changing the land use designation of the Project Area from Rural Development Area (RDA) to Rural Development Area, Alternative Energy (RDA, AE). The Project Area was rezoned from A-R/36A (Agricultural Residential/thirty-six acre minimum lot size) to an E-W (Energy Overlay-Wind) zone so that the wind farm site would be in conformance with the county plan.”

The changing the land use designation from RDA to RDA-AE and zoning the area as an Energy Overlay Zone would not alter the rural nature of the area.

A detailed analysis from two Key Observation Points within Lake Mead NRA as well as the visual effects for recreationist traveling on Temple Bar Road to Lake Mead is included in Section 4.12 in the Draft EIS.

266 The proposed project is found to be within conformance with the VRM Class IV management objective, as designated within the BLM Kingman Field Office Resource Management Plan.

The analysis considered common and/or the sensitive viewing areas in the Project viewshed that were within the 20-mile analysis area. Gold Butte is approximately 5 miles beyond the 20-mile radius and 10 miles beyond the end of the BLM Background Zone.

Based on the viewshed out to the 20-mile radius and the topography between Gold Butte (elevation 5,052 feet above sea level) and the Project Area, views from the peak to the turbines would probably be blocked by Bonelli Peak (elevation 5,331 feet above sea level).

For clarification Section 3.12.1 in the Final EIS was revised to state, “According to BLM distance zones, distances greater than approximately 15 miles are considered ‘seldom seen’; however, a 20-mile analysis radius was used because of the large acreage of the Project and the nearly 500-foot high turbines with rotating blades.”

267 Consistent with BLM’s Instruction Memorandum No. 2010-156, Bald and Golden Eagle Protection Act – Golden Eagle National Environmental Policy Act and Avian Protection Plan Guidance for Renewable Energy, and the Migratory Bird Treaty Act (MBTA), BP Wind Energy is required by BLM to have an Eagle Conservation Plan/Bird Conservation Strategy (ECP/BCS) accepted by the U.S. Fish and Wildlife Service (USFWS) prior to signing the Record of Decision (ROD) to demonstrate Bald and Golden Eagle Protection Act (BGEPA) and MBTA compliance for NEPA.

The Draft EIS used the best available data on golden eagles and other raptors, which included information from published sources, expert opinion, and baseline surveys for the Project. The Draft EIS includes information on golden eagle occurrences based on ground surveys conducted from 2007 to 2008 and from 2010 to 2011, as well as aerial surveys conducted in 2011. Ground surveys of raptor nests were conducted in spring 2008. Aerial surveys to assess breeding potential and population estimates of golden eagles were conducted in March and April 2011, with a follow-up aerial survey conducted in early 2012. A description of these surveys prior to 2012 and the results are described in Section 3.5.3.3 of the Draft EIS. Updated survey results and projected impacts are included in the draft ECP, which is appended to the Plan of Development, and in the Final EIS.

The results from the ECP and 2012 surveys indicated that golden eagle use in the Project Area and its surrounding environment is low, and the projected impacts are comparable to impacts already described in the Draft and Final EIS in Sections 4.5.2.4, 4.5.2.5 and 4.5.2.6. The 2012 surveys found one active golden eagle nest within the Project Area. The location of this nest increases the potential for disturbance to nesting eagles under Alternative A. Based on these findings; Alternative B would minimize the disturbance impact to nesting eagles relative to Alternative A. Alternative E, the Agencies’ Preferred Alternative, avoids development within the areas of greatest potential effects to golden eagles.

Letter Continued

268 [The California Condor has been reintroduced to an area not far from the wind turbines, at Vermillion Cliffs. These magnificent birds have a huge range, and have been seen at Gold Butte. This is less than 30 miles from the proposed project site. What mitigation measures will be taken to ensure that no condors are killed by the wind farm?

269 [In other areas of the country, bat populations have been decimated by wind turbines. What mitigation measures will be taken to prevent this from happening? Will the turbines be turned off from dusk to dawn? Bats are an integral part of the environment. It is environmentally irresponsible to build turbines near bat habitat.

270 [The “need” for this project in this location has not been established. An arbitrarily mandated Renewable Energy Standard does not constitute a “need”. If the mandate is legislated away, the need disappears. Locating an industrial wind project in this location is environmentally irresponsible.

271 [The project data presented on P. ES-30 and ES-31 is interesting. The range of workers is shown as from 90 to 275, a difference of three times; the number of estimated trips to the site is shown to range from 28,231 to 68,228, a difference of 40,000. Is this BP Wind’s first project? Why cannot they estimate more closely the numbers of employees and roundtrips?

How “green” can a project be that requires as many as 68,228 roundtrips?

272 [Yet, it is stated with confidence in hard numbers what the tax revenues and payroll will be! How can these be given as “hard” numbers when the estimated employee numbers and round trip numbers vary so greatly? Perhaps the data should be recalculated, and a supplemental DEIS issued.

273 [Also [the project is described as generating “up to 500 MW”. Unfortunately, experience has shown, world wide, that the average amount of electricity produced by wind turbines is between 20 and 30 percent of the name plate rating. This project destroys far too much public lands for the generation of a minimal amount of expensive, intermittent electricity.

274 [In conclusion [the “No action alternative” should be the only choice for this project.

Sincerely,

Judy Bundorf



Emailed to KFO_WindEnergy@blm.gov

Responses Continued

268 Coordination with the USFWS and the Peregrine Fund indicate that the California condors released in Arizona are not utilizing the Project Area or its surrounding environment. Instead, the area used by California condors seems to be expanding to the north and east of the Vermillion Cliffs region. No mitigation measures for California condors are anticipated at this time.

269 As described in Section 4.5.6 on pages 4-61 through 4-63 of the Draft EIS mitigation measures for wildlife include the following:

- Operators shall evaluate avian and bat use of the project area and design the project to minimize the potential for bird and bat strikes (e.g., development shall not occur in riparian habitats and wetlands). Scientifically rigorous avian and bat use surveys shall be conducted; the amount and extent of ecological baseline data required shall be determined on a project basis.
- Operators shall determine the presence of bat colonies and avoid placing turbines near known bat hibernation, breeding, and maternity/nursery colonies; in known migration corridors; or in known flight paths between colonies and feeding areas.
- Procedures shall be developed to avoid or lessen potential impacts on special status species. Such measures could include avoidance, relocation of project facilities or lay-down areas, and/or relocation of biota.
- Avoid or minimize impacts on sensitive wildlife and their habitat during Project planning.
- Avoid night-lighting for facilities other than mandatory lighting on turbines to minimize attracting nocturnal migrant birds.

BP Wind Energy has developed a draft Bat Conservation Strategy that includes post-construction mortality monitoring for 2 years initially and at 5-year intervals for the life of the Project. The results of the post-construction mortality monitoring will feed into an adaptive management strategy which incorporates feathering (i.e., adjusting the blades to not catch the wind) as a method to reduce fatalities. Further mitigation measures may be employed by the BLM, Reclamation, USFWS, and Arizona Game and Fish Department (AGFD) based on post-construction mortality monitoring and an adaptive management strategy to address actual impacts and to ensure the correct level of mitigation. Appendix C contains a summary of the Bat Conservation Strategy and the mitigation measures; the complete draft document is appended to the Plan of Development.

270 Section 1.3 on page 1-7 of the Draft EIS describes that the overall purpose of the proposed action is to respond to BP Wind Energy's proposal to use Federal lands. BLM does not dictate the location where a development is proposed; in this case, the location was selected, in part, by proprietary information gathered by BP Wind Energy on the availability of a marketable wind resource. Other locations had been considered and dismissed are described in Section 2.9, starting on page 2-57 of the Draft EIS.

The Mohave County Wind Farm Project was prepared in accordance with NEPA and is consistent with Best Management Practices (BMPs) for wind energy projects (see Draft EIS Appendix B). No federally protected threatened or endangered species are known to occur within the Project Site. Few cultural resources were identified through Class III surveys and efforts would be made to avoid and/or mitigate for sites that may be affected. The Project was found to be in conformance with the Kingman Field Office Resource Management Plan (RMP) (see Draft EIS Appendix A). The Project also is within the parameters of BLM's multiple-use mandate under the Federal Land Policy Management Act (FLPMA).

271 Pages ES-30 and ES-31 of Table ES-5 (Comparison of Resource-Specific Impacts) in the Draft EIS provides a summary of impacts associated with Transportation and Access. Though the range of trips varies from 28,481 (lower bound estimate) to 68,728 (upper bound estimate), the expected number of round trips is 47,930. The Final EIS estimated the number of round trips to be between 55,930 to 80,930. Table ES-5 has been revised to include this expected number of vehicle trips. Section 2.5.2.12, Traffic, and Appendix C (Transportation and Traffic Plan, Section C.2.12.8) provide additional information and the assumptions used in calculating these estimates. As described in Appendix C, the largest contribution

Responses Continued

to vehicle trips is the daily commute of workers to and from the site during construction. The potential number of construction personnel, combined with the construction duration range of 12-18 months, establishes the lower and upper bound estimates for personnel transports (50,000 and 75,000 respectively). Along with this range of vehicle round trips, Appendix C also presents the expected number of round trips, which is between 55,930 – 80,930. The number of personnel and number of estimated trips to the construction site would vary during the construction phase based on the type of work being done and length of time the employees would be needed on the construction site. Construction starts out with a limited number of individuals and ramps up to peak and then tapers off as the job is nearing completion.

272 The number of personnel and number of estimated trips to the construction site would vary during the construction phase based on the type of work being done and length of time the employees would be needed on the construction site. Construction starts out with a limited number of individuals and ramps up to peak and then tapers off as the job is nearing completion.

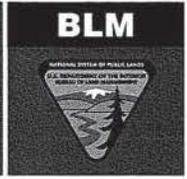
Projections are based on reasonable assumptions that are disclosed in the Draft EIS. Section 4.10.1.2, subsection Methodology for Employment and Income Effects, describes the use of IMPLAN, a widely used and accepted economic modeling program, to estimate the total economic effects of the Project. The introduction to each table in Section 4.10 provides the estimated dollar amounts, and explains that the numbers represent estimated economic impacts. A Supplemental EIS would be required only if there are substantial changes in the proposed action or there are significant new circumstances or information relevant to environmental concerns (40 CFR 1502.9). Since publication of the Draft EIS, there have been no substantial changes in the number of jobs or tax revenues anticipated from the project.

273 There is a difference between nameplate capacity and energy generation. Nameplate capacity is the amount of energy in a given instant that a facility could produce if all of the equipment were operating per design standards. For a wind project, this would require that all turbines are operating at a given instance that the wind conditions are sufficient to operate on the top portion of the power curve. The nameplate capacity of the Mohave County Wind Farm Project is 500 MW or 425 MW, depending upon the interconnection chosen. The percent of nameplate capacity that a facility will produce is known in the industry as a capacity factor. For example, if the Mohave County Wind Farm capacity factor were estimated at 30 percent of nameplate capacity, the energy generated in a given year would be equal to $8,760 \text{ hours in a year} * 500 \text{ MW nameplate capacity} * 0.30 = 1,314,000 \text{ megawatt-hours of energy}$. The wind farm would operate in that given year between its nameplate capacity of 500 MW and as low as 0 MW when the wind is not blowing at all, and all the ranges in between. It is the summation of all those hours across the year that determines the projects annual capacity factor. All power generation, including nuclear, coal, and natural gas fired generation, operate at less than nameplate capacity when measured across a year due to maintenance, demand for electricity, and operating conditions.

274 A standardized content analysis process was conducted to analyze the public comments on the Draft EIS. Each comment letter and email message received was read, analyzed, and considered by BLM, Reclamation, and Western to ensure that all substantive comments were identified. This comment was reviewed by BLM, and Reclamation, and Western; the agencies have determined that no response is required. Your participation in the public review process is appreciated and your input will be considered by the agencies in the decision-making process.



Mohave County Wind Farm Project



DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS) COMMENT FORM

Bureau of Land Management, Kingman Field Office / Arizona

As part of the 45-day public comment period the Bureau of Land Management (BLM) is holding public meetings to present an overview of the Draft Environmental Impact Statement (EIS) analysis. Please take a few minutes to answer the questions below and return this sheet to the sign-in table or to the address printed on the reverse side. Comments would be most helpful if received on or before the 45-day public comment period closing date of June 11, 2012.

Please provide your current mailing address and/or any additional names and addresses you think should be included on our mailing list.

Meeting Location: White Hills Az.

Your Name: Sandra Burton

Name: _____

Address: _____

City/State/Zip: _____

Please check all that apply:

- Add my name to the mailing list for this project
- Withhold my name/address to extent allowed by law (only for persons not representing organizations)*

* All comments received by BLM become part of the public record associated with this proposed project. Accordingly, your comments (including name and address) will be available for review by any person who wishes to review the public record. At your request, we will withhold your name and address to the extent allowed by the Freedom of Information Act or any other law. However, all submissions from organizations or businesses, and individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

1. Please provide comments on the Draft EIS and/or project characteristics (i.e., project area, turbine color, transmission interconnection, etc.).

- 275 [1. BENIFITS FOR SENIORS^{OR OTHER} / what kind
- 276 [of Benifits could we see if you ARE Retired./OR Living in the AREA.
- 277 [2. Roads = ARE the Roads Going to Be Closed AFTER Construction.
- 278 [3. ARE WE Able to prospect AFTER you ARE Completed
- 4. WE would Like to see GREY AND Not White turbines.

To make your comments most effective, please:

- Identify specific information that should be considered during the EIS process
- Offer a specific idea of how to address a particular concern
- Provide specific information about how a particular element of the project would affect you
- Speak to a project team member if you have any questions on project information
- Write clearly and legibly so that we can accurately record your comments

Remember: Every comment counts and any comment can make a difference.

Responses Continued

275 Section 3.11.1 of the Draft EIS discusses Executive Order 12898, which requires that consideration be given, and meaningful involvement of racial, ethnic, or socioeconomic groups, be enacted to not disproportionately impact these groups as a result of any federal action. Section 4.11 of the Draft EIS contains the environmental justice analysis, which found that increases in jobs, income, and tax revenues in Mohave County would have a positive effect on all populations including seniors. While it is recognized that retirees would not benefit from the jobs created, the tax revenues could be allocated to programs that benefit seniors; however, this is beyond the authority of BLM and Reclamation.

276 Section 2.5.4.2 (page 2-37 of the Draft EIS) includes information concerning road closures and public access on roads. Following construction, public access would be restricted only at the substation, switchyard, and Operations & Maintenance (O&M) building, which would be areas located outside roadways. Public access in the Project Area may be temporarily restricted during maintenance activities on roads or facilities, when warranted for public safety reasons. Access also may be restricted in areas where reclamation efforts have been undertaken and public access into those areas would diminish the reclamation efforts. Additionally, as stated in Section 2.5.5 of the Draft EIS, following decommissioning, roads would be closed and reclaimed if they are not needed by BLM or Reclamation.

277 Section 2.5 on page 2-4 of the Draft EIS notes that in response to the application to use this land for the proposed Project, BLM has segregated these public lands from appropriation under the public land laws including the mining law, but excluding the mineral leasing or materials acts, for a period of two years beginning March 2, 2012 when the segregation notice was published in the Federal Register. Prospecting outside of the Project Area can continue under 43 CFR Subparts 3715 and 3809. Unless the segregation notice is extended, prospecting within the Project Area would be allowed after March 2, 2014, subject to valid existing rights.

278 As noted in Section 2.6.1, two turbine colors are being considered. Since the preparation of the Draft EIS, however, the Federal Aviation Administration (FAA) has advised BLM that it is in the process of rewriting the FAA Obstruction Lighting Advisory Circular AC 70-7460-1K to provide more clear guidance and better consistency in turbine visibility rules. While BLM is still considering two color options for the turbines, the shade of gray turbines has been revised to comply with the darkest acceptable color for wind turbines that will be allowed by FAA, which is RAL 7035 (light gray on the RAL standardized color chart) or equivalent. The Final EIS has been revised at Section 2.5.2.3 and 2.6.1 to reflect the anticipated FAA guidance and the allowable color options.



Mrs. Gloria Davidson

Jackie Necker's

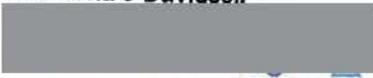
I am strongly in favor of wind
as a power generator. First its face
secondly I think the wind mills look
very pretty. I have heard that they make
noise but I still like them

All of our other power generators
oil Gasoline Natural Gas are limited & can
eventually be used up. Not in my life time
But wind continues as long as life on
Earth

Thank You
Gloria J. Davidson



Ms Gloria J Davidson



you could plant one in
my yard

12 MAY 21 PM 2

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279

Responses Continued

279 A standardized content analysis process was conducted to analyze the public comments on the Draft EIS. Each comment letter and email message received was read, analyzed, and considered by BLM, Reclamation, and Western to ensure that all substantive comments were identified. This comment was reviewed by BLM, and Reclamation, and Western; the agencies have determined that no response is required. Your participation in the public review process is appreciated and your input will be considered by the agencies in the decision-making process.

LETTER

From: Bill Eddy [REDACTED]
Sent: Monday, June 11, 2012 5:02 PM
To: BLM_AZ_KFO_Wind_Energy
Subject: Impact statement

280 [I love the views in white hills. I go there for the beauty and I would hate to have to look through a bunch of windmills just to see beautiful boulder city!] That is my statement .
Thank you

From: BLM_AZ_KFO_Wind_Energy <BLM_AZ_KFO_Wind_Energy@blm.gov>
Sent: Tuesday, June 12, 2012 3:28 PM
To: Bill Eddy
Cc: Defend, Beth; Neckels, Jacqueline D; Godfrey, Dennis C
Subject: RE: Impact statement

Thank you for your interest in the project proposal. We will take note of your comment in the Final EIS.

Eddie Arreola, Supervisory Project Manager, BLM Arizona
One North Central Avenue, Suite 800, Phoenix, AZ 85004
602-417-9505 O, 602-417-9454 fax, earreola@blm.gov

Responses Continued

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LETTER

From: Chantal Eddy [REDACTED]
Sent: Monday, June 11, 2012 4:36 PM
To: BLM_AZ_KFO_Wind_Energy
Subject: mohave wind farm Eis

281 | please save our views. [I love it up in White Hills in unit 2 and would hate to see the views ruined by the sight of a bunch of wind mills!]
thank you for your consideration !

From: BLM_AZ_KFO_Wind_Energy <BLM_AZ_KFO_Wind_Energy@blm.gov>
Sent: Tuesday, June 12, 2012 3:22 PM
To: Chantal Eddy
Cc: Defend, Beth; Neckels, Jacqueline D; Godfrey, Dennis C
Subject: RE: mohave wind farm Eis

Thank you for your comment. We will address it in the Final Environmental Impact Statement.

Eddie Arreola, Supervisory Project Manager, BLM Arizona
One North Central Avenue, Suite 800, Phoenix, AZ 85004
602-417-9505 O, 602-417-9454 fax, earreola@blm.gov

Responses Continued

281 Most of the views from Unit 2, where we have identified you own property, are in the viewshed of at least the blades of the turbines. Based upon the distance of 2.2 miles to 3.3 miles from the Unit 2 viewshed to the Alternative A Project boundary, the visual contrast of the seen portions of the turbines is expected to be strong.

Alternatives B and C would move the Project boundary and turbines one mile further away and the contrast would be less; however, at the distance to your property, the spinning blades and obstruction warning strobe lights would still be a strong contrast.

LETTER

From: Andy F. [REDACTED]
Sent: Monday, April 23, 2012 4:52 PM
To: BLM_AZ_KFO_Wind_Energy
Subject: Mohave County Wind Farm Project

282 [please keep me posted

From: BLM_AZ_KFO_Wind_Energy <BLM_AZ_KFO_Wind_Energy@blm.gov>
Sent: Wednesday, May 02, 2012 9:17 AM
To: Andy F.
Cc: Arreola, Eduardo J; Defend, Beth; Jerry Crockford
Subject: RE: Mohave County Wind Farm Project

Andy,

This is to acknowledge receipt of your e-mail concerning the Mohave County Wind Farm.

I am assuming that we have your contact information on file and will be sending you updates as them come available.

Virtually all of the BLM's project information is available at

<http://www.blm.gov/az/st/en/prog/energy/wind/mohave.html>. You are invited to check the site frequently for changes.

Feel free to contact me directly if you have questions.

Dennis Godfrey
Public Affairs Specialist
Bureau of Land Management
Arizona State Office
dgodfrey@blm.gov
602.417.9499

Responses Continued

282 A standardized content analysis process was conducted to analyze the public comments on the Draft EIS. Each comment letter and email message received was read, analyzed, and considered by BLM, Reclamation, and Western to ensure that all substantive comments were identified. This comment was reviewed by BLM, and Reclamation, and Western; the agencies have determined that no response is required. Your participation in the public review process is appreciated and your input will be considered by the agencies in the decision-making process.

LETTER

From: Bill & Sandy [REDACTED]
Sent: Monday, April 30, 2012 8:34 AM
To: BLM_AZ_KFO_Wind_Energy
Subject: 283 wind Turbines

283

Why don't they put the 283 Wind Turbines out by the Prison out on I-40 where there are no one living. Why do they always want to put things like that where people are living. Other words, put them in the middle of nowhere so people don't have to look at them.

William Gann



From: BLM_AZ_KFO_Wind_Energy <BLM_AZ_KFO_Wind_Energy@blm.gov>
Sent: Wednesday, May 02, 2012 8:46 AM
To: Bill & Sandy
Cc: Defend, Beth; Arreola, Eduardo J; Jerry Crockford
Subject: RE: 283 wind Turbines

Mr. Gann,
Thank you for your comments.

They will be included in the Bureau of Land Management's project record for the Mohave County Wind Farm.

As you likely know, the BLM is holding a public meeting on this project at the Dolan Springs Community Center on May 16, from 6 to 8 p.m.

We encourage you to attend. Information about that meeting, and others in Mohave County, is available at <http://www.blm.gov/az/st/en/prog/energy/wind/mohave.html>

Please feel free to contact me if you have questions about the project.

Dennis Godfrey
Public Affairs Specialist
Bureau of Land Management
Arizona State Office
dgodfrey@blm.gov
602.417.9499

Responses Continued

283 The right-of-way (ROW) application was submitted in consideration of several years of data collection on the wind resource, as described on page 1-4 in Section 1.2.3.1 of the Draft EIS, as well as potential for environmental concerns that could be identified early in the development process. Locations for the Project that were considered but eliminated from detailed analysis are described on pages 2-57 and 2-58 in Section 2.9.1, 2.9.2, and 2.9.3 of the Draft EIS.

LETTER

From: matthew grider [REDACTED]
Sent: Saturday, June 09, 2012 1:35 PM
To: BLM_AZ_KFO_Wind_Energy
Cc: matthew grider
Subject: Fwd: Mohave County Wind Farm

I own a house in White Hills, AZ. [REDACTED]

I purchased this property about five years and recently completed building a retirement home.

This home has beautiful views to the northwest including, Boulder City, Black Canyon Mountains, Charleston Mountains, Mt Wilson, and much of the Detrital Valley.

Recently, I went to a corner of the proposed wind farm project that is in line with the access road to the materials source pit (identified in the EIS) just off highway 93. The coordinates for that corner are N 35 degrees and 47.935 minutes by W 114 degrees and 29.063 minutes. From that spot, at ground level looking to the south east, I could see the homes in my neighborhood. I've attached a map and some photos taken from there.

Considering that the generators will be 492' tall, there is no doubt that the wind farm will be highly visible from my residence and others in Unit 2.

284

This project will have a negative impact on my view. It will also devalue my home and the quality of my life.

Please consider Alternative D as my choice.

The attached map shows my location in Golden Horseshoe Ranchos Unit 2, the location where the photos were taken, and my field of view towards the northwest.

Thanks for the opportunity to comment.

Matthew T Grider

Responses Continued

284 The potential effects on property values also were considered in Section 4.10.2.3 on page 4-100 in the Draft EIS. As discussed in this section, private property values can vary based on the scenic quality of the surrounding landscape. As wind farm developments affect the visual resources in an area, it is possible that such developments could influence property values. However, as described in Section 4.12 regarding visual resources, there is limited visibility of Project turbines from residential areas in the White Hills Community, Dolan Springs, and Meadview areas. From a few homes located on Indian Peak Road (directly south of the Wind Farm Site), some turbines would be visible.

For the homes that have views of the Project Area or may experience noise impacts, property value impacts may occur, but are not expected. Numerous economic studies have analyzed the effect of wind farm development on private property values, and most have found that there is no statistical relationship between property values and proximity to wind farms. For example, a 2009 review of data on 7,500 sales of single-family homes located within 10 miles of 24 existing wind facilities in 9 U.S. states found that there is no consistent, statistically significant effect on home sale prices with a view of wind facilities or proximity to wind facilities (Lawrence Berkeley National Laboratory 2009). While there may temporarily be added traffic, noise, dust, water use, and sediment in washes in the Project Area, particularly during construction, these effects are not expected to affect property values due to their temporary (during construction) or minor nature.

Letter Continued

From: BLM_AZ_KFO_Wind_Energy <BLM_AZ_KFO_Wind_Energy@blm.gov>
Sent: Tuesday, June 12, 2012 3:20 PM
To: matthew grider
Cc: Defend, Beth; Godfrey, Dennis C; Neckels, Jacqueline D
Subject: RE: Mohave County Wind Farm

Mr. Matthew Grider,

Thank you for your comment. We will address it in the Final Environmental Impact Statement.

Eddie Arreola, Supervisory Project Manager, BLM Arizona
One North Central Avenue, Suite 800, Phoenix, AZ 85004
602-417-9505 O, 602-417-9454 fax, earreola@blm.gov

Jul 07 12 07:25p

George Heilman

p.1

HINN, Jackie Neckels

1 11 2012 1 07 1



County Wind Farm Project



DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS) COMMENT FORM

Bureau of Land Management, Kingman Field Office / Arizona

As part of the 45-day public comment period the Bureau of Land Management (BLM) is holding public meetings to present an overview of the Draft Environmental Impact Statement (EIS) analysis. Please take a few minutes to answer the questions below and return this sheet to the sign-in table or to the address printed on the reverse side. Comments would be most helpful if received on or before the 45-day public comment period closing date of June 11, 2012.

Please provide your current mailing address and/or any additional names and addresses you think should be included on our mailing list.

Meeting Location: White Hills

Your Name: GEORGE HEILMAN Name: CAROL HEILMAN

Address: [Redacted] Address: SARAH

City/State: [Redacted] City/State/Zip: _____

Please check all that apply:

- Add my name to the mailing list for this project
- Withhold my name/address to extent allowed by law (only for persons not representing organizations)*

*All comments received by BLM become part of the public record associated with this proposed project. Accordingly, your comments (including name and address) will be available for review by any person who wishes to review the public record. At your request, we will withhold your name and address to the extent allowed by the Freedom of Information Act or any other law. However, all submissions from organizations or businesses, and individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

1. Please provide comments on the Draft EIS and/or project characteristics (i.e., project area, turbine color, transmission interconnection, etc.).

To make your comments most effective, please:

- Identify specific information that should be considered during the EIS process
- Offer a specific idea of how to address a particular concern
- Provide specific information about how a particular element of the project would affect you
- Speak to a project team member if you have any questions on project information
- Write clearly and legibly so that we can accurately record your comments

Remember: Every comment counts and any comment can make a difference.

SARAH PAGES 2 & 3

June 29, 2012

Page 2 of 3

Mohave County Wind Farm Project

BLM

I was told the Federal Land in question was owned by "We the People" & managed by the B L M., and I hope the finding will reflect the results.

285 [I do not know why B.P. would want to be so close to Public and to Lake Mead Recreational land. There are thousands of acres to the West of the site in question.] We do not need another Gulf episode in Arizona. I am a fan of Solar & alternative energy, which is why I purchased the land I own. It is perfect for a Solar home which I plan to build. Since B.P. first tried to surround the private land and then proposed the present plan which is a little over a mile from my site. I have put my plans on hold.]

286 | When you purchase a piece of land in Arizona or anywhere in America, it comes with a "Bundle of Rights" and one of those rights is the Right to Quiet enjoyment, which I intend to receive with my land purchase.]

287 | When this Farm was first proposed, I offered my land to B.P. to purchase, or to do a land swap. B.P. is being silent, trying to go the other route and ignoring the private land owners.] That is their right!

I have been a Realtor for over 20 years and when we talk about "Setbacks" and "Buffer Zones" in Commercial projects, in my opinion a Buffer of about five (5) miles from a private sub-division and Lake Mead recreational area should be required given the size and height of this project. My wife is a cancer survivor and who knows what might develop from the amount of electricity this project will produce. All of the above being said, My vote goes to Plan C! See page 3.

George Heilman

Responses Continued

285 A standardized content analysis process was conducted to analyze the public comments on the Draft EIS. Each comment letter and email message received was read, analyzed, and considered by BLM, Reclamation, and Western to ensure that all substantive comments were identified. This comment was reviewed by BLM, and Reclamation, and Western; the agencies have determined that no response is required. Your participation in the public review process is appreciated and your input will be considered by the agencies in the decision-making process.

286 As “quiet enjoyment” may be interpreted here to refer to the ambient sound environment and the Project’s potential effects, Maps 4-2 through 4-7 (pages 4-150, 4-151, 4-154 through 4-157 of the Draft EIS) illustrate that for anticipated Project operation noise for the three alternatives considered in the Draft EIS, private lands within a mile radial distance from LT3 can be expected to experience sound levels that are external to (and thus less than, due to sound level diminishing with increasing distance from the sources) the 35 dBA Leq noise contour. And as shown in Table 4-25 on page 4-147 of the Draft EIS, estimated construction noise levels at LT3 for the three alternatives are also predicted to be well below 35 dBA Leq. This means that, at these locations within a mile of LT3, Project operation and construction noise is expected to be less than the 35 dBA Leq, as measured at night near LT3 during the ambient sound level survey. When existing ambient or non-project background sound exceeds Project noise, particularly when the difference in the noise levels are great, the background noise is likely to “mask” the turbine operations, rendering the Project noise indistinguishable from the background. The likelihood of masking would also increase when ground wind speeds are high in the vicinity of the receiver and create noise from wind traversing through vegetative cover and around nearby natural features (e.g., rocks, large cactus or trees) and man-made structures. When such masking occurs, the heard ambient sound will only be as quiet as these natural noise sources allow.

287 As described in Section 2.9.1 (page 2-57 of the Draft EIS) and Section 5.1.1 (page 5-1 of the Draft EIS), some private lands were initially planned as part of the Wind Farm Site and may have been purchased or leased by BP Wind Energy. However, based on comments received from the initial scoping meetings in December 2009, the Wind Farm Site was relocated to eliminate private land from consideration for the wind farm. BP Wind Energy has no plans to purchase private property in connection to the Project.

PAGE 3 of 3

Wind Farm Opposition

288 [
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291 [
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293 [

What exactly is the benefit to the individual landowner?

Wind farms are costly, ugly, and environmentally unsound from a visual and noise point of view.

They are a permanent eyesore on the landscape with negative impact on local wildlife and birds.

They are inefficient, unreliable and power is extremely expensive – because wind is very intermittent and requires backup power 24/7 raising individuals electricity costs.

They are detrimental to property values not only from an esthetic view but health concerns that are raised.

Doctors studying *Wind Turbine Syndrome* have stated a genuine concern for health hazards associated to high – voltage power lines, sound frequency and pressure change.

Risk Factors:

1. Sleep problems noise or physical sensation or pressure makes it hard to sleep and cause frequent awaking.
2. Headaches
3. Dizziness, unsteadiness, and nausea (affects to inner ear)
4. Exhaustion, anxiety, anger, irritability, and depression
5. Problems with concentration and learning
6. Tinnitus (ringing in the ears)

Genuine health hazards associated with expose exists and the concern for PERCEPTION of health risk from the public will negatively impact property values.

Wind Farms are not farms, but industrial installations making large scale industrial noise [What happens to those steel towers when the companies that installed them go away and we are left with rusted out hunks of steel? Because of all the grease in them no one will touch them and each one will become a superfund site. Look ahead ten years and see how green they really are.

I emphatically oppose the project!

George Heilman

Responses Continued

288 Section 4.10 in the Draft EIS addresses both potential positive and adverse social and economic conditions. As indicated in this section, impacts to the residents near the construction areas may be realized, but given the distance from housing in relation to the majority of the Wind Farm Site, this impact would be expected to be temporary in nature. Numerous economic studies have analyzed the effect of wind farm development on private property values, and most have found that there is no statistical relationship between property values and proximity to wind farms.

As discussed in Section 4.10.2.2 of the Final EIS, Mohave County is expected to realize approximately \$366,000 annually in tax dollars, but how and where these tax monies are used would be under the control of Mohave County. Section 4.11 of the Draft and Final EIS contains the environmental justice analysis, which found that increases in jobs, income, and tax revenues in Mohave County would have a positive effect on all populations.

289 See response 285 regarding the comment content analysis process.

290 See response 285 regarding the comment content analysis process.

291 Section 3.12.2 of Draft EIS describes the sensitive receptors near the Project from a visual perspective. The distance of sensitive receptors to the proposed turbines is listed in Appendix D, in the table titled “Range of Viewing Conditions and Photographic Details”; this table indicates that the nearest residential housing is more than one mile from the closest proposed turbine. On page 4-122 of the Draft EIS, Section 4.12.2.2 notes that many residential areas (although not all) would be shielded from views of the Wind Farm Site by topography and vegetation. Section 4.10.2.3, sub-section Visual Impacts and Property Value Effects on page 4-100 of the Draft EIS, states that “numerous economic studies have analyzed the effect of wind farm development on private property values, and most have found that there is no statistical relationship between property values and proximity to wind farms. For example, a 2009 review of data on 7,500 sales of single-family homes located within 10 miles of 24 existing wind facilities in 9 US states found that there is no consistent, statistically significant effect on home sale prices with a view of wind facilities or proximity to wind facilities (Lawrence Berkeley National Laboratory 2009).”

“Wind Turbine Syndrome” (WTS) is a term that has been coined by Dr. Nina Pierpont. According to Pierpont, wind turbines associated with wind farms can cause illness in certain individuals due to the rotating blades which creates noise and vibration. Symptoms that are believed to result from WTS are: sleep disturbance, headache, tinnitus (ringing in ears), ear pressure, dizziness, vertigo, nausea, visual blurring, tachycardia, irritability, problems with concentration and memory, and panic episodes associated with sensations of internal pulsation or quivering, which arise while awake or asleep (Pierpoint 2009). There is no known dose-response relationship between exposure to wind turbine noise/vibration and health effects. Pierpoint’s single clinical study reported a correlation between distance to large (1.5 to 3 MW) wind turbines and WTS, and suggested that symptoms are eliminated by siting wind turbines a minimum of 1.25 miles away from sensitive receptors. An additional study prepared for the state of Massachusetts in January 2012 found that “There is no evidence for a set of health effects, from exposure to wind turbines that could be characterized as a “Wind Turbine Syndrome” (Ellenbogen, J.M., et al. Wind Turbine Health Impact Study. Report of Independent Expert Panel. Prepared for: Massachusetts Department of Environmental Protection. Massachusetts Department of Health).

Property owner concerns and values, as expressed through public comments, will be considered in the decision-making process.

292 See response 291 regarding property value evaluations.

293 “As stated in Section 2.5.5, The goal of Project decommissioning is to remove the installed power generation equipment and return the site to a condition as close to a pre-construction state as feasible.” The towers and aboveground structures would be removed. The foundations would be removed in accordance with a BLM and/or Reclamation approved decommissioning plan.

LETTER

From: Steen Hillestrøm [REDACTED]
Sent: Thursday, May 03, 2012 6:16 AM
To: BLM_AZ_KFO_Wind_Energy
Subject: ATTENTION: Jackie Neckels

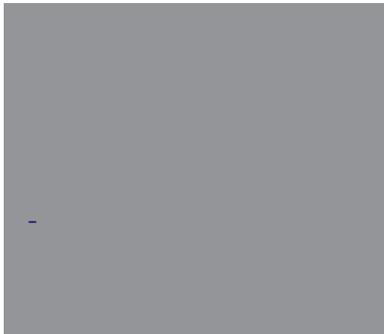
Dear Jackie

I have some questions about the Mohave County Wind Farm.

- 294 [What is the purpose from this 45 day period? To find out how many local persons who might is against the project?
- 295 [When you are writing might "federal approval" by end of 2012 which agency exactly is sitting with the final decision on this wind project?
- 296 [And how do you see the PTC matter have any affect on this wind project?
- 297 [Finally can you direct me more precisely to where I can find more information on the proposed turbines for this project? I have read somewhere that it is either Vestas 1,8 MW or Siemens 2,3 MW ?

Med venlig hilsen / Best regards
Aktiefokus

Steen Hillestrøm



Responses Continued

294 A standardized content analysis process was conducted to analyze the public comments on the Draft EIS. Each comment letter and email message received was read, analyzed, and considered by BLM, Reclamation, and Western to ensure that all substantive comments were identified. This comment was reviewed by BLM, and Reclamation, and Western; the agencies have determined that no response is required. Your participation in the public review process is appreciated and your input will be considered by the agencies in the decision-making process.

295 Federal approval is required because the project would be placed on federal lands managed by the Bureau of Land Management and the Bureau of Reclamation. Each of those agencies will be making a decision on allowing use of their particular lands. In addition, Western Area Power Administration, another federal agency, will be deciding whether to allow the project to connect to the electrical transmission system that it manages. Those decisions will be part of the official Records of Decision, which are expected in 2013.

As noted in Table 1-2 (starting on page 1-10 of the Draft EIS), other federal agencies (including U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, and Federal Aviation Administration) have decisions to make, primarily in form of approving plans or issuing permits. BP Wind Energy would pursue these approvals and permits independently from the EIS process.

296 See response 294 regarding the comment content analysis process.

297 Page 2-16 in Section 2.5.2.3 of the Draft EIS explains that turbine types are not selected until shortly before construction begins, primarily because the availability of turbine types varies and not all manufacturers have the ability to provide the machines at a specified time. Some turbines being considered include the 1.8 MW Vestas turbine and the 2.3 MW Siemens turbine, but other turbines may be selected as well.

Letter Continued

From: BLM_AZ_KFO_Wind_Energy
Sent: Monday, May 07, 2012 10:12 AM
To: Steen Hillestrøm
Cc: Neckels, Jacqueline D; Arreola, Eduardo J
Subject: RE: ATTENTION: Jackie Neckels

Mr. Hillestrøm,
I have been asked to respond to your inquiry concerning the Mohave County Wind Farm.

The 45-day period is a chance for the public to comment on the draft environmental impact statement (EIS). Comments received during the period will be considered in preparing the final EIS, which is expected to be released by the end of 2012. The final EIS is the basis for the final decisions on the use of government lands.

Federal approval is required because the project would be placed on federal lands managed by the Bureau of Land Management and the Bureau of Reclamation. Each of those agencies will be making a decision on allowing use of their particular lands. In addition, Western Area Power Administration, another federal agency, will be deciding whether to allow the project to connect to the electrical transmission system that it manages. Those decisions will be part of the official Record of Decision, which is expected in early 2013.

I am not familiar with "PTC." Please provide more information on what you are seeking concerning this.

As far as I know, no decision has been made about the size or manufacturer of the turbines. Your best source for that information would be BP Wind. Daniel Runyan may be a good contact at the company. His e-mail is daniel.runyan@bp.com

Dennis Godfrey
Public Affairs Specialist
Bureau of Land Management
Arizona State Office
dgodfrey@blm.gov
602.417.9499

LETTER

From: Dennis Jablonski [REDACTED]
Sent: Tuesday, May 15, 2012 9:44 AM
To: BLM_AZ_KFO_Wind_Energy
Subject: BLM seeks input on wind farm NW of Kingman - Kingman Daily Miner - Kingman, Arizona

KFO_WindEnergy@blm.gov I am a property owner of White Hills (currently in Wyoming) and I would like to review a map showing where the wind turbines will be placed. Please send me that information as soon as possible. Thank you.
Dennis Jablonski

From: BLM_AZ_KFO_Wind_Energy@blm.gov
To: [REDACTED]
CC: EARreola@blm.gov; jneckels@blm.gov; jandjcrockford@comcast.net; beth.defend@urs.com
Date: Tue, 22 May 2012 14:43:50 -0600
Subject: RE: BLM seeks input on wind farm NW of Kingman - Kingman Daily Miner - Kingman, Arizona

Mr. Jablonski,
The most immediate source of information on the proposed Mohave County Wind Farm, including project maps, is the BLM's project web site, at <http://www.blm.gov/az/st/en/prog/energy/wind/mohave.html>.

Let me know if you have trouble navigating the site or need additional information.

Dennis Godfrey
Public Affairs Specialist
Bureau of Land Management
Arizona State Office
dgodfrey@blm.gov
602.417.9499

From: Dennis Jablonski [REDACTED]
Sent: Tuesday, May 22, 2012 3:44 PM
To: BLM_AZ_KFO_Wind_Energy
Subject: RE: BLM seeks input on wind farm NW of Kingman - Kingman Daily Miner - Kingman, Arizona

Thank you for your reply. I have visited the BLM site and reviewed the excellent maps provided. I own property in Unit #4 of Golden Horseshoe Ranchos in White Hills. I wonder if the operation of the windmills will drive the rattlesnakes away from them and closer to the residential properties? Otherwise I am not opposed to this project as long as it is NOT visible from Unit #4.
Dennis Jablonski 8513 Mustang Drive, White Hills, AZ

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299 |

From: BLM_AZ_KFO_Wind_Energy <BLM_AZ_KFO_Wind_Energy@blm.gov>
Sent: Wednesday, May 23, 2012 9:35 AM
To: Dennis Jablonski
Cc: Arreola, Eduardo J; Neckels, Jacqueline D; Jerry Crockford; Defend, Beth
Subject: RE: BLM seeks input on wind farm NW of Kingman - Kingman Daily Miner - Kingman, Arizona

We are adding your comments to the project record and they will be considered in preparing the final environmental impact statement.

We appreciate your interest in the project. Let me know if you need further assistance.

Dennis Godfrey

Responses Continued

298 The BLM, in cooperation with the U.S. Fish and Wildlife Service and Arizona Game and Fish Department, examined impacts to reptiles, including rattlesnakes. The best available information was used to determine baseline conditions for the Project Area and the impact analysis. A review of readily available literature pertaining to existing wind farms did not identify that wind farm operations would drive rattlesnakes away from their normal habitats and towards residential properties.

299 The view from Unit 4 is in the viewshed of at least the blades of the turbines. Based on the distance of 4.7 miles from your property to the Alternative A Project boundary, the contrast of the turbines with the surrounding landscape is expected to be moderate to strong depending upon conditions such as lighting conditions, number of turbines seen, and height of turbines in view. Alternative B and C would remove the Project boundary and closest turbine about another mile farther away, however at your distance there may not be much of a difference in contrast.

LETTER

-----Original Message-----

From: Dawn Lenza [REDACTED]
Sent: Saturday, April 28, 2012 6:43 PM
To: BLM_AZ_KFO_Wind_Energy
Subject: Mohave County Wind Farm Project

300 [I would like more information on this project so I may opine using the 45-day window.

Thank you.

Dawn Lenza
Chandler, AZ. 85249

From: BLM_AZ_KFO_Wind_Energy <BLM_AZ_KFO_Wind_Energy@blm.gov>
Sent: Wednesday, May 02, 2012 9:02 AM
To: Dawn Lenza
Cc: Arreola, Eduardo J; Defend, Beth; Jerry Crockford
Subject: RE: Mohave County Wind Farm Project

Ms. Lenza,

Information is available at <http://www.blm.gov/az/st/en/prog/energy/wind/mohave.html>, which is the BLM's web page for this project.

You will have access to a great amount of information from this page, which includes a link to the complete draft environmental impact statement.

If you have specific questions, please contact me directly.

Dennis Godfrey
Public Affairs Specialist
Bureau of Land Management
Arizona State Office
dgodfrey@blm.gov
602.417.9499

Responses Continued

300 A standardized content analysis process was conducted to analyze the public comments on the Draft EIS. Each comment letter and email message received was read, analyzed, and considered by BLM, Reclamation, and Western to ensure that all substantive comments were identified. This comment was reviewed by BLM, and Reclamation, and Western; the agencies have determined that no response is required. Your participation in the public review process is appreciated and your input will be considered by the agencies in the decision-making process.

LETTER

From: Aubrey Loucks [REDACTED]
Sent: Monday, June 11, 2012 1:45 PM
To: BLM_AZ_KFO_Wind_Energy
Subject: Mohave Wind Farm EIS

Hello,

We have concerns about the obstruction of our view of the beautiful lights of Boulder City and the sunset. As much as we love the idea of capturing energy from the wind in our area, we don't want to have to look at all the turbines between us and our view. [We believe it would ruin the the beautiful landscape we see from our lot in Unit 2 along Indian Peak Road.] We bought there for the spectacular views. And paid a premium for it. Why should we have to look through them to see our view. [It is so quiet and nice out there and we hope the noise will not travel to my wife's sensitive ears!] [I hear everything! :)] Please consider our concerns when reviewing the placement of these wind mills. Thank You, Aubrey E. and Cynthia Loucks of White Hills Arizona Unit 2, Home and land owners. I'm not sure how much information you need from us but you can always reply to this email address: [REDACTED]

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303 [P.S. We like the white turbines the best.

From: BLM_AZ_KFO_Wind_Energy
Sent: Tuesday, June 12, 2012 3:21 PM
To: 'Aubrey Loucks'
Subject: RE: Mohave Wind Farm EIS

Ms. Aubrey Loucks,

Thank you for your comment. We will address it in the Final Environmental Impact Statement.

Eddie Arreola, Supervisory Project Manager, BLM Arizona
One North Central Avenue, Suite 800, Phoenix, AZ 85004
602-417-9505 O, 602-417-9454 fax, earreola@blm.gov

Responses Continued

301 The view from Unit 2 on Indian Peak Road is in the viewshed of at least the blades of the turbines. Based on the distance of 2.6 miles from your property to the Alternative A Project boundary, the contrast of the seen portions of the turbines is expected to be strong.

Alternatives B and C would move the Project boundary and turbines one mile farther away and the contrast would be less; however, at the distance to your property, the spinning blades and obstruction warning strobe lights would still be a strong contrast.

302 Project construction and operation noise travels, but diminishes with increasing distance from the sources; this is illustrated in Maps 4-2 through 4-7 in Section 4.15.2.2 for anticipated Project operation noise for the three alternatives considered in the Draft EIS. Beyond the indicated 35 dBA Leq noise contour, project noise would continue to diminish in magnitude. At some distance over which the sound travels, the Project noise level would become indistinguishable from other sound sources that comprise the “quiet” ambient outdoor sound level. As noted in Section 4.15.1.1 under “Impact Duration,” construction noise impacts are considered temporary and would occur mostly during daytime hours. Section 4.15.7 of the Final EIS includes the following mitigation measures that would be applied under all alternatives (including Alternative E) to reduce impacts from noise associated with the project:

- All noise-producing equipment and vehicles using internal combustion engines would be equipped with exhaust mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed “package” equipment (e.g., arc-welders, air compressors) would be equipped with shrouds and noise control features that are readily available for that type of equipment. The diesel generator, a potential power source for the batch plant described in Chapter 2, would similarly be equipped to keep its resulting sound emission to levels below 81 dBA at a distance of 50 feet.
- All mobile or fixed noise-producing equipment used on the Project, which is regulated for noise output by a local, state, or Federal agency, would comply with such regulation while in the course of Project activity.
- The use of noise-producing signals, including horns, whistles, electronic alarms, sirens, and bells, would be for safety warning purposes only.
- No construction-related public address, loudspeaker, or amplified music system would exhibit sound levels that exceed limits imposed by local regulation at any adjacent noise-sensitive land use, or that exceed noise limits imposed on elements of the wind farm, whichever is the lowest level of acceptable noise.
- BP Wind Energy and their contractors would implement a noise complaint process and hotline number for usage by members of the surrounding community (e.g., White Hills, Arizona). Upon establishment of the hotline, BLM or its compliance inspectors would have the responsibility to receive, evaluate, coordinate with the BLM or Reclamation representatives, respectively, and when appropriate make reasonable efforts to resolve noise complaints. The resolution and evaluation of noise complaints would be subject to appropriate criteria as described in this Final EIS, and as identified as the Mohave County Noise Standards – Maximum Noise Levels for Various Land Uses (Figure 3-7).
- The proposed Project design and implementation would include appropriate noise attenuation measures adequate to help ensure that the noise levels from turbine transformers, substations, and other ancillary systems or components would not cause aggregate noise levels produced by operation of the Project to exceed identified thresholds. For instance, HVAC systems on an occupied control or maintenance building might feature, if needed, sound abating cabinet linings or intake/exhaust shrouds that are typically offered by manufacturers as optional equipment upgrades.
- Maintenance and security patrol vehicles, such as pick-up trucks and/or all-terrain vehicles, using internal combustion engines would be equipped with exhaust mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating

Responses Continued

condition that meet or exceed original factory specification. Operation of these vehicles would typically be expected to occur on access roads that interconnect turbine positions.

303 A standardized content analysis process was conducted to analyze the public comments on the Draft EIS. Each comment letter and email message received was read, analyzed, and considered by BLM, Reclamation, and Western to ensure that all substantive comments were identified. This comment was reviewed by BLM, and Reclamation, and Western; the agencies have determined that no response is required. Your participation in the public review process is appreciated and your input will be considered by the agencies in the decision-making process.

LETTER

-----Original Message-----

From: Zenon Mocarski [REDACTED]
Sent: Friday, May 18, 2012 7:09 PM
To: BLM_AZ_KFO_Wind_Energy
Subject: Wind Farm

304 [I'm just not sure about an energy source that is inefficient by all standards, requires government subsidies to exist, and ruin the view of every landscape at which they exist. I'd like to see more efficient renewable energy explored, especially in regards to solar and thermal. There are only a few in Kingman of the large wind mills outside of Kingman, and they can be seen from the top of the Hualapai range.
We tend to have knee-jerk reactions when further research should be done and conduct too much research when action should be taken. I see the push for wind farms to be knee jerk. Any energy source that cannot support itself should not be used.

305 [What I don't understand is why counties and state's don't act more aggressively in regards to building codes and require homes to have solar panels. While it will not eliminate the need for traditional sources, it will reduce the load and eliminate the need for such a monstrous, inefficient source of energy.
My vote is that they should not be built at all.

My thoughts.
Zen Mocarski

[REDACTED]

From: BLM_AZ_KFO_Wind_Energy <BLM_AZ_KFO_Wind_Energy@blm.gov>
Sent: Tuesday, May 22, 2012 1:26 PM
To: Zenon Mocarski
Cc: Arreola, Eduardo J; Jerry Crockford; Neckels, Jacqueline D; Defend, Beth
Subject: RE: Wind Farm

Mr. Mocarski,
Thank you for your comments concerning the proposed Mohave County Wind Farm project. The comments will be included in the project record and considered in preparing the final environmental impact statement.

Dennis Godfrey
Public Affairs Specialist
Bureau of Land Management
Arizona State Office
dgodfrey@blm.gov
602.417.9499

Responses Continued

304 According to BP Wind Energy, this project could be built without any government subsidies. It is important to note that the Production Tax Credit (PTC) that currently exists allows BP Wind Energy to reduce its price of power that it sells to its consumers. This reduction in price makes renewable projects more competitive than if the PTC was not available. Additionally, government subsidies exist for all current forms of energy generation including coal and natural gas.

BLM is required to consider applications for right-of-way (ROW) grants. As indicated in Section 1.3 on page 1-7 of the Draft EIS, “[w]ith regard to the affected public lands administered by the BLM, the purpose for the proposed action is to respond to a Federal Land Policy Management Act (FLPMA) ROW application submitted by BP Wind Energy to construct, operate, maintain, and decommission a wind energy facility and associated infrastructure in compliance with FLPMA, BLM ROW regulations, BLM’s multiple use mandate, and other applicable Federal laws and policies.” BLM has received applications for solar energy development in and adjacent to the Project Area; some of these applications have been withdrawn, as described in Section 2.9.2 and Section 2.9.3 (pages 2-57 and 2-58 of the Draft EIS).

305 Mohave County and Arizona building code requirements for residences, industrial and commercial buildings are outside of the authority of BLM, Reclamation, and Western. Section 2.9.6 (on page 2-58 of the Draft EIS) addresses the feasibility of using residential and wholesale distributed generation, in conjunction with increased energy efficiency, and why this alternative was eliminated from detailed analysis. Reasons for eliminating the alternative include the insufficient amount of residential or commercial developments to generate the amount of power that could be produced by the proposed wind farm and the alternative’s failure to satisfy the purpose and need to consider an application for the authorized use of public land for a specific renewable energy technology.

LETTER

From: Jean Public [REDACTED]
Sent: Wednesday, May 16, 2012 12:14 PM
To: BLM_AZ_KFO_Wind_Energy; BLM_AZ_KFO_Wind_Energy; broads@greatoldbroads.org; info@earthjustice.org; center@biologicaldiversity.org
Cc: americanvoices@mail.house.gov; comments@whitehoue.gov; sf.nancy@mail.house.gov
Subject: public comment on federal register

306 i object to construction of so large a facility. 306 i believe we need to have smaller facilities and not cover all land
307 with these bird killing machines. 308 such wind turbines also increas the temperautre of the land below them. 309 there
308 are negatives to wind energy production. how are you proposing to minimize these negatives. 309 its clear we
309 cannot continue to decimate bird populations- especially raptors get killed by these machines. 309 this is my
comment for the public reocrd. jean public

[Federal Register Volume 77, Number 87 (Friday, May 4, 2012)]
[Notices]
[Pages 26572-26574]
From the Federal Register Online via the Government Printing Office
[www.gpo.gov]
[FR Doc No: 2012-10749]

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

Responses Continued

306 A standardized content analysis process was conducted to analyze the public comments on the Draft EIS. Each comment letter and email message received was read, analyzed, and considered by BLM, Reclamation, and Western to ensure that all substantive comments were identified. This comment was reviewed by BLM, and Reclamation, and Western; the agencies have determined that no response is required. Your participation in the public review process is appreciated and your input will be considered by the agencies in the decision-making process.

307 Bird, bat, and other wildlife mortality are topics of concern for BLM, Reclamation, National Park Service (NPS), U.S. Fish and Wildlife Service (USFWS), Arizona Game and Fish Department (AGFD), and BP Wind Energy. Impacts to birds, bats, other wildlife, and wildlife movement are addressed in Section 4.5 of the Draft EIS. Mitigation measures have been developed to minimize bird and other impacts to wildlife and plants. Specific methods to conserve birds are addressed in the draft Eagle Conservation Plan/Bird Conservation Strategy. Appendix C in the Final EIS includes a summary of these plans and the mitigation measures; the complete draft plans are appended to the Plan of Development. Further mitigation measures may be employed by the BLM, Reclamation, USFWS, and AGFD as part of adaptive management of the Project.

308 A study published in Nature Climate Change of an area in Texas with a rapid increase in wind turbine installation over a period of 8 years did find an increase in the nighttime land surface temperature. The study authors also stated that it is “very likely, the wind turbines do not create a net warming of the air and instead only redistribute the air’s heat near the surface (the turbine itself does not generate any heat), which is fundamentally different from the large-scale warming effect caused by increasing atmospheric concentrations of greenhouse gases due to the burning of fossil fuels.” (Liming Zhou, Yuhong Tian, Somnath Baidya Roy, Chris Thorncroft, Lance F. Bosart and Yuanlong Hu, Impacts of wind farms on land surface temperature, Nature Climate Change, DOI: 10.1038/NCLIMATE1505, Published online on 29 April 2012). This article can be accessed online at: http://www.atmos.albany.edu/facstaff/zhou/press_release_wind_farm.htm.

309 Consistent with BLM’s Instruction Memorandum No. 2010-156 Bald and Golden Eagle Protection Act – Golden Eagle National Environmental Policy Act and Avian Protection Plan Guidance for Renewable Energy, BP Wind Energy is required by BLM to have an Eagle Conservation Plan/ Bird Conservation Strategy (ECP/BCS) accepted by the U.S. Fish and Wildlife Service (USFWS) prior to signing the Record of Decision to demonstrate Bald and Golden Eagle Protection Act (BGEPA) and Migratory Bird Treaty Act (MBTA) compliance for NEPA. USFWS has been consulted during the NEPA process and has been actively engaged in reviewing the ECP/BCS. BP Wind Energy is following the proper procedures for golden eagle conservation and compliance with the Bald and Golden Eagle Protection Act. A complete draft of the ECP/BCS is appended to the Plan of Development and is summarized in Appendix C of the Final EIS. Appendix I of the Final EIS contains USFWS’s letter acknowledging consistency with the Draft Eagle Conservation Plan Guidelines.

Letter Continued

[LLAZC01000.L51010000.FX0000.LVRWA09A2310; AZA 32315]

Notice of Availability of the Draft Environmental Impact
Statement for the Proposed Mohave County Wind Farm Project, AZ

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of availability.

SUMMARY: In accordance with the National Environmental Policy Act of 1969 as amended (NEPA), the Bureau of Land Management (BLM) has prepared a Draft Environmental Impact Statement (EIS) for the proposed Mohave County Wind Farm Project and by this notice is announcing the opening of the comment period.

DATES: To ensure comments will be considered, the BLM must receive written comments on the proposed Mohave County Wind Farm Project Draft EIS within 45 days following the date the Environmental Protection Agency publishes its Notice of Availability in the Federal Register. The BLM will announce dates and locations of future meetings or hearings and any other public involvement activities at least 15 days in advance through public notices, media releases, mailings, and the BLM Web site at <http://www.blm.gov/az/st/en/prog/energy/wind/mohave.html>.

ADDRESSES: You may submit comments related to the following Mohave County Wind Farm Project by any of the following methods:

Web site: <http://www.blm.gov/az/st/en/prog/energy/wind/mohave.html>.

Email: KFO_WindEnergy@blm.gov.

Fax: 602-417-9490.

Mail: Bureau of Land Management, Renewable Energy
Coordination Office, Arizona State Office, One North Central Avenue,
Suite 800, Phoenix, Arizona 85004-4427.

Copies of the Mohave County Wind Farm Project Draft EIS are available in the Arizona State Office at the above address; in the Kingman Field Office located at 2755 Mission Boulevard, Kingman, Arizona 86401; and on the above Web site.

FOR FURTHER INFORMATION CONTACT: Or to have your name added to our mailing list, contact Jerry Crockford, BLM-contracted project manager, telephone 505-360-0473; email KFO_WindEnergy@blm.gov; or contact Jackie Neckels, Environmental Coordination, telephone 602-417-9262; address Bureau of Land Management, Arizona State Office, Renewable Energy Coordination Office, One North Central Avenue, Suite 800, Phoenix, Arizona 85004-4427. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339 to contact the above individuals during normal business hours. The FIRS is available 24 hours a day, 7

Letter Continued

days a week, to leave a message or question for the above individuals. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION: The lead Federal agency for the Mohave County Wind Farm Project is the BLM Kingman Field Office. Cooperating agencies are the Western Area Power Administration (Western); Bureau of Reclamation--Lower Colorado Region (Reclamation); National Park Service--Lake Mead National Recreation Area; Mohave County, Arizona; Arizona Game and Fish Department; and the Hualapai Tribe Department of Cultural Resources.

The applicant, BP Wind Energy North America (BPWE), applied for a right-of-way to construct, operate, maintain, and decommission a 500-megawatt (MW) wind farm, including turbine generators and associated infrastructure, on approximately 38,099 acres of land managed by the BLM and approximately 8,960 acres of land managed by Reclamation, totaling approximately 47,059 acres of Federal land. The project area is located in the White Hills area approximately 40 miles northwest of Kingman, Arizona, approximately 9 miles south of the Colorado River, and approximately 20 miles southeast of Hoover Dam. A map of the proposed project area and a legal description are available on the BLM Web site at <http://www.blm.gov/az/st/en/prog/energy/wind/mohave.html>. The project is anticipated to generate up to 500 MW of electricity. It is proposed to consist of up to 283 turbines, access roads, and ancillary facilities. The turbine generators would be selected from those with a power output ranging from 1.5 to 3.0 MW each. To the extent possible, existing roads would be used to reduce potential impacts associated with the construction of new roads. Roads would be improved as needed, and the road network would be supplemented with internal access/service roads to each wind turbine.

Proposed ancillary facilities include pad-mounted transformers, an underground 34.5-kilovolt (kV) electrical collection system between the turbines, distribution connector lines (either underground or above-ground) tying the turbine strings to either a 345-

[[Page 26573]]

kV or a 500-kV electrical substation. This would provide interconnection with the regional power grid through the substation to a new switchyard at one of two major electric transmission lines transecting the project area. The lines, which are administered by Western, are the 345-kV Liberty-Mead line and the 500-kV Mead-Phoenix line.

Scoping was initiated with the publication of a notice of intent in the Federal Register on November 20, 2009, and conducted from November 20 through January 8, 2010. Three public meetings and an agency meeting were held in Kingman, Dolan Springs, and White Hills, Arizona. A supplemental scoping period was initiated with publication of a second notice of intent on July 26, 2010, and concluded on September 9, 2010. Four public scoping meetings were held during the supplemental scoping period; one at each of the three original scoping meeting communities and an additional meeting in Peach Springs, Arizona, at the Hualapai

Letter Continued

Tribe Cultural Center. The BLM considered all input received from the start of the first scoping period (November 20, 2009) to the end of the second scoping period (September 9, 2010).

Public and cooperating agency concerns/comments identified the following issues. The percentage of comments for each issue is included in parentheses: Biological resources (23 percent), project description (17 percent), socioeconomics (9 percent), land use, recreation, and transportation (8 percent), NEPA process (7 percent), visual resources (6 percent), project alternatives (5 percent), cumulative effects (4 percent), noise (4 percent), project need (3 percent), air quality (3 percent), geology and minerals (3 percent), water resources (3 percent), cultural resources (2 percent), and hazardous materials and safety (1 percent).

The Draft EIS considers the impacts of the proposed action, two action alternatives, and a no action alternative. An updated wilderness characteristics inventory determined that none of the public lands in the project area have wilderness characteristics. The Alternative A (proposed action) wind-farm site would encompass approximately 38,099 acres of land managed by the BLM and 8,960 acres of land managed by Reclamation. As with all action alternatives, project features within the wind-farm site would include turbines aligned within corridors, access roads, electrical collection system, an operations and maintenance building, two temporary laydown/staging areas (with temporary batch plant operations), two substations, and a switchyard. The number of turbines constructed would vary depending on the turbine type that is installed, but Alternative A proposes more turbines than the other alternatives. Alternative A could support development of a maximum of 283 turbines.

The Alternative B wind-farm site would encompass approximately 30,872 acres of land managed by the BLM and 3,848 acres of land managed by Reclamation. Alternative B reduces the wind-farm site footprint and has fewer turbines than Alternative A, with the intent of reducing visual and noise impacts on the Lake Mead National Recreation Area primarily and secondarily on private property. The number of turbines constructed would vary depending on the turbine type that is installed, but Alternative B could support development of a maximum of 208 turbines. Alternative B provides a greater distance between the Lake Mead National Recreation Area and the proposed wind-farm project boundary. The Alternative C wind-farm site would encompass approximately 30,178 acres of land managed by the BLM and 5,124 acres of land managed by Reclamation. Alternative C also reduces the wind-farm site footprint and has fewer turbines than Alternative A, with the intent of reducing visual and noise impacts primarily on private property and secondarily on the Lake Mead National Recreation Area. The number of turbines constructed would vary depending on the turbine type that is installed, but Alternative C could support development of a maximum of 208 turbines. Alternative C provides a greater distance from private land and the proposed wind-farm project boundary.

Alternative D is the no action alternative, which provides a baseline against which action alternatives can be compared. Alternative D includes an analysis of effects from not developing the project.

Letter Continued

Alternative D assumes that no actions associated with the project would occur, and no rights-of-way or interconnections would be granted. The BLM-administered lands would continue to be managed in accordance with the Kingman Field Office Resource Management Plan, and the Reclamation-administered lands would continue to be managed by Reclamation. Capacity on Western's transmission lines would remain available for other projects.

The BLM's purpose and need for the Mohave County Wind Farm Project is to respond to BPWE's application under Title V of the Federal Land Policy and Management Act of 1976 (FLPMA) (43 U.S.C. 1761) for a right-of-way (ROW) grant to construct, operate, and decommission a wind-farm site in compliance with FLPMA, BLM ROW regulations and other applicable Federal laws. The BLM will decide whether to approve, approve with modification or deny a ROW grant to BPWE for the proposed wind project.

Reclamation's responsibility under the Act of Congress of June 17, 1902 (32 Stat. 388), Section 10 of the Reclamation Project Act, 1939 (53 Stat. 1187), and 43 CFR part 429 is to respond to a request for a ROW on Reclamation-administered Federal land. Reclamation will decide whether to grant the ROW for the construction, operation, and decommissioning of the wind-farm site on Reclamation-administered lands.

Western's Federal action would be to execute an interconnection agreement and design, construct, own, operate, and maintain the project switchyard and physical interconnection to the existing transmission line under all alternatives.

The BLM will continue to use and coordinate the NEPA public participation requirements to assist the agency in satisfying the public involvement requirements under Section 106 of the National Historic Preservation Act (16 U.S.C. 470f) pursuant to 36 CFR 800.2(d)(3).

The BLM will continue to consult with Indian tribes on a government-to-government basis in accordance with Executive Order 13175 and other policies. Tribal concerns, including impacts on Indian trust assets and potential impacts to cultural resources, will be given due consideration. Federal, State, and local agencies, along with tribes and other stakeholders that may be interested in or affected by the decision on this proposed project, are encouraged to review and comment on the Draft EIS.

The BLM will respond to each substantive comment by making appropriate revisions to the document or by explaining why a comment did not warrant a change.

Before including your phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment--including your personal identifying information--may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Letter Continued

Authority: 40 CFR 1506.6 and 1506.10.

Joan B. Losacco,
Acting Associate State Director.
[FR Doc. 2012-10749 Filed 5-1-12; 11:15 am]
BILLING CODE 4310-32-P

From: BLM_AZ_KFO_Wind_Energy <BLM_AZ_KFO_Wind_Energy@blm.gov>
Sent: Tuesday, May 22, 2012 1:39 PM
To: Jean Public
Cc: Jerry Crockford; Arreola, Eduardo J; Neckels, Jacqueline D; Defend, Beth
Subject: RE: public comment on federal register

Ms. Public,
Thank you for your comments concerning the proposed Mohave County Wind Farm. The comments will be included in the project record and considered in the preparation of the final environmental impact statement.

Dennis Godfrey
Public Affairs Specialist
Bureau of Land Management
Arizona State Office
dgodfrey@blm.gov
602.417.9499

LETTER

From: Catherine Robertson [REDACTED]
Sent: Saturday, May 19, 2012 4:17 PM
To: BLM_AZ_KFO_Wind_Energy
Subject: Mohave County Wind Farm

To Whom It May Concern,

310 | I am a resident of Meadview Arizona, just outside of Lake Mead City and about 20 miles north of Dolan Springs. I say No to the Mohave County Wind Farm. My concern is animal migration and bird kill. There is no feasible protection for eagles, other raptors and migrating birds. Bird kill is the number one issue for me. How would Game and Fish, BLM or Park Service be compliant? I realize that the needs of our nation likely outweigh the worth of eagles and red tail hawks. But, I am concerned.

Thank You

Catherine Robertson
[REDACTED]

From: BLM_AZ_KFO_Wind_Energy <BLM_AZ_KFO_Wind_Energy@blm.gov>
Sent: Tuesday, May 22, 2012 1:23 PM
To: Catherine Robertson
Cc: Arreola, Eduardo J; Neckels, Jacqueline D; Jerry Crockford; Defend, Beth
Subject: RE: Mohave County Wind Farm

Ms. Robertson,

Thank you for your comments on the proposed Mohave Wind Farm project. They will be included in the project record and considered in preparation of the final Environmental Impact Statement.

Dennis Godfrey
Public Affairs Specialist
Bureau of Land Management
Arizona State Office
dgodfrey@blm.gov
602.417.9499

Responses Continued

310 Bird, bat, and other wildlife mortality and animal migration are topics of concern for BLM, Reclamation, National Park Service (NPS), U.S. Fish and Wildlife Service (USFWS), Arizona Game and Fish Department (AGFD), and BP Wind Energy. Impacts to birds, bats, other wildlife, and wildlife movement are addressed in Section 4.5 of the Draft EIS. Mitigation measures have been developed to minimize bird and bat mortality and other impacts to wildlife and plants. Specific methods to conserve birds are addressed in the draft Eagle Conservation Plan/Bird Conservation Strategy. Appendix C in the Final EIS includes a summary of these plans and the mitigation measures; the complete draft plans are appended to the Plan of Development. Further mitigation measures may be employed by the BLM, Reclamation, USFWS, and AGFD as part of adaptive management of the Project.

LETTER

From: Elno Roundy [REDACTED]
Sent: Wednesday, May 16, 2012 12:55 PM
To: BLM_AZ_KFO_Wind_Energy
Cc: 'Leonard Mardian'; 'Austin Williams'; 'LA LORI MARDIAN WILLIAMS'; [REDACTED]
Subject: Mohave County Wind Farm Project

Dear Ms. Neckels,

311

I represent Colorado Mining Company, LLC who owns the livestock grazing base property for the Big Ranch A and B grazing allotments administered by BLM. I have leased the base property to the Charles W. Hamilton Irrevocable Trust who is the BLM grazing permittee. The livestock on these allotments use the area of the proposed wind farm. The draft EIS is a large document and I am looking for any reference to impacts to livestock grazing. So far I can not find anything. Could you please point me to pages in the document that covers this issue??

Thanks you.

Elno Roundy
[REDACTED]

The Desert Blooms:
Mariposa Lily
Calochortus Kennedyi



From: Neckels, Jacqueline D [<mailto:jneckels@blm.gov>]
Sent: 2012-05-24 08:19
To: cleo@citlink.net [REDACTED]
Subject: FW: Mohave County Wind Farm Project

Hi Mr. Roundy,

Your email request on grazing information was forwarded to me. Below is information that should help lead you to the discussion on grazing in the draft EIS.

"Grazing" is a term included in the index – page number references include:

Grazing..... 2-2, 2-3, 3-67, 3-69, 3-74, 3-76, 3-80, 4-75, 4-76, 4-77, 4-79, 4-80, 4-81, 4-82, 4-83, 4-94, 4-102, 4-129, 4-163, 4-167, 4-168, 4-171, 4-178, 4-179, 4-180, 4-181, 4-182, 4-183, 4-185, 4-187, 4-188, B-1

Key text in Chapter 3:

8.3.8 Livestock Grazing

Historic livestock grazing practices in northwest Arizona, including within the region, are similar to those employed in the northwest and southwest U.S. prior to the mid-twentieth century. Enactment of the Taylor Grazing Act of 1934 provided parameters for livestock grazing in the form of grazing allotments, regulation of number and type of livestock (i.e., cattle, sheep, horses), and season of use. BLM uses monitoring studies and rangeland health assessments to determine if proper grazing management will meet public land health standards as outlined in the *Arizona Standards and Guidelines for Rangeland Health* (BLM 1997).

Responses Continued

311 BLM Environmental Coordinator Jackie Neckels responded to the comment on May 24, 2012 with the following information:

Below is information that should help lead you to the discussion on grazing in the Draft EIS. “Grazing” is a term included in the index – page number references include:

Grazing..... 2-2, 2-3, 3-67, 3-69, 3-74, 3-76, 3-80, 4-75, 4-76, 4-77, 4-79, 4-80, 4-81, 4-82, 4-83, 4-94, 4-102, 4-129, 4-163, 4-167, 4-168, 4-171, 4-178, 4-179, 4-180, 4-181, 4-182, 4-183, 4-185, 4-187, 4-188, B-1 Key text in Chapter 3: Section 3.38

In Chapter 4, it would be best to refer to Section 4.8. There is not a separate section on grazing, per se, but the effects on grazing for each alternative and in each phase of the project are addressed in Section 4.8. Most of the latter Chapter 4 page number references noted in the index for “grazing” pertain to the cumulative effects analysis. Hopefully this will help you navigate through the document. If you have other questions please let us know.

Letter Continued

Grazing permits are required for livestock use on public lands. Permits are generally authorized for 10 years and outline terms and conditions for annual grazing utilization. Grazing allocations in terms of animal unit months (the amount of forage needed to sustain one cow, five sheep, or five goats for a month), season of use, and number and type of livestock are among the mandatory terms and conditions put forth in each permit. Other terms and conditions include methods to meet management objectives. Annual adjustments to a grazing system are possible if the livestock operator (permittee) has met the terms and conditions of his/her permit.

Grazing allotments on public lands in the region are classified according to the type of forage available for livestock. Two classifications are used: perennial and ephemeral. Perennial forage is available consistently each year through perennially producing grasses, forbs, and shrubs. Ephemeral forage consists of annual grasses and forbs that become productive only in response to adequate spring moisture and warm temperatures. On ephemeral allotments, grazing is authorized only when ephemeral forage is abundant. All grazing allotments in Mohave County are designated as perennial or ephemeral. Forage availability in the allotments is both ephemeral and perennial and most ranching operations on public land in the region are yearlong cow-calf enterprises.

Rangeland improvement projects have been constructed throughout the region to improve livestock grazing. Rangeland improvements such as springs, wells, storage tanks, and rain catchments have been developed in the region to provide water for livestock and wildlife. Rangeland improvement features in Big Ranch Unit A include unfenced reservoirs, troughs, windmills, and livestock fencing. Big Ranch Unit B range features include a trough, storage tank, and two developed springs (see Map 3-8). There are no rangeland improvement projects located on Reclamation-administered lands in Big Ranch Unit B.

8.4.3 Livestock Operations/Grazing Allotments/Grazing Permits

The Project Area is located on portions of two grazing allotments: Big Ranch Unit A and Big Ranch Unit B (Table 3-18). A majority of the Project Area is located within the Big Ranch Unit A allotment. The BLM categorizes grazing allotments by three types of management priority; “I” for improve, “M” for maintain, and “C” for custodial. Allotments within the Project Area are categorized as “I” for improve, and “C” for custodial. The two grazing allotments encompassing the Project Area are classified as ephemeral and authorized for yearlong cow-calf enterprises. In Arizona, BLM grazing allotments classified as ephemeral are rangelands that do not consistently produce enough forage to sustain a year round livestock operation but may briefly produce unusual volumes of forage to accommodate livestock grazing. Livestock grazing is permitted on Reclamation-administered land and, prior to issuing a grazing lease; the lessee determines carrying capacities and establishes a grazing plan to maintain productive rangelands (Reclamation 2002). There are no rangeland improvement features in Big Ranch Unit A or Big Ranch Unit B within the proposed Wind Farm Site (Map 3-8).

Table 3-18 Grazing Allotments in Proposed Wind Farm Site

Allotment Name	Management Priority	Allotment ID	Acres in Allotment	Permitted AUMs in Allotment	Acres within Project Area	Percentage of Allotment L within Wind
Big Ranch Unit A	I	00007	173,343	5,397	29,445	17.0
Big Ranch Unit B	C	00081	442,630	0	17,619	0.4

SOURCE: LR 2000

In Chapter 4, it would be best to refer to Section 4.8. There isn't a separate section on grazing, per se, but the effects on grazing for each alternative and in each phase of the project are addressed in Section 4.8.

Most of the latter Chapter 4 page number references noted in the index for “grazing” pertain to the cumulative effects analysis.

Hopefully this will help you navigate through the document. If you have other questions please let us know. Thanks.....jn

Jackie Neckels
 Environmental Coordinator
 Renewable Energy Coordination Office
 BLM Arizona State Office
 One North Central Ave., Suite 800
 Phoenix, AZ 85004-4427
 602.417.9262
jneckels@blm.gov

“Have the courage of patience and the strength of persistence.” Dad



Mohave County Wind Farm Project



DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS) COMMENT FORM

Bureau of Land Management, Kingman Field Office / Arizona

As part of the 45-day public comment period the Bureau of Land Management (BLM) is holding public meetings to present an overview of the Draft Environmental Impact Statement (EIS) analysis. Please take a few minutes to answer the questions below and return this sheet to the sign-in table or to the address printed on the reverse side. Comments would be most helpful if received on or before the 45-day public comment period closing date of June 11, 2012.

Please provide your current mailing address and/or any additional names and addresses you think should be included on our mailing list.

Meeting Location: White Hill Comm. Center

Your Name: John L. Sandow Name: _____

Address: _____ Address: _____

City/State: _____ City/State/Zip: _____

Please check all that apply:

- Add my name to the mailing list for this project
- Withhold my name/address to extent allowed by law (only for persons not representing organizations)*

* All comments received by BLM become part of the public record associated with this proposed project. Accordingly, your comments (including name and address) will be available for review by any person who wishes to review the public record. At your request, we will withhold your name and address to the extent allowed by the Freedom of Information Act or any other law. However, all submissions from organizations or businesses, and individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

1. Please provide comments on the Draft EIS and/or project characteristics (i.e., project area, turbine color, transmission interconnection, etc.).

To make your comments most effective, please:

- Identify specific information that should be considered during the EIS process
- Offer a specific idea of how to address a particular concern
- Provide specific information about how a particular element of the project would affect you
- Speak to a project team member if you have any questions on project information
- Write clearly and legibly so that we can accurately record your comments

Remember: Every comment counts and any comment can make a difference.

312 [I'm looking forward to the operation of the Wind Mill Project.

Responses Continued

312 A standardized content analysis process was conducted to analyze the public comments on the Draft EIS. Each comment letter and email message received was read, analyzed, and considered by BLM, Reclamation, and Western to ensure that all substantive comments were identified. This comment was reviewed by BLM, and Reclamation, and Western; the agencies have determined that no response is required. Your participation in the public review process is appreciated and your input will be considered by the agencies in the decision-making process.

LETTER

From: Rick Sherwood [REDACTED]
Sent: Wednesday, May 16, 2012 10:38 AM
To: BLM_AZ_KFO_Wind_Energy
Subject: Mohave County Wind Farm Project

Project questions:

- 313 [- how was BP and BLM brought together?
- 314 [- Who paid for the EIS?
- 315 [- who will pay for the project costs?
- 316 [- who owns the land now, in project and after?
- 317 [- how does the financially help Mohave County? I want real dollars
-
- 318 [- Why not have an alternative E? This would be.. return our land back to the public and let market forces develop and use this land. We didn't vote on this, we are being TOLD about this. Government can not and should not be in the market place, they can't manage business. Hasn't this been proven enough already?

Rick Sherwood
[REDACTED]

Responses Continued

313 Pages 1-4 and 1-5 of Section 1.2 of the Draft EIS include a summary of the project background that discusses the regulatory guidance for wind energy projects proposed for development on BLM and Reclamation lands. As discussed in Section 1.2.2, BLM is responsible for reviewing and processing applications for ROWs on public lands in accordance with the Federal Land Policy Management Act (FLPMA). BLM is authorized to issue rights-of-way (ROWs) for “systems for generation, transmission, and distribution of energy...” per FLPMA 43 U.S. Code (U.S.C.) § 1761(a)(4). A ROW grant is a Federal action that requires the completion of environmental reviews pursuant to National Environmental Policy Act (NEPA). Table 1.1 on pages 1-5 and 1-6 of the Draft EIS provides a description of how the Project Area has been established through a series of BLM and Reclamation ROW grants for wind energy testing and monitoring, and applications for development ROW grants beginning in October of 2003.

314 The EIS was prepared at BP Wind Energy’s expense and included a cost recovery agreement with the BLM, Western, and Reclamation to compensate for time expended by agency staff. BLM selected URS, a third-party contractor, to develop the EIS and to work at BLM’s direction. URS is working for BLM, but BP Wind Energy is paying for the EIS.

315 BP Wind Energy would pay the cost of constructing, operating and maintaining, and decommissioning of most project elements; an exception is that Western would construct, own, operate, and maintain the Switchyard. Title V of FLPMA and the ROW regulations authorize the BLM to require the ROW holder to provide a bond to secure the obligations imposed by the ROW grant (43 U.S.C. 1764(i) and 43 CFR 2805.12(g)). If ROW is granted to BP Wind Energy, BLM will require a Performance and Reclamation bond to ensure compliance with the terms and conditions of the ROW authorization. The BLM authorized officer will identify the total amount of the Performance and Reclamation bond in the decision that supports the issuance of the ROW authorization.

316 The land proposed for the wind farm and the associated features (e.g., access road, Materials Source, etc.) are owned by the U.S. Government; these lands are administered by BLM and Reclamation. If the project is approved for development, BLM and Reclamation would issue ROWs to BP Wind Energy, but the land would continue to be owned by the U.S. Government and administered by the BLM and Reclamation, during Project development, operations, as well as after the Project is decommissioned. Other commercial uses that are permitted and occur within the area include rights-of-way that do not conflict with the Project (per 43 CFR 2805.15(b), grazing, use of mineral materials, and recreation use. These uses would continue should the Project be approved by the BLM, Reclamation, and Western and other compatible uses would be considered in accordance with multi-use policies.

317 Tables 4-15 and 4-16 in Section 4.10.1.2 (pages 4-91 and 4-92 in the Draft EIS), and Tables 4-19 in the Final EIS show that the estimated construction expenditures in Mohave County would be \$14,340,000 per 100 MW. Table 4-20 in the Final EIS indicates that the operations and maintenance expenditures would be \$410,000 per 100 MW. Because the nameplate capacity of the Project would be 425 MW or 500 MW, depending on the transmission line intertie, this equates to construction expenditures in the range of \$60.9 million to \$71.7 million and operations and maintenance expenditures of \$1.7 million to \$2.0 million. Assuming a 500-MW project, Mohave County is anticipated to receive approximately \$366,000 in tax revenues over the construction phase of the Project, while local purchases of goods and labor is anticipated to generate nearly \$900,000 in tax revenue for cities within the county (see Table 4-20, page 4-97 of the Draft EIS, and Table 4-24 of the Final EIS). At current tax rates, annual tax revenues to Mohave County are estimated at \$350,000 with an additional \$40,000 to cities within Mohave County (Table 4-21 of the Draft EIS and Table 4-25 of the Final EIS). Alternatives B, C, and E are anticipated to support a comparable number of jobs and income as Alternative A.

318 The land is public land that is administered by the BLM and Reclamation. FLPMA, which established BLM’s role, mandates that the public land be managed for multiple uses, which includes the market forces that influence developers to submit applications for ROWs to use the land.

Responses Continued

Other commercial uses that are permitted and occur within the area include grazing, use of mineral materials, and recreation use. These uses would continue should the project be approved by the BLM, Reclamation, and Western.

If BLM and Reclamation were to approve ROWs for the project, the agencies would not be involved in the day-to-day business operations. BP Wind Energy would be responsible for wind farm operations.

The Draft EIS analyzes a no action alternative (Alternative D). Should that alternative be selected by the BLM, Reclamation, and Western, the Project would not be developed. However, the land within the Project Area would still be managed for multiple use and be available should another commercial project or activity be proposed in that area.

No alternative to transfer the land to private ownership was considered as this would be a separate proposal beyond the scope of the action proposed and was not deemed reasonable; land exchanges and transfers are often complex and lengthy processes. Had the land been in private ownership, BP Wind Energy might have sought lease agreements from private land owners; the majority of the wind farms developed by BP Wind Energy have been on leased private land.

Letter Continued

From: Rick Sherwood [REDACTED]
Sent: Tuesday, May 29, 2012 8:13 AM
To: Neckels, Jacqueline D
Subject: Re: Mohave Wind Project

319 Thank you for your responses, I do appreciate them. I do however think I didn't make my last question clear. [While you might think these are public lands, they really are not. What I was referring to was, if Joe the plumber owned this land have BP work with him, not BLM or any other governmental agency. If this were the case would this project still be viable. Or, will it turn out to be another Solendra?

From: Neckels, Jacqueline D <jneckels@blm.gov>
Sent: Tuesday, May 29, 2012 9:43 AM
To: [REDACTED]
Cc: Defend, Beth; Godfrey, Dennis C; Arreola, Eduardo J
Subject: RE: Mohave Wind Project

Mr. Sherwood,

Thank you for your additional comments, expressing your point of view. Those comments will also be included in the project record.

Jackie Neckels
Environmental Coordinator
Renewable Energy Coordination Office
BLM Arizona State Office
One North Central Ave., Suite 800
Phoenix, AZ 85004-4427
602.417.9262
jneckels@blm.gov

"Have the courage of patience and the strength of persistence." Dad

Responses Continued

319 A standardized content analysis process was conducted to analyze the public comments on the Draft EIS. Each comment letter and email message received was read, analyzed, and considered by BLM, Reclamation, and Western to ensure that all substantive comments were identified. This comment was reviewed by BLM, and Reclamation, and Western; the agencies have determined that no response is required. Your participation in the public review process is appreciated and your input will be considered by the agencies in the decision-making process.

LETTER

From: Tom Treaccar [REDACTED]
Sent: Tuesday, May 29, 2012 11:04 AM
To: BLM_AZ_KFO_Wind_Energy
Subject: BP's Development Plan

Ruben Sanchez, Field Manager
[BLM Kingman Field Office](#)
2755 Mission Boulevard
Kingman, AZ 86401

Mr Sanchez:

320 [Is BP's Development Plan available. I am a property owner nearby and would like to see the project plans. I am excited to see this project go forward.

Sincerely,
Tom Treaccar

[REDACTED]

From: BLM_AZ_KFO_Wind_Energy <BLM_AZ_KFO_Wind_Energy@blm.gov>
Sent: Tuesday, May 29, 2012 2:18 PM
To: Tom Treaccar
Cc: Arreola, Eduardo J; Neckels, Jacqueline D; Sanchez, Ruben A; Defend, Beth
Subject: RE: BP's Development Plan

Mr. Treaccar,
I've been asked to respond to your inquiry concerning the proposed Mohave County Wind Farm project.

BP Wind's Plan of Development is available from the BLM project page,
<http://www.blm.gov/az/st/en/prog/energy/wind/mohave/reports.html>.

Please let me know if you have any problems getting to the page, or if you have additional questions.

Dennis Godfrey
Public Affairs Specialist
Bureau of Land Management
Arizona State Office
dgodfrey@blm.gov
602.417.9499

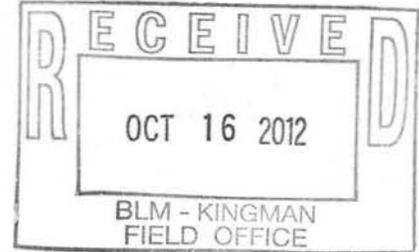
Responses Continued

320 Dennis Godfrey, the BLM Public Affairs Specialist, responded to this comment via email on May 29, 2012, indicating that BP Wind's Plan of Development is available from the BLM project page, <http://www.blm.gov/az/st/en/prog/energy/wind/mohave/reports.html>.

LETTER

Mohave County Wind Farm
Renewable Energy Coordination Office
Jackie Neckels
One North Central Avenue, Suite 800
Phoenix, Arizona 85004-4427

10/16/2012



Dear Mr. Neckels,

321 I would like to object to the proposed wind farm. I feel these towers would be
322 blight on the public lands. I also would like to file a formal complaint. On a
weather tower being built 1 ½ miles from my home. Under your rules anything
that happens on Blm property within three miles of private property. The land
owners are to be contacted for input, prior to the action. I was not notified. I do
not want ugly towers in the view shed of my home.

A handwritten signature in cursive script that reads "Arthur J Schlosser Jr.".

Arthur J Schlosser Jr.

Responses Continued

321 A standardized content analysis process was conducted to analyze the public comments on the Draft EIS. Each comment letter and email message received was read, analyzed, and considered by BLM, Reclamation, and Western to ensure that all substantive comments were identified. This comment was reviewed by BLM, and Reclamation, and Western; the agencies have determined that no response is required. Your participation in the public review process is appreciated and your input will be considered by the agencies in the decision-making process.

322 The weather tower is unrelated to the Mohave County Wind Farm Project and is beyond the scope of this EIS. BLM is investigating the proposed weather tower and will provide findings to you.