Comments of the American Wind Energy Association to the *Draft Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States*

The American Wind Energy Association (AWEA) and its members greatly appreciate the efforts of the Bureau of Land Management (BLM) to develop the *Draft Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States* (draft PEIS). BLM's desire to encourage renewable energy production, including wind energy, on federal lands is, as described in detail in the draft PEIS, beneficial for everyone involved in terms of economic benefits and clean electricity production.

The wind energy industry is pleased that the BLM developed the draft PEIS in order to bring standards and consistency to the BLM's consideration of environmental issues that are similar across all wind energy projects proposed on BLM-administered lands in the western U.S. As BLM officials such as Rebecca Watson, Assistant Secretary for Land and Minerals Management at the Department of the Interior, have indicated in the press, wind energy projects would continue to conform to site-specific analyses and public participation processes for individual projects. However, the ability to tier an Environmental Assessment (EA) off of the analyses in the PEIS and the decisions in the resultant Record of Decision (ROD) will allow all involved to focus on any site-specific issues and reduce the need for duplicative reviews for every wind energy project.

Below are selected statements and sections in the draft PEIS. In each case, AWEA's comments on the highlighted statement or section are provided and a recommendation is made. AWEA appreciates the opportunity to comment on the draft PEIS and looks forward to working with the BLM on the development of wind energy on public lands.

These comments reflect the views of the diverse membership of AWEA, including companies such as FPL Energy, Orion Energy, PPM Energy, SeaWest WindPower, Stoel Rives LLP, Tetra Tech, and Zilkha Renewable Energy.

Application Process

Statement: "*Tiering off project-specific environmental analyses.* The BLM proposes that future, project-specific environmental analyses for wind energy development would tier off of the analyses conducted in this PEIS and the decisions in the resultant Record of Decision (ROD), and thereby allow the project-specific analyses to focus just on the critical, site-specific issues of concern." [2.2]

- Comment: Clarify this statement to indicate the preference for EA's rather than site-specific EIS's unless there is significant public concern or significant impacts. In the *Interim Wind Energy Development Policy* language was included to this effect.

- Recommendation: Add the following language from the Interim Policy: "A comprehensive Environmental Assessment (EA) will usually be required, however, an Environmental Impact Statement (EIS) may be required if significant public controversy or a determination of significant adverse impacts is made. It may also be possible to combine the required environmental review process for a wind energy development project with applicable State or local environmental procedures for energy facility siting. This would both streamline the process and be consistent with Departmental policy on intergovernmental cooperation."

Wildlife

Statement: "Meteorological towers should not be located in or near sensitive habitats or in areas where ecological resources known to be sensitive to human activities… are present." [2.2.3.2.1]

- Comment: We are aware of many cases of meteorological towers placed near sensitive areas where no adverse impacts were found.

- Recommendation: "Meteorological towers should not be located in or near locations known to support ESA-protected species which are expected to be adversely and significantly impacted by the installation of the meteorological tower."

Statement: "The monitoring program should incorporate adaptive management strategies to ensure that potential adverse impacts of wind energy development are mitigated to the fullest extent possible throughout the life of the project." [2.2.3.2.2]

- Comment: A continuous monitoring program appears to address all of the unknowns that could arise, creating significant uncertainty for the wind project owner.

- Comment: Right-of-way holders should not be required to mitigate impacts "to the fullest extent possible throughout the life of the project." Certain impacts, such as visual impacts, cannot be mitigated while others can be mitigated only at a cost that is disproportionate to the impact. This language should be amended to "mitigated to a level of insignificance, to the extent practicable."

- Recommendation: "If appropriate, the monitoring program should incorporate adaptive management strategies for a reasonable period of time to ensure that potential adverse impacts of wind energy development are mitigated to a level of insignificance, to the extent practicable."

Statement: "…the location of turbines in areas with high bird usage, in known bird migration pathways, near wetlands and other bird-rich habitats, and in areas with a high incidence of fog and mist, should be avoided." [2.2.3.2.2]

- Comment: Scientifically-based avian studies and evaluation of proposed project sites can identify sites that pose a significant risk to avian species of concern. There are many existing wind projects that do not experience high rates of avian mortality but are near areas with high bird usage, in known bird migration pathways, near wetlands and other bird-rich habitats, and in areas with a high incidence of fog and mist.

- Recommendation: "…the location of turbines in areas with high bird usage, in known bird migration pathways, near wetlands and other bird-rich habitats, and in areas with a high incidence of fog and mist, should be avoided *if site studies show the turbines would pose a significant risk to avian species of concern*." [Emphasis indicates additional language proposed]

Statement: "turbines should be configured to avoid landscape features known to attract raptors" [2.2.3.2.2; 5.9.5.2.1]

- Comment: Scientifically-based avian studies and evaluation of proposed project sites can identify sites that pose a significant risk to raptor species of concern.

- Recommendation: "turbines should be configured to avoid landscape features known to attract raptors *only if a particular feature is heavily used by raptors and if site studies show placing turbines there would pose a significant risk to raptor species of concern*." [Emphasis indicates additional language proposed]

Statement: "Procedures should be developed to mitigate potential impacts to special status species. Such [mitigation] measures could include avoidance, relocation of project facilities or lay-down areas, and/or relocation of biota." [2.2.3.2.2]

- Comment: Mitigation should be addressed to species of concern. "Species of concern" means species that might be in need of conservation action. (See http://endangered.fws.gov/glossary.pdf.) It includes species listed as threatened or endangered under the federal Endangered Species Act (ESA) and "candidate" species actively being considered for listing under the ESA.

- Recommendation: Replace "special status species" with "species of concern."

Statement: "New access roads and utility corridors should be configured to avoid high quality habitats and minimize habitat fragmentation." [5.9.5.2.1]

- Comment: Any required measures to protect habitats should be addressed to "species of concern" and must be practicable.

- Recommendation: "New access roads and utility corridors should be configured to avoid high quality habitats *of species of concern* and minimize fragmentation *of habitats of species of concern, to the extent practicable*." [Emphasis indicates additional language proposed]

Statement: "Permanent meteorological towers, transmission towers, and other facility structures should be designed so that they cannot be used for perching or nesting by birds." [5.9.5.2.1]

- Comment: Developers cannot guarantee that no perching or nesting will occur on any structures in a project. For example, developers cannot prevent perching or nesting on an O&M building.

- Recommendation: "Permanent meteorological towers *and wind turbines* should be designed to *minimize the potential for perching and nesting by raptors, to the extent practicable. Overhead distribution lines should conform to the recommendations of the Avian Power Line Interaction Committee (APLIC) in its Suggested Practices for Raptor Protection on Power Lines (1996)."* [Emphasis indicates additional language proposed]

Statement: "Turbines and other project facilities should not be located in areas with known high bird usage; in known bird and/or bat migration corridors or known flight paths; near raptor nest sites; and in areas used by bats as colonial hibernation, breeding, and maternity/nursery colonies." [5.9.5.2.1]

- Comment: Scientifically-based avian and bat studies and evaluation of proposed project sites can identify sites that pose a significant risk to avian and bat species of concern. There are many existing wind projects that do not experience high rates of avian or bat mortality but are near areas with known high bird usage; in known bird and/or bat migration corridors or known flight paths; near raptor nest

sites; and in areas used by bats as colonial hibernation, breeding, and maternity/nursery colonies.

- Recommendation: "Turbines and other project facilities should not be located in areas with known high bird usage; in known bird and/or bat migration corridors or known flight paths; near raptor nest sites; and in areas used by bats as colonial hibernation, breeding, and maternity/nursery colonies, *if site studies indicate that they would pose a high risk to species of concern.*" [Emphasis indicates additional language proposed]

Statement: "Buffer zones should be established around raptor nests, bat roosts, and biota and habitats of concern." [5.9.5.3.2]

- Comment: Scientifically-based avian and bat studies and evaluation of proposed project sites can identify sites that pose a significant risk to avian and bat species of concern. There are many existing wind projects that do not experience high rates of avian or bat mortality but are near raptor nests, bat roosts, or biota or habitats of concern.

- Recommendation: "Buffer zones should be established around raptor nests, bat roosts, and biota and habitats of concern *if the proposed turbines and other project facilities are shown to pose a significant risk to avian or bat species of concern*." [Emphasis indicates additional language proposed]

Statement: "Higher-height vegetation should be encouraged along transmission corridors to minimize foraging in those areas by raptors." [5.9.5.4.3]

- Comment: This language appears to be specific only to the Altamont Pass Wind Resource Area and not applicable to wind projects in other locations. Additionally, there are other concerns, such as public safety (e.g. fire hazard) and maintenance issues that conflict with this recommendation.

- Recommendation: Delete this statement.

Statement: "Biota protected by state statutes should be relocated." [5.9.5.6]

- Comment: This statement is too broad. Biota means all the plant and animal life of a particular region. If plants protected by state statutes will be unavoidably impacted by the proposed turbines or other project facilities, one possible means of mitigating the impact is to relocate the impacted plants to another location, but relocation may not always be the best or most practical choice for mitigation. State law will dictate the preferred means of protecting biota protected under state statutes.

- Recommendation: Delete this statement.

Sound

Statement: "Proponents of a wind energy development project should take measurements to assess the existing background noise levels at a given site and compare them with the anticipated noise levels associated with the proposed project." [2.2.3.2.2; 5.5.5]

- Comment: Project proponents should be required to comply with applicable state and local noise regulations. Most noise regulations do not require measurements of background noise levels prior to installation of the project. In many cases, there will not be any sensitive receptors close enough to the proposed turbines to hear the wind turbine noise, so these measurements will serve no useful purpose.

- Recommendation: Replace this statement with the following: "If there are residences, hospitals, retirement facilities, churches or other sensitive noise receptors within 1 mile of the proposed wind turbines, then project proponents should model the expected noise levels at the nearest receptor to ensure compliance with state and local noise standards applicable to the project."

Section: Low-Frequency Sound [3.3.5]

- Comment: A critical survey of published measurement results of infrasound from wind turbines concludes that wind turbines with the rotor located upwind of the tower produce only very low levels of infrasound [See reference below]. Even measured quite close to these turbines the infrasound level was found to be far below relevant assessment criteria, including the limit of human perception. In the evaluation of the environmental impact of wind turbines, such low infrasound levels are not significant.

  Reference:

  - Jørgen Jakobsen, Danish Environmental Protection Agency, **Infrasound Emission from Wind Turbines,** 11th International Meeting On Low Frequency Noise and Vibration and its Control, Maastricht, The Netherlands, 30 August to 1 September 2004.

- Comment: Wind turbines with a downwind rotor generate considerably higher infrasound levels, which may violate relevant assessment criteria in distances up to several hundred meters. At greater distances the infrasound level drops below these criteria, and experts have questioned whether the infrasound can be the cause of reported negative public reactions to large downwind turbines.

  Reference:

- Jørgen Jakobsen, Danish Environmental Protection Agency, **Infrasound Emission from Wind Turbines,** 11th International Meeting On Low Frequency Noise and Vibration and its Control, Maastricht, The Netherlands, 30 August to 1 September 2004.

- Comment: Dr. Geoff Leventhall, noted acoustical expert and author of "A Review of Published Research on Low Frequency Noise and its Effects," has commented on the effects of low-frequency noise from wind turbines, as follows: "There is only a relatively small amount of low-frequency noise from wind farms, where low-frequency noise is taken to mean 10 Hz to about 200 Hz. The noise is mainly mechanical, and gear related. Considering infrasound as below 20 Hz, there is very little from wind turbines. You have to distinguish between what is technically interesting and what is relevant to subjective effects. Available information shows that infrasound levels at approximately 100 meters from a turbine rise to 60 to 70 dB at 10Hz, where the average hearing threshold is nearly 100 dB. I really do not expect infrasound from modern wind turbines to be an issue, but because of the publicity which has been given to low frequency noise, we have to take this on board in order to find out the true facts".

  References:

  - Bastasch, Mark. **Revising Oregon's Noise Regulations for Wind Turbines.** NOISE-CON 2004. Baltimore, Maryland. July 12-14, 2004.

- Comment: This section appears to be based on an older installations of downwind machines. It references subjective criteria and 'complaints'. This section is alarming and unnecessary given that *all modern turbines are upwind.*

- Recommendation: Modify this section to reflect the comments above.

Statement: "The human response to changes in decibel levels has the following characteristics (NWCC 1998): A 3-dB change in sound level is considered a barely noticeable difference; A 5-dB change in sound level will typically result in a noticeable community response; and, A 10-dB change, which is generally considered to be a doubling of the sound level, almost certainly causes an adverse community response." [4.5.1]

- Comment: This statement is overbroad and lacks context when applied to a wind project. At many project sites on BLM-administered lands, large fluctuations in broadband wind noise will be common, and an increase from 20 to 30 dB or even 30 to 40 dB would not likely be objectionable to the community.

- Recommendation: Delete this statement.

Statement: "Proponents of a wind energy development project should take measurements to assess the existing background noise levels at a given site and

compare them with the anticipated noise levels associated with the proposed project (Section 4.5.2)." [5.5.5]

- Comment: Project proponents should be required to comply with applicable state and local noise regulations. Most noise regulations do not require measurements of background noise levels prior to installation of the project. In many cases, there will not be any sensitive receptors close enough to the proposed turbines to hear the wind turbine noise, so these measurements will serve no useful purpose.

- Recommendation: Replace this statement with the following: "If there are residences, hospitals, retirement facilities, churches or other sensitive noise receptors within 1 mile of the proposed wind turbines, then project proponents should model the expected noise levels at the nearest receptor to ensure compliance with state and local noise standards applicable to the project."

Statement: "Noisy activities should be scheduled to occur at the same time since additional sources of noise generally do not add a significant amount of noise." [5.5.5]

- Comment: It may be appropriate to include the time-of-day restrictions on noisy activities, but this statement implies that all blasting must be done at the same time, which is impractical and would significantly increase the amount of noise.

- Recommendation: Delete this statement.

Visual

Statement: "Turbine arrays and the turbine design should be integrated into the surrounding landscape. To accomplish this integration, several elements of design need to be incorporated." [5.11.6]

- Comment: This statement would be difficult or impossible to comply with in many cases. Turbine placement is usually not flexible, as the turbines must be located where they will operate most effectively, and changes in placement often substantially impact performance. Further, turbine placement, design and integration should not be implemented to the detriment of other environmental considerations and may not be economically viable.

- Recommendation: This statement should be deleted.

Statement: "The operator should avoid placement of ancillary structures on high land features and along "skylines". [5.11.6]

- Comment: This statement is too broad. There is often no practical alternative to placing ancillary structures on high land features and along "skylines".

- Recommendation: "*To the extent practicable,* the operator should avoid placement of *substations or large operations buildings* on high land features and along 'skylines' *that are visible from nearby sensitive view points*." [Emphasis indicates additional language proposed]

Statement: "The operator should bury power collection cables or lines on site." [5.11.6]

- Comment: It may be impracticable to bury power collection cables or lines where blasting is the only commercially reasonable method of burying the power line, or where the power line crosses a road, railroad, pipeline, power line, ravine, flowing water, wetland, or location that has plant species of concern.

- Recommendation: "*If practicable*, the project proponent should bury power collection cables or lines on site *unless burial would result in increased impacts or would violate applicable law*." [Emphasis indicates additional language proposed]

Noxious Weeds

Statement: "...the cleaning of vehicles prior to arrival at a location to avoid the introduction of invasive weeds should be required." [2.2.3.2.2]

- Comment: It is impracticable and unnecessary to clean every vehicle prior to its arrival at the project location.

- Recommendation: Replace this statement with the following: "Comply with federal, state, and local noxious weed control regulations. Provide a 'clean vehicle policy' while entering and leaving construction areas to prevent transport of noxious weed plants and/or seed."

Hazardous Materials and Waste Management [Section 2.2.3.2.2]

- Comment: It should be sufficient for the BLM to require that an operator comply with all applicable state and federal hazardous materials and waste management laws.

- Recommendation: Replace this section with the following: "A wind project operator must develop a spill prevention and response plan and a stormwater pollution plan, if applicable, in compliance with federal and state law."

Safety

Statement: "…the health and safety program should establish a safety zone or setback from residences, roads, and other public access areas that is sufficient to prevent accidents resulting from various hazards." [2.2.3.2.2]

- Comment: The public has access to much of the land managed by the BLM. The inclusion of "other public access areas" is a vague term that could be interpreted to cover vast areas not appropriate to protect public safety.

- Recommendation: "…the health and safety program should establish a safety zone or setback *for wind turbine generators* from residences *and occupied buildings*, roads, *railroad rights-of-way, transmission corridors and above-ground pipelines* that is sufficient to prevent accidents resulting from *the operation of wind turbine generators*." [Emphasis indicates additional language proposed]

Statement: "The project should be designed to establish a sufficient setback from turbines to the nearest residence to reduce EMF, shadow flicker, and exposure to low-frequency sound emissions. A minimum setback distance of 10 rotor diameters is recommended to reduce shadow flicker (Burton et al. 2001) and may be sufficient for EMF and low frequency sound." [5.8.2 Public Safety, (pg 5-34)]

- Comment: A 10 rotor diameter setback is excessive and unnecessary to address the issues of EMF, shadow flicker and low frequency sound, as discussed elsewhere in these comments.

- Recommendation: Delete the 10 rotor diameter setback recommendation and replace these statements with the following: "If operation of the wind turbines is expected to cause significant adverse impacts to nearby residences and occupied buildings from shadow flicker or low frequency sound, site specific recommendations for addressing these concerns should be incorporated into the project design."

Shadow Flicker

Statement: "A minimum distance of 10 rotor diameters is recommended to reduce shadow flicker…" [2.2.3.2.2]

- Comment: A 10 rotor diameter setback to reduce shadow flicker is not based on any objective criteria. Shadow flicker at potential receptors depends on a number of different criteria including sun-angle, vegetative cover (or other landscape features), and topography. At distances of greater than 1000 feet between wind turbines and potential receptors, shadow flicker only occurs at sunrise or sunset when the shadows from moving turbine blades are sufficiently long, and generally for only a small number of hours per year. Shadow flicker can be prevented by switching on lights in an affected room, by covering a window with curtains, blinds or shutters, or by screening windows and/or receptors with trees, shrubs, fences or similar objects.

- Comment: There are no documented human or animal health impacts associated with shadow flicker. The shadow flicker frequency from modern wind turbines varies, but is generally between 0.6 to 1.0 Hz (less than 1 alternation per second), whereas the Epilepsy Foundation states that frequencies below 10 Hz are not likely to trigger photosensitive epilepsy seizures.

- Recommendation: Delete the 10 rotor diameter setback for shadow flicker or modify it to reflect the comments above.

Lighting

Statement: "Additional warning information may also need to be conveyed to aircraft with onboard radar systems so that echoes from wind turbines can be quickly recognized." [2.2.3.2.4; 5.8.2] "…the FAA should be consulted so that only white strobe lights with a minimum number of flashes per minute are used." [pg 5-65]

- Comment: The Federal Aviation Administration (FAA) is responsible for determining hazards to aircraft and air traffic, and for making lighting determinations. Recommendations such as this should be left to the appropriate agency, the FAA. The FAA is currently considering revisions to its wind power project lighting guidelines, and wind project developers should comply with the FAA's guidelines.

- Recommendation: Replace these statements with the following: "Projects must comply with applicable requirements of the FAA."

Site Construction Activities

Statement: "All electrical collector lines should be buried adjacent to roads, unless it is necessary to install surface lines to avoid further habitat disturbance." [2.2.3.2.3]

- Comment: If the environmental impacts associated with an above-ground electrical collector line (including avian impacts) are not expected to be significant, then above-ground lines should be a viable option. Additionally, it is sometimes not practical to bury the lines adjacent to roads. For example, if the road is on one side of a string of turbines and the transformers are located on the other side (to minimize the risk of a vehicle hitting a transformer, which itself could have adverse environmental impacts), then it may be more practical to bury the electrical collector line on the transformer side of the turbine string instead of next to the road.

- Recommendation: This comment should be deleted or modified to reflect the comment above.

Statement: "The footprints of substations are expected to be 1 acre (0.4 ha) or less in size…" [3.1.2.4]

- Comment: Expected substation size may be more than 2 acres.

- Recommendation: Change this phrase to read "to be 5 acres or less in size."

Statement: "Because most towers are equipped with lifting devices of sufficient capacity to lower or raise individual drivetrain components, a crane should not be needed for such component replacements." [3.1.3]

- Comment: Many drivetrain components will require a separate crane.

- Recommendation: Delete this sentence.

Regulatory Requirements

Statement: "This section identifies the major laws, regulations, executive orders (E.O.s), compliance instruments, and policies that may impose environmental protection and compliance requirements on site monitoring and testing, construction, operation, and decommissioning phases of a wind energy project on BLM-administered land." [3.2]

- Comment: It would be beneficial to affirm that not all of the regulations listed apply to all wind projects.

- Recommendation: Add the following sentence after this statement: "This list of laws and regulations may not apply to every wind project."

Statement: "Appendix E lists the relevant federal and state statutory authorities that establish permits, approvals, or consultations with which a wind energy project must comply." [3.2]

- Comment: See previous comment.

- Recommendation: "Appendix E lists the relevant federal and state statutory authorities that establish permits, approvals, or consultations with which a wind energy project must comply, *where applicable*." [Emphasis indicates additional language proposed]

Statement: "Also, the construction of a wind energy project may be required to consider impacts on local populations, including E.O. 12898, 'Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations' (U.S. President 1994), and E.O. 13045, "Protection of Children from Environmental Health Risks and Safety Risks" (U.S. President 1997). Certain states may have specific requirements with regard to nuisances, including Arizona (Environmental Nuisances [Arizona Revised Statutes (ARS) 49-141 et seq.] and Light Pollution [ARS 49-1101 et seq.]) and New Mexico (Night Sky Protection Act [74-12-1 New Mexico Statutes Annotated (NMSA) 1978 et seq.])." [3.2]

- Comment: These E.O.s and statutes may not apply to wind projects. In any event, it ought to be recognized that (1) wind projects must be sited where there is an adequate wind resource and transmission access, which is often in rural areas that may have a significant minority population and low-income population, (2) wind projects pose few if any environmental health risks or safety risks to the local community, and (3) wind projects provide significant economic benefits to the community in the form of jobs, tax revenues for public schools and hospitals, and additional income for landowners which often include small farmers and ranchers.

- Recommendation: Modify this statement to reflect the comment above.

Statement: "*Land use.* Depending on the location of a proposed wind energy project, special land use determinations may need to be made, particularly if the project is to be sited in or would impact special or protected areas." [3.2]

- Comment: The term "special" used in this section is unclear.

- Recommendation: Add a definition of "special" as used in this context, require the BLM Field Office to identify "special" areas in local land use plans, or delete this statement.

Statement: "*Floodplains and wetlands.* While turbines would not be located in wetland areas or adjacent to other water bodies…" [3.2]

- Comment: Turbines located in wetland areas or adjacent to other water bodies may be subject to separate legal requirements.

- Recommendation: Replace this statement with the following: "Project facilities may sometimes be located in wetland areas or adjacent to other water bodies, and these facilities should comply with statutory requirements and associated regulations established by the Army Corps of Engineers if applicable."

Voltage Flicker [3.3.7]

- Comment: Voltage flicker or stability is not an environmental issue.

- Recommendation: This section should be deleted.

Water

Statement: "Culverts of adequate size to accommodate the runoff of a 25- and 100- year storm for temporary and permanent roads, respectively, should be used when constructing stream or wash crossings." [5.3.5]

- Comment: The requirement to design stream and wash crossings for 25- and 100-year storms is appropriate for urban areas, not the rural settings where wind projects are generally located.

- Recommendation: Replace this statement with the following: "When constructing stream or wash crossings, culverts or water conveyances for temporary and permanent roads should be designed to comply with county standards, or, if there are no county standards, to accommodate the runoff of a 10-year storm."

Electromagnetic Fields (EMF)

Statement: "A health and safety program should be developed to protect workers during construction, operation, and decommissioning of a wind energy project. The program should identify all applicable federal and state occupational safety standards, establish safe work practices for each task (e.g., requirements for personal protective equipment and safety harnesses; OSHA standard practices for safe use of explosives and blasting agents; measures for reducing occupational EMF exposures), …" [5.8.1]

Statement: “Measures should be considered to reduce occupational EMF exposures, such as backing the generator with iron to block EMF, shutting down the generator when working in the vicinity, and/or limiting exposure time while the generator is running (Robichaud 2004).” [5.8.1]

Statement: “These hazards include risks associated with major construction sites, rare tower failures, human-caused fire, EMF exposure, aviation safety interference, EMI, low-frequency sound, and shadow flicker.” [5.8.2]

- Comment: Numerous studies have shown that EMF does not present a significant public health risk, even to workers who experience relatively high exposure levels. Further, most government agencies that have studied this issue have not proposed safety standards for cancer, leukemia or similar health risks allegedly attributable to worker exposure to EMF. For example, the National Institute for Occupational Safety and Health (NIOSH) and other government agencies do not consider EMF a proven health hazard (see http://www.cdc.gov/niosh/emf2.html). Examples of the research results are available at http://www.powerlinefacts.com/Steering%20Committee%20Informaton%20Hearing/Expert%20Testimony/Valberg%20testimony.htm

- Recommendation: Modify these sections to reflect the comment above.

Electromagnetic Interference (EMI)

Statement: “These hazards include risks associated with major construction sites, rare tower failures, human-caused fire, EMF exposure, aviation safety interference, EMI, low-frequency sound, and shadow flicker.” [5.8.2]

- Comment: No specific standards exist for wind turbine generators with regard to EMI, though the standards contained in FCC Rules, Title 47, Chapter 1, Part 15 establish criteria for emissions from many electronic devices. These rules establish that devices may not produce "Harmful Interference", defined as "Any emission, radiation or induction that endangers the functioning of a radio navigation service or other safety services or seriously degrades, obstructs or repeatedly interrupts a radio communications service operating in accordance with this chapter". This language should state that EMI levels from wind projects should conform to the federal standards contained in FCC Rules, Title 47, Chapter 1, Part 15.

- Recommendation: Require that wind projects comply with FCC rules (defined above), if applicable.

Agency Consultation and Coordination (Section 7.4)

- Comment: This section of the PEIS indicates that BLM will be consulting with the U.S. Fish & Wildlife Service (USFWS) in accordance with the requirements of Section 7 of the ESA.

- Recommendation: Assuming that the BLM receives a programmatic Biological Opinion (BO), the BO should contain language allowing site-specific BOs to tier off of the programmatic BO and allow for an expedited consultation schedule with flexibility in the amount of data needed. The BLM has requested the option for such expedited Section 7 consultation in other programmatic consultations with the USFWS.