BLM

June 2005 FES 05-11

Final Programmatic Environmental Impact Statement on

WIND ENERGY DEVELOPMENT

on BLM-Administered Lands in the Western United States

Volume 3: Comments and Responses (printed from CD)

U.S. Department of the Interior
Bureau of Land Management

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NOTATION

The following is a list of acronyms and abbreviations (including units of measure) used in this document.

GENERAL ACRONYMS AND ABBREVIATIONS

ACEC	Area of Critical Environmental Concern
BLM	Bureau of Land Management
BMP	best management practice
CEC	Commission for Environmental Cooperation
CEQ	Council on Environmental Quality
CFR	*Code of Federal Regulations*
CWA	Clean Water Act
CX	Categorical Exclusion
DoD	U.S. Department of Defense
EA	environmental assessment
EIS	environmental impact statement
EMF	electric and magnetic fields
EMI	electromagnetic interference
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act of 1973
FAA	Federal Aviation Administration
FLPMA	Federal Land Policy and Management Act of 1976
GIS	geographic information system
IBB	individual-based models
JEDI	Jobs and Economic Development
MBTA	Migratory Bird Treaty Act of 1918
MCA	Montana Code Annotated
MPDS	maximum potential development scenario
NCA	National Conservation Area
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act

NLCS	National Landscape Conservation System
NREL	National Renewable Energy Laboratory
NRHP	*National Register of Historic Places*
OHV	off-highway vehicle
PCB	polychlorinated biphenyl
PEIS	programmatic environmental impact statement
PILT	Payments in Lieu of Taxes
POD	Plan of Development
PTC	Production Tax Credit
RMP	Resource Management Plan
ROD	Record of Decision
ROW	right-of-way
RSA	rotor-swept area
SIP	State Implementation Plan
USC	*United States Code*
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WinDS	Wind Deployment System
WIWET	Western Interconnection Wind Evaluation Team
WRA	wind resource area

UNITS OF MEASURE

dB(A)	A-weighted decibel(s)	L	liter(s)
ft	foot (feet)	m	meter(s)
gal	gallon(s)	MW	megawatt(s)
ha	hectare(s)		

ENGLISH/METRIC AND METRIC/ENGLISH EQUIVALENTS

The following table lists the appropriate equivalents for English and metric units.

Multiply	By	To Obtain
English/Metric Equivalents		
acres	0.4047	hectares (ha)
cubic feet (ft^3)	0.02832	cubic meters (m^3)
cubic yards (yd^3)	0.7646	cubic meters (m^3)
degrees Fahrenheit (ºF) –32	0.5555	degrees Celsius (ºC)
feet (ft)	0.3048	meters (m)
gallons (gal)	3.785	liters (L)
gallons (gal)	0.003785	cubic meters (m^3)
inches (in.)	2.540	centimeters (cm)
miles (mi)	1.609	kilometers (km)
pounds (lb)	0.4536	kilograms (kg)
short tons (tons)	907.2	kilograms (kg)
short tons (tons)	0.9072	metric tons (t)
square feet (ft^2)	0.09290	square meters (m^2)
square yards (yd^2)	0.8361	square meters (m^2)
square miles (mi^2)	2.590	square kilometers (km^2)
yards (yd)	0.9144	meters (m)
Metric/English Equivalents		
centimeters (cm)	0.3937	inches (in.)
cubic meters (m^3)	35.31	cubic feet (ft^3)
cubic meters (m^3)	1.308	cubic yards (yd^3)
cubic meters (m^3)	264.2	gallons (gal)
degrees Celsius (ºC) +17.78	1.8	degrees Fahrenheit (ºF)
hectares (ha)	2.471	acres
kilograms (kg)	2.205	pounds (lb)
kilograms (kg)	0.001102	short tons (tons)
kilometers (km)	0.6214	miles (mi)
liters (L)	0.2642	gallons (gal)
meters (m)	3.281	feet (ft)
meters (m)	1.094	yards (yd)
metric tons (t)	1.102	short tons (tons)
square kilometers (km^2)	0.3861	square miles (mi^2)
square meters (m^2)	10.76	square feet (ft^2)
square meters (m^2)	1.196	square yards (yd^2)

1 INTRODUCTION

This volume of the Final Programmatic Environmental Impact Statement (PEIS) on Wind Energy Development on BLM-Administered Lands in the Western United States contains public comments on the Draft PEIS and the Bureau of Land Management's (BLM's) responses to those comments. The BLM prepared the Draft PEIS in accordance with the Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of the National Environmental Policy Act (NEPA) (*Code of Federal Regulations*, Title 40, Parts 1500–1508 [40 CFR Parts 1500–1508]) and the requirements of the Federal Land Policy and Management Act of 1976 (FLPMA) (*United States Code*, Title 43, Section 1701 [43 USC 1701]). These procedures and requirements provide for a period of public comment on a Draft PEIS prior to publication of a Final PEIS.

The Notice of Availability (NOA) of the Draft PEIS was published in Volume 69, page 175, of the *Federal Register* on September 10, 2004 (69 FR 175). This began a 90-day public comment period, which lasted from September 10 to December 10, 2004. More than 120 people and organizations participated in the public comment process by providing Internet-based comments or postal letters. Approximately 718 individual comments were received.

The comment documents are presented in this volume in numerical order by assigned document number. Comment documents received by postal mail were assigned sequential 5-digit numbers starting with number 00001. Documents received via the electronic comment form on the project Web site were assigned sequential 5-digit numbers starting with 80001. The numbering system is not continuous (e.g., the system jumps from document 80012 to 80014); however, all public comments that were received have been included in the system and were considered in preparing the Final PEIS.

Each document is immediately followed by the responses to the individual comments identified within the document. To view a specific comment document and the associated responses, the reader should consult the following indices to determine the document number. Two indices are provided: (1) the Individuals Index contains all of the comment documents received, and (2) the Agencies, Organizations, and Tribal Governments Index contains a subset of the Individuals Index identifying documents received from these types of organizations.

INDEX: INDVIDUALS

INDEX: AGENCIES, ORGANIZATIONS, AND TRIBAL GOVERNMENTS[a]

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Renewable Northwest Project	80093	639
Resource Advisory Council to Bureau of Land Management, Boise District	00023	136
Sagebrush Sea Campaign	80079	527
San Juan Citizens Alliance	80079	527
Sardinia Preservation Group	80008	219
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[a] This listing of agencies, organizations, and Tribal governments was compiled on the basis of comment documents submitted on official letterheads.

COMMENTS AND RESPONSES

Document 00001

WYOMING
GAME AND FISH DEPARTMENT
Dave Freudenthal, Governor — Terry Cleveland, Director
"Conserving Wildlife - Serving People"

October 1, 2004

WER 10708
Bureau of Land Management
Washington D.C.
Draft Programmatic Environmental Impact Statement
Wind Energy Development on BLM-Administered Lands in the Western United States

BLM Wind Energy
Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

Dear Sir or Madam:

The staff of the Wyoming Game and Fish Department has reviewed the *Draft Programmatic EIS on Wind Energy Development on BLM-administered lands in the Western United States*. We offer the following comments.

The document is very thorough and well written, and the information provided is comprehensive and very helpful in understanding the scope of wind energy technology, implementation, and issues/solutions.

We concur with the preferred alternative, and agree that implementation of the described analyses, monitoring, mitigation, adaptive management, and best management practices will result in an effective program with minimal impacts to other resources. To help assure that result, we recommend that, in Chapter 2, Section 2.2.3.2. (proposed BMPs), the language be such that the BMPs are more than suggestions. Though the BMPs "would be adopted as required elements of project-specific PODs and/or as ROW grant stipulations" (page 2-9), the specific actions within the BMPs themselves do not appear to be required.

1-1

For example, under Section 2.2.3.2.2, examples of wording follow: "BLM and operators *should* contact appropriate agencies…", "projects *should* be planned to minimize or mitigation impacts to wildlife habitat…", "operators *should* evaluate avian and bat use of the project area…". We recommend the *should* be changed to *shall* in all BMPs, so that the requirement cannot be challenged and the intent of the programmatic guidance is clear. Inserting the imperative in the language would allow this programmatic document to adequately guide project

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actions, and flexibility for specifically how to implement the requirement would still be available at the project level. For instance, bird and bat use will obviously have to be a component of every plan, but the extent of data requirements and reactions to that data would still be determined on a case-by-case basis. 1-1 (cont.)

In Chapter 5, Section 5.9.5.2.2, (mitigating site/wildlife interactions during the development preparation and project design phase), an additional specific measure should be added to address the effects of noise on sage grouse. Sage grouse has been petitioned as an endangered species, and recent science has indicated that noise can be an impact to sage grouse during breeding. Since noise is not expected to be an issue other than immediately adjacent to turbines or overhead power lines, we recommend adding that siting of turbines or overhead power lines avoid sage grouse leks for an adequate distance to negate potential noise impacts. Our Department's standard stipulation for lek protection is No Surface Occupancy or disturbance of sage grouse leks within ¼ mile of the perimeter of the lek. Since this recommended distance includes the distances where noise is expected to a potential issue, we recommend our stipulation be added as a development/design requirement. 1-2

Much of the area of Wyoming with medium or high wind development potential is located in the southern part of the state along the checkerboard area. The checkerboard is a huge area across Wyoming where every second section (640 acres) was granted to the Union Pacific Railroad over a century ago, and is private land. The majority of the remaining sections are administered by BLM, and thus the BLM administers only about half of the development area. Recent wind farm developments in this area, including actual developments and those currently in planning, have avoided siting turbines on BLM lands. The practice has been for the turbines and other facilities to be on private land, with only some necessary road access being on BLM land. The wind farms are planned this way in order to avoid a full NEPA analysis. In at least one instance (the Uinta County Wind Farm), BLM did not require a NEPA analysis of the entire project, even though roads for the project were located on BLM land. Only a minor Environmental Analysis was done for the roads, and to make matters worse, our Department was not asked for input in that analysis, when we had significant wildlife resources in the project area. Other wind farms in the checkerboard that are in the planning stage are also using this approach, as indicated by our initial conversations with various wind developers. 1-3

We believe that if any part of the wind project is located on BLM land, a full project NEPA analysis should be required, as addressed under both FLPMA and NEPA. The adjacent development, supported by the roads on BLM land, obviously has a cumulative effect on adjacent BLM-managed land and resources. Because the practice of avoiding NEPA has become common in Wyoming, we recommend the appropriate NEPA requirements be addressed in this document to provide adequate direction for future developers as well as for local BLM Field Offices.

Thank you for the opportunity to comment.

Sincerely,

for BILL WICHERS
DEPUTY DIRECTOR

BW:VS:as
cc: Mary Flanderka-Governor's Planning Office
USFWS

Responses for Document 00001

00001-001: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

00001-002: The U.S. Fish and Wildlife Service has completed its status review of the greater sage-grouse throughout its range and determined that the species does not warrant protection under the Endangered Species Act at this time. However, as stated in Section 2.2.3.1, Proposed Policies, in the 14th bullet, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into the Plan of Development (POD) that is required for all wind energy projects proposed for BLM-administered lands. As required by the Wind Energy Development Program proposed policies and BMPs, species-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach of these species-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting, design, and operation stipulations for incorporation into the POD. No text change has been made to the document in response to your comment.

00001-003: The BLM implements NEPA upon receipt of a completed right-of-way application for use of BLM-administered lands by preparing either an EA or an EIS to determine the probable environmental effects of the proposed federal action to grant the right-of-way. The determination of whether to prepare an EA or an EIS and the scope of that analysis are determined at the BLM Field Office level. The proposed Wind Energy Development Program includes a policy stating that NEPA analyses will be conducted on all wind energy development projects (see Section 2.2.3.1, 9th bullet). This policy has been reworded to state that the scope of the NEPA analyses is generally limited to the proposed action on BLM-administered land. However, if access to a proposed development on adjacent non-BLM-administered lands is entirely dependent on obtaining a right-of-way across BLM-administered land, and there are no alternatives for that access, the NEPA analysis for the proposed right-of-way may need to assess the probable environmental effects from that proposed development. As with future analyses of wind energy projects on BLM-administered lands, the BLM's NEPA analyses of right-of-way access to projects on adjacent non-BLM-administered lands may tier off of this PEIS to the extent that the proposed project falls within the scope of the PEIS analyses.

Document 00002

Valley County Board of County Commissioners

P. O. Box 1350 / 219 North Main Street
Cascade, Idaho 83611-1350

TEL 208-382-7100
FAX 208-382-7107

TERRY F. GESTRIN
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tgestrin@co.valley.id.us

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LELAND G. HEINRICH
Clerk
lheinrich@co.valley.id.us

October 13, 2004

Bureau of Land Management, Wind Energy Programmatic EIS,
Argonne National Laboratory
EAS/900, 9700 S. Cass Ave.
Argonne, IL 60439

RE: Wind Energy Programmatic Environmental Impact Statement

Dear Reviewer:

The Valley County Board of County Commissioners (Board) support the federal government's commitment to developing a Wind Energy Programmatic Environmental Impact Statement (PEIS) to guide future development of wind energy resources on lands administered by the Bureau of Land Management. In the materials released with the announcement of intent to prepare a PEIS, the Bureau of Land Management (BLM) has done a good job of identifying the major issues.

It is of great importance to Valley County in all rule-making and decision-making processes that the Board's of County Commissioners be invited by BLM to participate as equal partners with the BLM as is mandated in the National Environmental Policy Act (NEPA). This mandate is in addition to the BLM (s) work on a government-to-government basis with Native American Tribes, as a part of the government's Treaty and Trust responsibilities. The government-to-government relationship was formally recognized by the federal government on November 6, 2000, with Executive Order

2-1

13175. At the very least, the National Association of Counties and the Idaho Association of Counties and its counterparts in other states should be invited to participate as cooperating agencies. 2-1 (cont.)

The Board encourages BLM to undertake a comprehensive PEIS for natural gas, oil and coal exploration and development on federally administered lands in the Rocky Mountain States. The impacts from fossil fuel development and power plants are perceived to be greater than those associated with wind, making a compelling case for a broader PEIS. The National Energy Plan's emphasis on natural gas production in the Rockies establishes an urgent need for a PEIS analyzing which combination of energy sources makes the most sense for the West and the nation. 2-2

Specific resources and impacts that should be considered for individual wind power projects include:

1. Wildlife and wildlife habitat
2. Plants and plant habitat
3. Avian species (especially migratory birds, raptors and bats) and important flyways and raptor concentration areas. Projects should be sited to avoid key migration routes. Design of turbines and supports should avoid creating perching opportunities for birds—columns are generally better than lattice towers in this respect.
4. Visual environment, including scenic view-sheds.
5. Avoiding the creation of noise nuisance. Decibel levels should be limited to acceptable standards and citing should be an acceptable distance from the nearest residences or recreational use areas.

2-3

Importantly, the decision must provide certainty that other public land uses, such as public-rights-of-ways that cross the public lands which are under local government jurisdiction must remain open; mining, that holds a special place in this Nation's statutory history, must remain open; and all other traditional uses of public lands including but not limited to: grazing, hunting, fishing, recreation, and timber must continue to be protected.

The proposed action would present the best approach for managing wind energy development on BLM-administered lands. The proposed Wind Energy Development Program is likely to result in the greatest amount of wind energy development over the 2-4

next 20 years, at the lowest potential cost to industry. Simultaneously, the proposed action would provide the most comprehensive approach for ensuring that potential adverse impacts are minimized to the greatest extent possible. And, finally, the proposed action is likely to provide the greatest economic benefits to local communities and the region as a whole. As a result, the proposed action appears to best meet the objectives of the National Energy Policy recommendations to increase renewable energy production on federally administered lands. Additionally, it would be good for Idaho to have this project completed at Argonne West in Idaho Falls Idaho.

2-4 (cont.)

Respectfully submitted,

For the Valley County Commissioners,
Leland G. Heinrich
Valley County Clerk

Responses for Document 00002

00002-001: The BLM's proposed policy for consultation with federal, state, and local agencies, described at Section 2.2.3.1, Proposed Policies, 3rd bullet, provides the opportunity for site-specific consultations between BLM Field Offices and county governments. The subject of cooperating agency status should be discussed on a case-by-case basis at this level.

00002-002: Your comment addresses issues that are beyond the scope of the PEIS, the mission and responsibilities of the BLM, and/or the defined programmatic scope of the proposed Wind Energy Development Program.

00002-003: Proposed BMPs presented in Section 2.2.3.2 address each of these potential impact areas. The BMPs have been reworded in the Final PEIS to indicate that they are required, not suggested, elements of any wind energy development activity on BLM-administered land.

00002-004: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 00003

John W. France
P.O. Box 656
Rawlins, WY 82301
1-307-324-4377

October 16, 2004

BLM Wind Energy Programatic EIS,
Argonne National Laboratory
EAD/906
9700 Cass Ave.,
Argonne, IL 60439

Gentlemen,

I read with great interest about the wind energy projects as written up in the Casper(Wyo) Star Tribune recently and would like to add my comments.

I have been a strong supporter of wind energy for many years and it is very gratifying to see the wind finally being used for something. It blows here a lot and the energy should certainly be used for a constructive purpose.

I am very famaliar with the project at Arlington Wyoming which has over two hundred wind turbines, they operate quietly, do not create pollution, are not unsightly, and their source of energy is free . I definitely feel you cannot beat this for a source of electricity. 3-1

Sincerely

John W. France

Response for Document 00003

00003-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 00004

IDAHO DEPARTMENT OF FISH AND GAME
600 S Walnut / PO Box 25
Boise, Idaho 83707-0025

Dirk Kempthorne / Governor
Steven M. Huffaker / Director

October 26, 2004

BLM Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue,
Argonne, IL 60439

To Whom it May Concern,

The Idaho Department of Fish and Game has reviewed the BLM programmatic wind power DPEIS.

The DPEIS has three alternatives, no action, limited wind energy development that would entail only the proposed Cotteral project in Idaho, and implement a comprehensive wind energy development that might include numerous wind energy projects in Idaho and other western states.

The latter proposes to implement a comprehensive program to develop wind energy including establishing policies, minimum mitigation measures, programmatic policies, BMPs, wind development exclusion areas, and amendment of land use plans to address wind energy development. Those land use plans proposed for amendment by the DPEIS in Idaho include the Cascade, Challis, Jarbidge, Kuna, Lemhi, Owyhee, and Twin Falls plans. The wind energy development alternative proposes policies which would identify lands on which wind energy would not be allowed, establish consultation and involvement requirements for public and agencies, incorporate adaptive management strategies, and BMPs that would establish environmentally sound and economically feasible mechanisms to protect and enhance natural and cultural resources. Potential impacts to wildlife would be reduced under this alternative through use of programmatic BMPs and by requirement of site and species specific concerns being addressed at the project level.

The Department recognizes the development of wind energy as a viable alternative to other, more environmentally deleterious, forms of power. However, wind generation is not benign, particularly to wildlife. We strive to reduce the impacts of all forms of power generation to fish and wildlife. To do this, it is most important that analysis and decisions regarding wind energy development and its potential impacts should be made and determined at the local level. It is our experience that some of the ideas of the programmatic wind power EIS such as defining site and species specific concerns have always been best addressed at the local and site-specific level. Minimum mitigation measures, BMP, and exclusion areas should be included in the programmatic EIS so long as they provide meaningful direction to local decisions. 4-1

The Department is also interested in not only using wind power to diversify power generation but in also using wind energy to defray, replace, or mitigate power generated by methods that inhibit or harm fish and wildlife resources. For example, wind power project development might help ameliorate the regulation and management of the Columbia River hydropower system in the Pacific Northwest to aid in the recovery of federally listed salmon and steelhead. We would recommend that the BLM's final EIS require wind power generated by projects developed and implemented on BLM lands be used, to the greatest extent possible, to relieve and aid federally listed species whose recovery may be limited or affected by other federal power production facilitates, projects, or operations. 4-1 (cont.)

We would also like to provide the following comments on the DPEIS.

We recommend that development of transmission lines in relation to any wind power production project on BLM lands be viewed as a connected action of any wind generation project and that the associated development and impacts of these transmission lines require the same analysis of effects, limits, and mitigation as any and all wind production projects covered under this DPEIS. 4-2

We recommend all the Idaho Land Use plans amended by the DPEIS show wind energy development will be restricted from wildlife habitat where adverse effects cannot be mitigated and that all programmatic policies and BMPs within the final EIS be adopted as minimum policies and BMPs for these Land Use plans. 4-3

We recommend that the policy stating wind projects "will be developed in a manner that will not prevent other land uses...." be restated as "wind energy development will be addressed relative to its singular and cumulative effects and wind energy projects will be gauged and modified as necessary to fully mitigate, minimize, or eliminate the environmental and cumulative effects without regard to maintaining existing or traditional land uses except to provide either no change or an overall net benefit to the resources affected by wind power development." 4-4

We recommend that the DPEIS policy be restated to direct BLM to consult with appropriate agencies as early as possible rather than wind power entities or project proponents consulting with appropriate agencies. This is based on the presumption that a BLM plan amendment has only authority over BLM and its actions and it cannot direct an outside entity by its policy or plan. This same policy should also add "mitigation" to the list of issues and concerns to be identified and addressed. 4-5

We recommend the DPEIS policy stating, "The BLM will incorporate management goals and objectives specific to habitat conservation for sage grouse...." be restated to direct BLM to "implement strategies to achieve management goals and objectives specific to habitat conservation for sage grouse....". This policy needs to imply that the BLM will initiate and be responsible for actions through wind power projects to achieve management goals and objectives for sage grouse and other shrub steppe obligate species. 4-6

We recommend the policy stating "The BLM's proposed Wind Energy Development program would incorporate adaptive management strategies to ensure that potential adverse impacts of wind energy....." be restated to require BLM to incorporate adaptive management strategies ensuring potential adverse and cumulative impacts of wind energy development and BLM land use are monitored and mitigated at the appropriate scale and that impacts are minimized throughout the term of the project. This statement should also require that monitoring and mitigation be done at the appropriate ecological scale of effect or impact and that BLM will coordinate monitoring, programmatic policies, and project-specific standards, procedures, and stipulations across local, state, and national levels and agencies to identify environmental baselines and improve BMPs, mitigation, operating procedures, and stipulations based on monitoring and adaptive management throughout the terms of all BLM wind projects. 4-7

As currently stated in the DPEIS, many of the proposed BMPs are passive and imply little, if any, action will be taken by BLM. We recommend that the language in most, if not all, the statements be changed to clearly demonstrate BLM's responsibility for applying these BMPs. One change would be to replace the word "should" found in many of the BMPs with the term "shall." If this language is not changed, then the BMPs in the DPEIS should be identified as guidelines rather than BMPs. If this is the case, the Department finds these guidelines inadequate for the conservation of fish and wildlife in relation to wind power development and the programmatic EIS insufficient. 4-8

Under "Wildlife and Ecological Resources" BMPs: these are stated in terms of the "operators" rather than the BLM. It is not clear to us if BMPs adopted by the BLM within a final EIS can direct and hold accountable outside entities to the decision of the EIS. Wind power projects are not licensed or regulated under FERC and, therefore, have no development or operational specifications requirements other than those specified by a BLM management decision. Therefore we suggest that the BMPs within the final EIS are the BLM's responsibility and as such, should direct the BLM to be responsible for ensuring they are implemented and that they are effective. We recommend "operators" be changed to "BLM" or that these be stated neutrally without identifying how or who will do them. 4-9

We recommend the addition of other BMPs within the final EIS. They include:

"Cumulative effects and impacts will be evaluated for each project with consideration of scale of effects, ongoing land use, adjacent non-BLM land use, and associated or connected actions such as transmission line development."

"Off-site, adjacent, and on-site mitigation will be implemented where necessary to minimize or eliminate the site specific, surrounding, regional, and/or ecological effects of wind development projects." 4-10

Both these new BMPs are important because the effects of a wind power development project will not only be site specific but may impact wildlife at varying ecological scales. This might include abandonment of important habitats near wind projects, metapopulation fragmentation,

and effects to migrating species at regional and larger ecological scales. Many of these effects will be unknown at the time of the project but appropriate monitoring will help determine to what extent these effects manifest themselves as well as whether or not wildlife habituate to the initial project impacts. In either case, implementation of these BMPs will allow design of appropriate and adaptable mitigation of project effects or benefits as informed by monitoring. 4-10 (cont.)

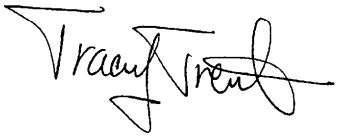
We recommend that the terms "to the extent feasible" or "to the extent practicable" be deleted wherever they appear throughout the document. They are vague and their implementation will vary with individual viewpoints. As such they do not belong in the DPEIS or in BMP statements. 4-11

We recommend there be a section of "Public Recreation" BMPs. This section should address how public recreation and access will be handled relative to wind power development. 4-12

Similarly, we recommend there be BMP sections on "Noxious Weeds" and "Fire Management" relative to wind power development. 4-13

Thank you for the opportunity to comment.

Sincerely,



Tracey Trent
Chief
Natural Resources Policy Bureau
Idaho Department of Fish and Game

Responses for Document 00004

00004-001: We agree with the comment in the first paragraph. Site-specific analyses are required by the Wind Energy Development Program proposed policies and BMPs (Section 2.2.3.1, Proposed Policies, and Section 2.2.3.2, Proposed BMPs). In addition to the BMPs, Chapter 5, Potential Impacts of Wind Energy Development and Analysis of Mitigation Measures, includes measures that could be implemented to minimize or mitigate environmental impacts. The proposed policy in the first bullet in Section 2.2.3.1, Proposed Policies, identifies lands excluded from wind energy development.

The BLM has no authority to dictate where power generated by wind energy development is used, as suggested in the second paragraph.

00004-002: Section 6.4.3 acknowledges that wind energy development on BLM-administered lands may require the construction of new transmission lines. Such construction is considered to be a separate but related activity and will require interagency cooperation and multidisciplinary environmental reviews. The designation of new transmission corridors on BLM-administered lands will occur as a result of interagency consultations, not as a result of a unilateral decision by the BLM. Any such designations would be evaluated through either regional or local land use planning efforts, with opportunities for full public involvement. The potential impacts of transmission system interconnects or expansions that would be required by an individual wind energy project on BLM-administered lands will be assessed as part of the site-specific analyses, with input from other federal, state, and local agencies, and interested stakeholders.

00004-003: As shown in Appendix C, Proposed Land Use Plan Amendments under the Wind Energy Development Programmatic Environmental Impact Statement, Table C-1, Proposed Changes and Rationales for Land Use Plan Amendments, the proposed amendments for the Idaho land use plans will incorporate the programmatic policies and BMPs. The policies and BMPs have been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land. Regarding restricting development where adverse impacts to wildlife habitat could not be mitigated, the 1st bullet under Section 2.2.3.1, Proposed Policies, provides for that restriction.

00004-004: No text change has been made to the document in response to your comment. The referenced policy is specifically intended to ensure that wind energy development on BLM-administered land will not prevent other land uses. Other proposed policies and BMPs address the additional issues raised in this comment regarding cumulative effects, monitoring programs, and adaptive management.

00004-005: The BLM is responsible for establishing policy requiring consultation; however, it is appropriate for the applicant to initiate discussions with appropriate agencies prior to submitting an application for wind energy development to the BLM.

00004-006: As written, the policy establishes a requirement to incorporate management goals and objectives specific to habitat conservation for species of concern, including sage-grouse and other shrub steppe obligate species. Other proposed policies and BMPs establish requirements ensuring that site-specific and species-specific analyses will be conducted for any proposed project on BLM-administered lands in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project- specific stipulations for incorporation into the POD, including stipulations specific to sage-grouse and other species of concern. Species-specific analyses are beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

00004-007: The concerns addressed in the suggested revision are addressed in other proposed policies and BMPs in a fashion that reflects the commentor's concerns. No text change has been made to the document in response to your comment.

00004-008: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

00004-009: The BLM is responsible for setting policy. The operator, not the BLM, is responsible for the application process and for developing the Plan of Development (POD). The operator’s application to the BLM must adequately reflect the BLM’s proposed policies and the BMPs (see Section 2.2.3.1, Proposed Policies, and Section 2.2.3.2, Proposed BMPs) for the development process to move forward. No text change has been made to the document in response to your comment.

00004-010: First recommendation. A new BMP has been inserted in Section 2.2.3.1, Proposed Policies, to ensure that site- specific NEPA analyses will identify and assess any cumulative impacts that are beyond the scope of the cumulative impacts addressed in the PEIS.

Second recommendation. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the incorporation of adaptive management strategies and monitoring programs (see Section 2.2.3.1, Proposed Policies, last bullet, and Section 2.2.3.2.2, Plan of Development Preparation, General, 7th bullet) will be conducted for any proposed project on BLM-administered lands. The application of adaptive

management strategies will ensure that programmatic policies and BMPs will be revised as new data regarding the impacts of wind power projects become available. The source for a significant portion of the new data is likely to be the required site-specific monitoring programs that will evaluate environmental conditions at a site through all phases of development. A key requirement for the site-specific monitoring programs is the requirement that monitoring observations and additional identified mitigation measures be incorporated into standard operating procedures and project-specific BMPs.

00004-011: Where appropriate, the text has been modified.

00004-012: As stated in Section 5.10.5, wind energy projects should be planned to mitigate or minimize impacts to other land uses. This would include recreation. The scope and approach for site-specific analyses for handling public recreation and access will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and stakeholders.

00004-013: The Wind Energy Development Program includes BMPs specific to noxious weeds and fire management (see Section 2.2.3.2.2, Plan of Development Preparation, Noxious Weeds and Pesticides and Human Health and Safety, respectively). All wind energy projects proposed for BLM-administered lands will be required to develop a noxious weed and invasive species control plan, and to develop a fire management strategy to minimize the potential for a human-caused fire. These plans will be applicable to the construction, operation, and decommissioning phases of the proposed project. The specific nature of these plans and strategies will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. No text change has been made to the document in response to your comment.

Document 00005

TO: BLM Wind Energy Programmatic EIS

FROM: William H. Everett
5420 South Oak Street
Casper, Wyoming 82601-6432

SUBJECT: Draft Environmental Impact Statement on Wind Energy Development

DATE: November 11, 2004

Gentlemen:

I have never before submitted any comments on any subject to the Bureau of Land Management, other than documents submitted by me on behalf of clients when I was still actively practicing law. I am, however, very concerned with the potential adverse impacts of using windmills for power generation.

When I first moved to Casper, Wyoming, in 1940, my father was in the habit of taking his family on Sunday excursions to view this state. I can recall being particularly struck by the Salt Creek oil field, which, at that time, covered thousands of acres in northern Natrona County. The field had been drilled on what we now call "40-acre spacing". Each well had its own wooden derrick, which included a large walking beam to raise and lower the rods which pumped fluid from the reservoir. Everything in sight was black from spilled oil. There was not a sage bush, blade of grass, antelope, deer or rabbit in sight anywhere. There was no grazing livestock. The wells were powered by horizontal surface rods emanating from many central pump houses which were powered by engines fueled with casinghead gas; the engines could be heard for 8-10 miles in every direction. It was all very much like pictures we see today of the (in)famous East Texas Oil Field. 5-1

Today there are no derricks. There are no casinghead gas engines or surface pumping rods. The only way you can tell you are in an oil field is by the movement of pump arms over producing wells; those pumps, and most of the production equipment, are painted in "camo" colors to match the landscape. The ground is covered with sagebrush, grass and cactus and is indistinguishable from all the surrounding undisturbed prairie. There are antelope, mule deer and rabbits in great abundance. From two miles away the area appears like it had never been touched by human development.

When I first began my law practice in Casper in the late 1960's, the hunt for uranium in Wyoming was in full swing. There were several large open pit mines opened which produced for many

years. There were huge mounds of overburden deposited next to those mines. Today, there is limited (if any; I am not conversant with this industry) production of uranium here. If you tour the areas which were once mined, it is impossible to tell that there was ever a single shovel dug into the ground. All the overburden has been replaced, the ground sculpted to match the surrounding undisturbed prairie, and grass seeded on the entirety. There are run-off reservoirs which appear to be entirely natural (not "gully plugs"). Once the sagebrush repopulates all of these areas, it will be impossible to tell there were ever any open pits.

Much the same can be said about the open pit coal mines here, although most of them are still producing, but the mine owners are aware of their responsibility to reclaim and are doing so as portions of their pits are completed.

The transformation I have described is the result of many years of cooperative improvement among the producers, the Wyoming Oil and Gas Conservation Commission and the BLM. The stringent requirements laid down by the federal Environmental Protection Agency and the state Department of Environmental Quality have been met at great expense to both the producers involved (through their shareholders, partners, etc.), and the State of Wyoming and its affected counties (through their taxpayers).

5-1 (cont.)

When I say "stringent requirements", that is really an understatement. I am mindful of the attempts by a Casper energy producer to open a trona mine in Sweetwater County. The environmental compliance consultant for that effort is a friend of mine. He told me in detail what the requirements were, including a "view easement" compliance, road impact compliance, and other visibility and emission requirements which would not only have been very difficult to meet, but also very expensive. The mine was never opened, even though the producer had the required leases.

I used to fly around the state in my own airplane. From the air, it was difficult, if not impossible, to see even small towns, entire oil fields and mine heads. Irrigated acreage was easy to spot, as were coal-fired power plants and large antenna arrays (all of which can be seen at great distances on the ground). I can remember one day when I flew over Seminoe Reservoir and turned east toward Laramie Peak. I could see the stack emission from the power plant northeast of Wheatland and, to my great surprise and consternation, 30 or 40 wind turbines which I had never seen before and had to have been at least 50 miles east of my position.

The irrigated acreage is small in Wyoming and is a landowner

right which is time-honored and necessary in the state's agriculture business. I assume that the coal-fired power plants are grandfathered so far as everything except emission controls are concerned, as they have been here for many years. Antenna arrays are dangerous and unsightly, but are also probably grandfathered. Wind farms, however, are new to this state.

I have driven through other parts of the U.S. where wind power is more developed and, quite frankly, large concentrations of windmills are the ugliest, most unearthly sight I can imagine. When we choke off local investment, such as the trona mine I outlined above, through insistence on "view easements" and other minutia, I do not understand the necessity for permitting large wind farms which have no such requirements imposed upon them, and which can never be made to blend into the general view. They make a mockery of all the efforts expended over the years to minimize environmental impact in this State.

If I thought wind-generated electricity held out any hope of contributing substantially to the total amount of electrical power we need to generate, I might have a more tolerant attitude. My understanding, however, is that the most that wind-generated electricity can contribute to our overall energy consumption in the next 50 years is, at most, 3%, which strikes me as totally insignificant when you consider the blight of huge wind farms. I am not by nature an environmentalist, but I object strongly to the introduction and use of wind farms in Wyoming, particularly, or wherever they may be located. If we are going to allow them, then we must relax the stringent standards on our other electrical generating technologies in order to create a level playing field. In particular, whatever happened to nuclear power generation? Where are all the solar panels? Who is going to bear the costs of delivering this power to other parts of the country?

5-1 (cont.)

Incidentally, one of the largest complaints voiced by both landowners and environmentalists when it comes to the production of coalbed methane gas in the Powder River Basin is the many surface lease roads required to service the wells. Having flown over both (a) large areas of methane gas development and (b) wind farms, I can tell you that the surface road damage from wind farming is far greater than that associated with coalbed methane.

My message is: Please do not permit further development of wind farms in this part of the country. Try the areas off Long Island and Cape Cod which are ideally suited to this form of energy production.

William H. Everett

Response for Document 00005

00005-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 00006

Gretchen B. Walsh
1374 Lupo Lane
Gardnerville, NV 89410

BLM Wind Energy Programmatic EIS
Argonne National Laboratory, EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

October 28, 2004

Dear Manager:

I wish to contribute to the public review of the proposed leasing of BLM lands to private companies for generation of wind energy. In principle, I encourage such a productive use of our public lands. And I recognize the need for the production of electricity just as I see the need for oil refineries and steel mills. However, the location of such installations requires extreme care because the visual pollution of wind farms can be just as environmentally degrading as airborne or waterborne toxins. We in Nevada know only too well that there is a price to be paid for what was once considered "clean" nuclear energy generation.

Each wind energy site proposed will have its own individual issues and considerations. Some communities will welcome the economic development brought by energy companies. Some communities will see little if any conflict with current land uses such as grazing or open land. And some areas, such as those near fossil fuel or geothermal installations, will already have much of the required infrastructure in place. 6-1

Other communities now dependent on tourism will consider wind installations a blight on their scenic treasures. And others will have concerns over threatened wildlife. Viewsheds near populated areas must be protected to maintain community desirability and property values. And in most cases, BLM lands at urban interfaces are currently being heavily used for recreational purposes (hiking, biking, horseback riding, shooting, camping, OHV use, etc.). Such existing BLM land uses must take priority before assigning any new leases. It is the local citizens who must be given the final say on any industrial installations (and wind farms **are** an industrial usage) on BLM land in or near their communities.

The vast open mountain ranges of the West provide ample space for wind generation power plants. Please do not allow wind farm sites that will visually pollute those special landscapes that we treasure. (These include the area

within 50 miles of any National Park or environmentally sensitive area such as Lake Tahoe, Ruby Mountains and Marshes, Mono Lake, Carson Valley, etc.) Just as we refrain from oil drilling in much of Alaska, we must refrain from exploiting and degrading the best of our windy and scenic Western mountains for energy production.

The BLM will be the arbiter between the community and the lease applicant. Please remember that the BLM is the custodian of public lands for the benefit of **all** citizens, not just those few who would seek quick profits in the latest energy fad. (Wind energy in the U.S., even when highly subsidized, currently accounts for only 1% of our total consumption. And it has been under development for well over 20 years.) Local citizen input and sensitivity to the site are critical for any future leases.

6-1 (cont.)

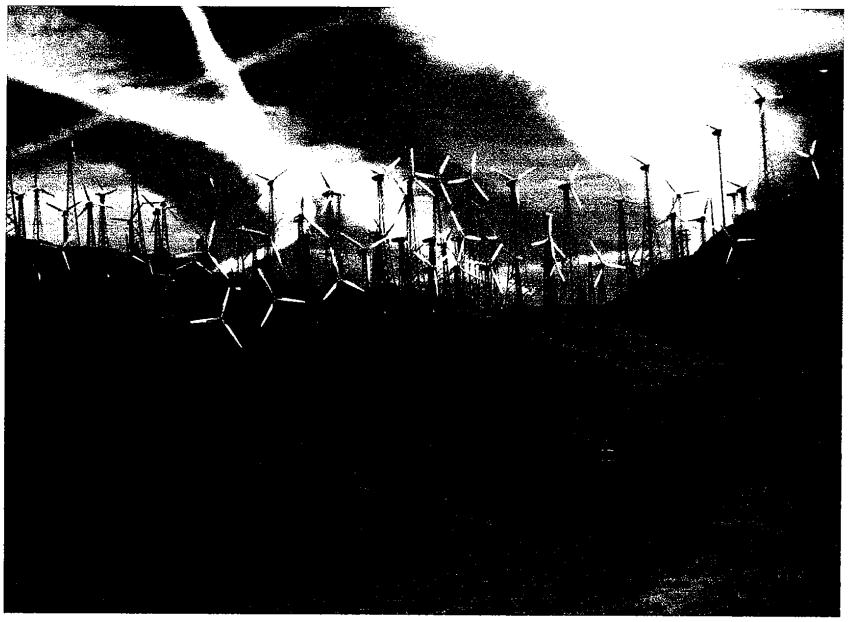
Sincerely,

Gretchen B. Walsh

Gretchen B. Walsh

C: Tom Crawford, BLM Office, Carson City, NV

Photo - Tehachapi, CA Wind Installation



Response for Document 00006

00006-001: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Issues such as those raised in this comment related to potential impacts to visual resources, wildlife, and land use will be addressed through the site-specific analyses. Many of the proposed policies and BMPs establish requirements to ensure that impacts are mitigated to the greatest extent possible. Through the site-specific analysis process, the BLM will develop project-specific stipulations for incorporation into the POD.

Document 00007

Nov. 20, 2004

BUREAU OF LAND MANAGEMENT
WIND ENERGY PROGRAMMATIC EIS
Argonne Nat'l. Laboratory/EAS
900 S. Cass Avenue
Argonne, IL 60439

Dear Wind Energy Proponents:

Here, in northern Nevada's Carson Valley, you will find exactly what you are looking for and what we so desperately need:

The best alternative energy source, which is non-polluting.

You have the land here to make this possible:
BLM owns the greater portion of property in our state.

We have the wind;
Our Minden-Tahoe airport ranks second in the world for ideal glider plane flying conditions.

Our whole country has the need:
Period.

7-1

Sincerely,

George and Diane Pezzolo
1275 Downs Drive
Minden, NV 89423

cc: Senator Harry Reid
Senator John Ensign
Rep. Jim Gibbons

Response for Document 00007

00007-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 00008

11-20-04

Dear Sirs,

I believe that wind power is very good for the enviroment & mankind. We need more! Please continue the research.

8-1

Katie Spencer
1692 Lantana Dr.
Minden, Nv. 89423
775-782-8080

Response for Document 00008

00008-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 00009

Department of Energy
Washington, DC 20585

December 3, 2004

BLM Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

Dear Mr. Brady:

The Office of Legacy Management (LM) of the Department of Energy (DOE) wishes to thank you for providing the opportunity to comment on the Bureau of Land Management's (BLM) draft Programmatic Environmental Impact Statement (PEIS) regarding your agency's national wind energy program. LM is custodian of radioactive ore-processing and mining sites with legacy wastes disposal systems requiring long-term surveillance and maintenance. Large sites with suitable land buffer zones, surrounding low-level radioactive waste disposal cells and monitoring systems, can offer safe usage for renewable energy power productions companies. We've identified several suitable wind power sites and will continue to encourage land reuse for renewable energy purposes.

We believe that the BLM PEIS will provide useful information to LM due to the fact that your PEIS is addressing similar policy and programmatic environmental impact issues in approximately the same geographical area as many of our western sites. It also provides information to us for actions that are substantially the same as those being considered by LM for use of wind energy. For example, your PEIS addresses similar programmatic environmental impact issues in approximately the same geographical areas as many of our western sites which would make this document and its information very useful for helping guide our potential future program. Several of our custodian sites suitable for wind or solar power are located adjacent to or near BLM lands in Wyoming. 9-1

Additionally, coordination with BLM is important because the National Energy Policy recommends that DOE and other Federal agencies work closely with BLM on renewable energy production. Our office has also coordinated with other DOE offices on wind energy applications including staffers with the Western Area Power Administration (WAPA) and the National Renewable Energy Laboratory (NREL) as well as with staffers with Argonne who are preparing the PEIS BLM.

LM's land reuse initiative is in the early planning stages and we see the potential value of adopting the final PEIS in advance of any sites being returned to beneficial reuse for renewable energy power production. Please let us know how we can coordinate with BLM in final development of your PEIS. 9-1 (cont.)

Robert Baney
Director, Office of Property Management
and Community Assistance

Cc Susan Starcevich, WAPA
Donna Heimiller, NREL
Karen Smith, Argonne
Charles Alton, Argonne
Eric Cohen, EH DOE
Tracey Plessinger, LM DOE

Response for Document 00009

00009-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 00010

Northwest Power and Conservation Council

December 2, 2004

BLM Wind Energy Programmatic EIS
Argonne National Laboratory, EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

Dear Sir or Madam:

The Northwest Power and Conservation Council appreciates the opportunity to submit comments on the Bureau of Land Management Draft Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States (DES 0441). The Council believes that windpower will grow to constitute a major element of the Northwest power system over the next two decades and supports implementation of the proposed wind energy development program as a means of facilitating cost-effective and environmentally sensitive development of promising wind resource areas on lands administered by the BLM. In contrast, the alternative actions considered in the DES are unlikely to support the future role of windpower envisioned by the Council. 10-1

Transmission system reinforcement, potentially including development of new corridors across BLM-administered lands may be required to support needed windpower development. BLM land use plans and specific project development plans should seek to identify and accommodate related transmission expansion 10-2

The Council requests that it receive notice concerning proposed revisions to the BLM land use plans undertaken in response to the wind energy development program for lands lying within the states of Idaho, Montana, Oregon and Washington. The Council also requests notice concerning draft Plans of Development for specific wind project proposals. 10-3

The Council again expresses its appreciation for this opportunity to comment.

Sincerely,

Judi Danielson
Chair

851 S.W. Sixth Avenue, Suite 1100
Portland, Oregon 97204-1348
www.nwcouncil.org

Steve Crow
Executive Director

503-222-5161
800-452-5161
Fax: 503-820-2370

Responses for Document 00010

00010-001: Thank you for your comment. We appreciate your input and participation in the public review process.

00010-002: Section 6.4.3 acknowledges that wind energy development on BLM-administered lands may require the construction of new transmission lines. Such construction would constitute a separate but related activity and would require interagency cooperation and multidisciplinary environmental reviews. The designation of new transmission corridors on BLM-administered lands will occur as a result of interagency consultations, not as a result of a unilateral decision by the BLM. Any such designations would be evaluated through either regional or local land use planning efforts, with opportunities for full public involvement. The potential impacts of transmission system interconnects or expansions that would be required by an individual wind energy project on BLM-administered lands will be assessed as part of the site-specific analyses, with input from other federal, state, and local agencies, and interested stakeholders.

00010-003: Stakeholders are routinely informed and invited to participate in all land use plan revisions. Proposed amendments relating to wind energy development for existing land use plans in Idaho, Oregon, Montana, and Washington are listed in Appendix C. As stated at Section 2.2.3.1, 3rd bullet, and at Section 2.2.3.2.2, General, 1st bullet, stakeholders will be contacted early in the planning process for proposed site-specific wind energy development projects. In addition, it is recommended that you contact the BLM State Offices to specifically request notification.

Document 00011

BLM Wind Energy Programmatic EIS
Argonne National Laboratory, EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

To the BLM:

I am writing to express my support of renewable energy and wind power. I wholeheartedly encourage the BLM, and all government agencies, to address issues associated with wind energy development and pursue future wind energy projects.

Currently, there is a great push to continue and increase oil and gas exploration in Wyoming. While this resource has been a boon to the state, it is not a renewable resource and it comes at the cost of environmental health. When the oil and gas are depleted, Wyoming will have also lost our wilderness and wildlife resources. Wind-power presents an opportunity to expand renewable energy in the state and minimize threats to our great outdoors. 11-1

Thank you for considering my comments on this important issue.

Sincerely,

Jodi P Nelan
PO Box 2995
Jackson, WY 83001

Response for Document 00011

00011-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 00012

KENNY C. GUINN
Governor

STATE OF NEVADA
DEPARTMENT OF WILDLIFE
1100 Valley Road
Reno, Nevada 89512
(775) 688-1500 • Fax (775) 688-1595

TERRY R. CRAWFORTH
Director

GENE WELLER
Deputy Director

12/8/2004

Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

Attn: Wind Energy DPEIS

Dear Sir:

The Nevada Department of Wildlife (NDOW) would like to thank you for the opportunity to comment on the Draft Programmatic Environmental Impact Statement (DPEIS) related to the Bureau of Land Management's (BLM) development of a wind energy program and best management practices. As you are probably aware, nearly 50 million acres of public lands are administered by the BLM in Nevada. This represents approximately 70 percent of the states land base. These 50 million acres also provides important habitat for a variety of wildlife species including federally listed fishes and animals, many sensitive species, and a variety of highly sought after game species. NDOW has a number of concerns, issues and comments on the DPEIS. Please see the attached word file for NDOW comments.

Sincerely,

for Doug Hunt
Chief, Habitat Bureau

cc: Gary Taylor, IAFWA
Larry Kruckenberg, WAFWA

General Comments:

The Purpose and Need section of Chapter 1 clearly states "BLM's proposed Wind Energy Development Program include……(3) best management practices (BMPs) for mitigating the potential impacts of wind energy development on BLM administered lands;". Chapter 2 goes on to define Best Management Practices as "a practice (or combination of practices) that is determined to provide the most effective, environmentally sound, and economically feasible means to manage an activity and mitigate its impacts. BMPs adapted as a part of the proposed Wind Energy Development Program would identify for the BLM, industry, and stakeholders the best set of practices for developing wind energy and insuring minimal impact to natural and cultural resources". It is incomprehensible, based on the above definition and the obvious assumption of this document that BMPs would be implemented, that of 102 identified BMPs, 97 or over 95% are phrased with the words should be or should. There has been no commitment to requiring any of these BMPs nor is there any information presented that would provide an expectation that any of these BMPs would be implemented. Yet the analysis presented leads the reader to believe impacts will be minimized by implementation of BMPs. The development of BMPs without any requirement for there implementation (BMPs written with should or should be instead of shall or will) invalidates the analysis within this document, especially with regard to the impacts analysis and conclusions. Considering the stated purpose and need, the definition of BMPs being "a practice (or combination of practices) that is determined to provide the most effective, environmentally sound, and economically feasible means to manage an activity and mitigate its impacts", and the process used in this document to develop these BMPs, it is recommended that the BMPs be rewritten with the words shall or will so as to provide some direction for BLM, industry, and stakeholders that would result in an understanding of what is required and provide a solid basis for the analysis within this document. 12-1

The proposed action indicates that the Programmatic Environmental Impact Statement (PEIS) will provide the necessary level of analysis to support amendment of several land use plans. It is unclear what the proposed action actually is in this case. It should be made clear if it is the action here to amend the identified land use plans through this PEIS process or that this PEIS will only provide the support for a land use plan amendment process to be conducted with an appropriate level of NEPA analysis and inputs at the local level. It is strongly recommended that the process called for here, provide for the land use plan amendments to be conducted at the local level subsequent to the finalization of this PEIS as the level of analysis in the PEIS does not provide a level of specificity to adequately assess local conditions, identify appropriate alternatives specific to a planning area and provide for an accurate depiction of environmental impacts. 12-2

Specific Comments:

1.1 Purpose and Need; Page 1-1; Paragraph 3: The developed BMPs provide no verbage indicating they would be required for implementation and therefore do not meet the stated purpose and need. (See above general comment) 12-3

1.2 Scope of Analysis; Page 1-2; 1.2 Paragraph 4: It is stated that direct and indirect impacts, including economic impacts, are evaluated but nowhere in the document are the impacts to wildlife and their habitat from disturbance, habitat loss and/or fragmentation, increased accessibility and visibility issues related to the economic values of fishing, hunting and wildlife-associated recreation discussed. Data for western states can be found in Department of Interior, U.S. Fish and Wildlife Service's publication "National Survey of Fishing , Hunting, and Wildlife Associated Recreation". We recommend that the document recognize this important potential economic impact. 12-4

2.2.3.1 Proposed Policies; Page 2-8; Paragraph 1: Based on observed wildlife mortality and the occurrence of significant human safety issues associated with low level helicopter wildlife survey flights, it does not seem appropriate to use a categorical exclusion to fulfill NEPA requirements for monitoring and testing activities. Program policies should be developed that sufficiently address these issues with regard to ROW issuance for monitoring and testing. 12-5

2.2.3.1 Proposed Policies; Page 2-8; Paragraph 3: The policy should also identify that the sage grouse management guidelines would be implemented as appropriate with specific reference to "Connelly,J.W., M.A. Schroeder, A.R. Sands, and C.E. Braun. 2000. Guidelines to manage sage grouse populations and their habitats. Wild. Soc. Bull. 28(4):967-985." These guidelines as well as specific goals and objectives for sage grouse conservation need to also apply to ROWs for monitoring and testing facilities. 12-6

2.2.3.2.1 Site Monitoring and Testing; Page 2-10; Paragraph 1: It should be identified that if new roads are required categorical exclusion would not apply. 12-7

2.2.3.2.1 Site Monitoring and Testing; Page 2-10; Paragraph 2: Incorporation of design features to minimize wildlife mortalities should be included here. 12-8

3.1.1 Site Monitoring and Testing Activities; Page 3-1; Paragraph 2: Monitoring and testing towers are getting significantly taller. Appropriate figures should be used here to represent heights for the foreseeable future. 12-9

4.6.2.2 Birds; Page 4-12; Paragraph 1 & 4-15 Table: Nevada recognizes 456 species of birds in the state. The 283 bird species identified in the text is only those birds that breed in Nevada. The total of 456 includes regular migrants and exotic or naturalized species such as chukar. Furthermore, this document needs to consider that some exotic species of birds (i.e. chukar) are state protected and must be considered in this document. Additionally, with the rapid change in global climate (i.e. average seasonal temperatures, changes in precipitation levels, etc.) some species of birds are altering their range distributions, and are either more common or less common in certain areas then they were just a few decades ago. 12-10

4.6.2.2.1 Migratory Routes; Page 4-15; Paragraph 1: North American flyways generally refer to waterfowl migration routes. There exist many major raptor migration routes not depicted here. To suggest that the flyways are the major routes for all bird species is 12-11

misleading. Much of the data for these are readily available through state wildlife agencies. Recommend review of Nevada Raptors, Herron el. al. 1985, for Raptor flyways in Nevada and Hawkwatch International data. 12-11 (cont.)

4.6.2.2.5 Birds of Prey and Vultures; Page 4-21, Paragraph 1: This document reports that Nevada has 15 species of raptors, when Nevada actually has 31 species of raptors. This should be corrected in table 4.6.2.2 also. 12-12

4.6.2.2.5 Birds of Prey and Vultures; Page 4-21, Paragraph 1&3: The California Condor has been reported on multiple occasions in southern Nevada. There are 11 species of owl that occupy Nevada, not 9 species as this document reports. Correct in Table 4.6.2.2. 12-13

4.6.2.3 Mammals; Page 4-22; Paragraph 1: Bighorn sheep have been left out of this list. Because of its significant relative to wind energy project sites it should be included here. There are 3 subspecies of bighorn in Nevada. These include the desert bighorn, California bighorn and the Rocky Mountain bighorn. The desert bighorn is a BLM sensitive species. 12-14

4.6.2.3 Mammals; Page 4-22; Paragraph 3: The data reported in this document regarding migratory distances for bats is inadequate. There are a number of species of bats that migrate a substantial distance further then "winter roosts in Mexico to caves in the southwestern United States", including species that migrate north into the Northwest U.S. and Canada, and species that migrate further south then Mexico. 12-15

4.6.2.3 Mammals; Page 4-23, Table 4.6.2-3: Nevada recognizes 23 species of bats, not 22 as this document reports. Nevada recognizes 2 species of Phyllostomidae, 18 (not 17 as this document reports) species of Vespertilionidae, 3 species of Molossidae, and no species of Mormoopidae. 12-16

4.6.2.3 Mammals; Page 4-23; Paragraph 3: The document reports that "Some species, such as the greater mastiff bat, may fly up to 990 ft (300 m) above the ground". This document needs to clarify that this is not the highest height recorded for bats to fly, since at least one species within the Family Molossidae has been observed flying substantially higher. 12-17

4.6.5.3 State Listed Species; Page 4-31, Table 4.6.5-4: The information for Nevada reported in this table should be updated with the current species classifications. Corrections may be necessary in Table 4.6.5-3 also. See Attachment 1. 12-18

Page 5-2, Table 5-1: The acreages reported in this table are unreasonable, at least for Nevada. In Nevada alone, there are currently over 105,000 acres right of way (ROW) granted and issued for wind energy development to 13 different companies. There are an additional 125,429 acres of ROW applications pending action submitted by 15 companies and more applications being received. Also, it should be recognized that as wind generation is established in select areas, other areas nearby become more economically feasible to develop as additional wind generation sites, because, for example, the cost 12-19

associated with transferring the generated power off-site and into the western power grid system becomes substantially reduced. 12-19 (cont.)

5.9 Ecological Resources; Page 5-35; Paragraph 4: Bullet 2 states that "a decrease in plant or animal population to below self-sustaining levels" would be considered important. The decrease in a population of plants or animals to below a self-sustaining level would result in that population's extirpation. This goes far beyond being a criteria for being considered important. This criteria should focus on measurable reductions in local populations of animals and some special status plants. 12-20

5.9 Ecological Resources; Page 5-35; Paragraph 4: It is imperative that a decline in all affected volant species populations also be addressed and "considered important from wind energy development [as] biological resources". It is recommended that bullet 6 under the 4th paragraph be rewritten to state, a decline in volant species populations; 12-21

5.9.1 Site Monitoring and Testing; Page 5-37; Paragraph 1: The document fails to report that non-native exotic plant species are likely to encroach upon wind energy development areas including monitoring and testing sites and will likely invade surrounding habitat outside project areas. 12-22

5.9.2.2.1 Habitat Disturbance; Page 5-41; Paragraph 1: There is no question that the construction of a wind energy development will impact wildlife not "may impact". 12-23

5.9.2.2.2 Introduction of Invasive Vegetation;; Page 5-42; Paragraph 1: The establishment of invasive vegetation on site could also result in seed source and disbursal into adjacent off-site habitats thus impacting more than just the disturbed areas of the project. 12-24

Page 5-43, Table 5.9.2-2: Erosion and runoff from project construction sites may very well impact water quality over the long term and not only affect habitats short term as there are no BMPs requiring revegetation to reduce runoff. 12-25

Page 5-43, Table 5.9.2-2: Interference with behavioral activities could result in long-term impacts to several wildlife species as the disturbance during construction and the ongoing occupation of the project site could eliminate the availability of effective habitat and use by wildlife. 12-26

Page 5-47, Table 5.9.2-3: Erosion and runoff from project construction sites may very well impact water quality over the long term and not only affect habitats short term as there are no BMPs requiring revegetation to reduce runoff. 12-27

Page 5-54, Table 5.9.3-2: Regarding the topic of "Interference with migratory behavior" under the "Ecological Stressor" category in Table 5.9.3-2, this document indicates that the fact that "Migratory birds and mammals may avoid previously used migration routes, potentially affecting condition and survival" would be a "localized" effect completely misses the concept of migration. Migratory animals use migration routes to complete 12-28

annual life cycles. The suggestion that wind energy development's potential negative effect on the loss of, or impediment to, migration routes for migratory species is a "localized" issues is a gross mis-statement. If wind energy development, even at the localized site level, interferes with the migratory ability of a species, then affected individuals within that species will have a reduced ability to complete their life cycle. The implications migratory species not being able to complete their life cycle is far from being a "localized" issue. Various species of volant and non-volant animals migrate in sexual or age class segregations, with females and males, or young and adult, using different migratory pathways, depending on physiological requirements. Interference with one of the groups ability to migrate clearly would have the potential affect the species as a whole. 12-28 (cont.)

Page 5-54, Table 5.9.3-2: With regard to collisions with turbines, towers etc. the identification of low magnitude of impact may be misleading especially if the species affected population is already stressed and on the decline as are many of the raptors and other birds of Nevada. (See Nevada Partners in Flight "Bird Conservation Plan). 12-29

5.9.3.2.1 Electrocution; Page 5-55, Paragraph 1: The statement that the "accidental electrocution of birds from contact with distribution or transmission lines in not expected to adversely affect bird populations in the vicinity of a wind energy development project" again ignores the fact that a majority of birds are migratory, and therefore doesn't account for the fact that these individuals, once electrocuted, are no longer able to contribute reproductively to their species. A majority of the potential impacts to migratory wildlife will be indirect, and not at the localized level, and this must be accounted for in the EIS. 12-30

5.9.3.2.2 Noise; Page 5-56; Paragraph 3: The conclusions derived from comparing data from studying the effects of gas well compressor noise with noise generation data from wind generators are inappropriate. Gas well compressors operate in a completely different mechanical method and disturbance environment then wind generators, and therefore it is highly inappropriate to compare wildlife avoidance data, simply because the two machine types generate noise. 12-31

5.9.3.2.3 Collisions with Turbines, Meteorological Towers, and Transmission Lines; Page 5-57, Paragraph 2 (Avian Collisions): The numbers provide for species of birds often considered pests or undesirables in the first paragraph of the Avian Collisions section represent only 13.6% of bird species for turbines in the United States, and only 6.25% of bird species for turbines outside of California. Since these represent such a small proportion of the bird species killed, why are they reported at all here, and more importantly why are data not provided for native species, including migratory and non-migratory. Highlighting wind energy's contribution to mortality of bird species often considered pests or undesirables is misleading when the numbers of native non-migratory and migratory species are significantly greater. Many of these native species are also experiencing significant stress on their populations making impacts of additional development all that more important. This document should be clear on this. 12-32

5.9.3.2.3 Collisions with Turbines, Meteorological Towers, and Transmission Lines; Page 5-57: Regarding this documents comments on avian collisions with wind turbines, the document makes gross conclusion without considering several key factors. The document does not indicate what habitats were included in the analysis of bird mortalities from the reported data, and does not report how this relates to habitats in the eleven western states this proposed EIS is to cover. Furthermore, this document, based on the fact that bird mortality data from multiple existing wind energy sites, was compiled and summarized to give average kill rates per year, fails to recognize an almost assured bias in sampling design for bird carcass searches, while asserting in the 4th paragraph under avian collisions that the mortality data is likely an overestimation of mortality contributed to wind energy development. Data on bird mortality rates should not be compared between multiple sites, if carcass searches were not performed the same at each site. Preliminary data available suggest huge biases in carcass documentation depending on the method of search used. 12-33

5.9.3.2.3 Collisions with Turbines, Meteorological Towers, and Transmission Lines; Page 5-59, Table 5.9.3-4: These data include only five western states. With the exception of California (included in this table), much of the bird mortality studies that have begun in recent years have been conducted in states not included in this table. By not including the magnitude of data available from states that already harbor operating wind energy sites, this dataset is incomplete and potentially misleading. In order to achieve a better understanding of the relationships of wind energy development and avian mortality, the data available should be examined by species, habitats, and eco-regional perspectives. 12-34

5.9.3.2.3 Collisions with Turbines, Meteorological Towers, and Transmission Lines; Page 5-60; Paragraph 1: The inferences derived from comparing the number of species observed as mortalities from wind generation with a list of species reported to occur in each of the selected states, are extremely inappropriate. Bird species lists have been continuously compiled and added to in every single U.S. state for several decades. Comparing these lists with a list of species killed by wind generation from anecdotal or inadequate sampling at wind generation sites is unfounded. 12-35

5.9.3.2.3 Collisions with Turbines, Meteorological Towers, and Transmission Lines; Page 5-60; Paragraph 1: This document states that "long-range migrations [of birds] are not likely to be impacted by turbines except during weather conditions that induce them to fly low, or during takeoff and landing", based on one single study. It is already very clear that species affected and to the extent they are affected will likely vary substantially by eco-region, habitat, and specific site locality. Concluding that long-range bird migrations are likely not to be impacted based on the data this document references, is completely inappropriate. 12-36

5.9.3.2.3 Collisions with Turbines, Meteorological Towers, and Transmission Lines; Page 5-62, Paragraph 3 (Raptors): This document states that "To date, no studies have shown population-level effects in raptor populations associated with wind energy projects", while ignoring that the affects to volant wildlife from wind generation is a 12-37

relatively new discovery, especially within the United States, and has only in the last few years been receiving attention. It will likely take time and substantial resources to observe potential population level effects to wildlife from a source such as wind-generation, and this document fails to recognize this fact, instead stating that wind energy projects do not induce population level affects on raptors. 12-37 (cont.)

5.9.3.2.3 Collisions with Turbines, Meteorological Towers, and Transmission Lines; Page 5-64: In order to begin to adequately address impacts of wind generation facilities to raptors, the mitigation measures in the "Compatibility of a Wind Energy Development Project and Raptors" draft document, should be mandated in this EIS. 12-38

5.9.3.2.3 Collisions with Turbines, Meteorological Towers, and Transmission Lines; Page 5-65 Paragraph 1: This document states that only 9 of the 39 species reported in the United States "have been recorded as fatalities at wind farms", yet fails to report that bat collisions with wind generators is a relatively new phenomenon and has received little attention, especially from carcass survey standpoint. Preliminary data available, suggests that different sampling methods for bats (i.e. weekly carcass searches vs. daily carcass searches) produce substantially different data sets. This document does not adequately address this issue, and instead compares the different data sets with little regard as to the different sampling methods used. 12-39

5.9.3.2.3 Collisions with Turbines, Meteorological Towers, and Transmission Lines; Page 5-67, Table 5.9.3-6: This table summarizes the data referred to in the above comment. These data are reported assuming that the different sampling methods for carcass searches conducted are equivalent to one another, when they were clearly not. Preliminary data suggests a rather large bias in observed bat carcasses at wind generation sites according to survey method. These data cannot be properly compared at the scale which they are in this document. 12-40

5.9.3.2.3 Collisions with Turbines, Meteorological Towers, and Transmission Lines; Page 5-68; Paragraph 1: The first sentence of the first paragraph of this page needs to be clarified that data from the Buffalo Ridge WRA apply only to the Buffalo Ridge WRA, and inference on other sites from these data should be made with extreme caution. Since data impacts to volant species of wildlife will likely vary substantially by eco-region, habitat, and specific site locality, it is imperative that general inferences to volant wildlife impacts not be made from such limited site-specific data, which is currently the only data available. 12-41

5.9.3.2.6 Disturbance to Wildlife; Page 5-68; Paragraph 1: At a previous point in the document it is recognized that natural habitat is assumed to be at "full capacity" regarding wildlife. However, in this section, it is stated that wildlife displaced from wind energy development will "permanently move from the area". This document fails to adequately address the fate of wildlife displaced from wind generation facilities. Not only direct displacement, but especially indirect displacement of wildlife must be considered. 12-42

5.9.3.2.6 Disturbance to Wildlife; Page 5-69: Regarding the "Compatibility of a Wind Energy Development Project and Bats" draft document: 1) Nevada does not recognize the little brown bat as "critically imperiled to imperiled". The Nevada Bat Conservation Plan (Draft 2002) in its risk assessment identifies the Little Brown Myotis populations and habitat at moderate risk ; 2) no mention is made and little consideration given to elevation migrations of bat species that are thought to be non-migratory; 3) little consideration is made to migratory bat species; 4) no consideration is offered to the fact that much of the western U.S. is an arid environment, and therefore, water sources are an attractant to bats and the locality of water sources must be considered with sitting wind generation facilities; and, 5) why are only little brown bats, big brown bats, and especially eastern red bats eastern pipistrelles discussed in specific, and not other species of bats that occupy the Western U.S. in substantially greater numbers? 12-43

5.9.3.2.6 Disturbance to Wildlife; Page 5-70: In order to begin to adequately address impacts of wind generation facilities to bats, the mitigation measures in the "Compatibility of a Wind Energy Development Project and Bats" draft document, should be mandated in this EIS. 12-44

5.9.3.2.7 Interference with Migratory Behavior; Page 5-71; Paragraph 1: The "" section only addressed non-volant species, and there is no mention of bird or bat species in this section. The interference to bird and bat species' ability to migrate must be adequately addressed in this section. 12-45

Page 5-72; Compatibility of a Wind Energy Development Project and Gallenaceous Birds: Again suggested mitigation as identified here is not required and therefore should not be considered in the impacts analysis unless rewritten to be required. 12-46

5.9.3.4: Operational Effects on Threatened and Endangered Species; Page 5-75; Paragraph 3: This document claims potential impacts to threatened or endangered species from non-facility related human activity would be "unrelated to facility operations and out of the control of the facility and its operators", thus completely ignoring the fact that human activities not related to wind generation are likely to occur as a direct result of a developed wind generation project. The BLM cannot ignore that through the permitting of a development that results in increased access and resultant impacts to resource values that these impacts are not related to the permitted project. Activities that are not specifically related to wind generation operations, but which are a result of the increased access to remote sites that permitted wind generation will potentially provide must be addressed in this document. 12-47

5.9.5 Mitigating Measures; Page 5-76: In order to adequately document and address the potential impacts to wildlife, it is imperative that appropriate mitigation measures regarding wildlife be mandated in this EIS. The mitigation measures as written do not require the described action and therefore cannot be assumed that they would be implemented. 12-48

5.9.5.6 Mitigation for Threatened, Endangered and Sensitive Species; Page 5-84; Paragraph 2, 3rd Bullet: Biota by definition refers to the plants and animals of a particular region. Relocation of animal species makes no sense at all relative to mitigating for any impacts of projects. As this document has discussed in other sections the loss and/or fragmentation of habitat and the impacts on movement behaviors will impact animal species and the assumption that animals will move (or in this case be moved) to habitats outside of the project area without affect on the population is invalid. Simply relocating state protected biota is completely inadequate. Where wind generation is proposed to occur in areas harboring federal or state protected, threatened, endangered, and sensitive species, careful consideration must be applied to determine the method in which wind generation can be employed with limited impacts to these biota. 12-49

Page 6-3. Section 6.1.2: This section states that " Implementation of the proposed policies and BMPs would ensure that potential adverse impacts to most of the natural and cultural resources present at wind energy development sites, except wildlife and visual resources, would be minimal to negligible." In order to prevent species declines and subsequent Federal Listing under the Endangered Species Act, it is imperative that this document take a more proactive approach at protecting wild flora and fauna, and the wildlife be mitigated and planned regarding wind generation development, so that impacts would be "minimal to negligible", instead of simply reduced. 12-50

6.1.2 Environmental Impacts; Page 6-2; Paragraph 1: The first sentence suggests that the Wind Energy Development Program would incorporate policies and BMPs that establish mitigation requirements for all projects. The statement is incorrect. In fact of 102 identified BMPs, 97 or over 95% are phrased with the words should be or should. There has been no commitment to requiring any of these BMPs nor is there any information presented that would provide an expectation that any of these BMPs would be implemented. Yet the analysis presented continues to lead the reader to believe impacts will be minimized by implementation of BMPs. 12-51

6.1.2 Environmental Impacts; Page 6-4; Paragraph 1: Again, the document is assuming that BMPs written with no requirement for implementation will "considerably reduce potential impacts to wildlife". This is not the case unless the BMPs the document has defined as "the most effective, environmentally sound, and economically feasible means to manage an activity and mitigate its impacts" are rewritten to assure there application where appropriate. 12-52

6.4.1.10 Ecological Resources; Page 6-18: The cumulative impacts section is lacking any significant assessment relative to the proposed action other than a comparative look at avian mortality by certain causative factors. There is no assessment of habitat fragmentation and loss. There are a significant amount of scientifically credible data available on existing impacts to habitats in the western United States for a variety of factors including fire and invasive plant impacts, highways, powerlines, urban development, agricultural development, etc., etc. This information should be used for creating a credible assessment of cumulative impacts. An example would be the 12-53

following: Wisdom, M. J., L. H. Suring, M. M. Rowland, R. J. Tausch, R. F. Miller, L. Schueck, C. Wolff Meinke, S. T. Knick, and B. C. Wales. 2003. A prototype regional assessment of habitats for species of conservation concern in the Great Basin Ecoregion and State of Nevada. Version 1.1, September 2003, unpublished report on file at USDA Forest Service, Pacific Northwest Research Station, 1401 Gekeler Lane, La Grande, OR 97850.

12-53 (cont.)

Page 6-14, Table 6.4.1-1: How accurate is the data in this table? The acreages reported in this table are unreasonable, at least for Nevada. In Nevada alone, there are currently over 105,000 acres right of way (ROW) granted and issued for wind energy development to 13 different companies. There are an additional 125,429 acres of ROW applications pending action submitted by 15 companies and more applications being received. These acreages are approximately seven times greater then the acreage reported in this table as "Economically Developable Wind Resources". Also, it should be recognized that as wind generation is established in select areas, other areas nearby become more economically feasible to develop as additional wind generation sites, because, for example, the cost associated with transferring the generated power off-site and into the western power grid system becomes substantially reduced.

12-54

ATTACHMENT 1

NEVADA STATE TERRESTRIAL SPECIES CLASSIFICATION LIST
(additions to past list in bold)
Mammals

Protected	
pika	*Ochotona princeps*
Douglas squirrel (chickaree)	*Tamiasciurus douglasi*
northern flying squirrel	*Glaucomys sabrinus*
western gray squirrel	*Sciurus griseus*
fringed myotis	*Myotis thysanoides*
pallid bat	*Antrozous pallidus*
Allen's lappet-eared bat	*Idionycteris phyllotis*
Brazilian free-tailed bat	*Tadarida brasiliensis*
dark kangaroo mouse	*Microdipodops megacephalus*
pale kangaroo mouse	*Microdipodops pallidus*
Protected, Threatened	
spotted bat	*Euderma maculatum*
Protected, Sensitive	
California leaf-nosed bat	*Macrotus californicus*
Western red bat	*Lasiurus blossevillii*
Townsend's big-eared bat	*Corynorhinus townsendii*
Western mastiff bat	*Eumops perotis*
Sierra mountain beaver	*Aplodontia rufa californica*
Hidden Forest Uinta chipmunk	*Tamias umbrinus nevadensis*
Palmer's chipmunk	*Tamias palmeri*
Ash Meadows montane vole	*Microtus montanus nevadensis*
Pahranagat Valley montane vole	*Microtus montanus fucosus*
BIRDS	
Endangered	
Bald Eagle	*Haliaeetus leucocephalus*
Peregrine Falcon	*Falco peregrinus*
Yuma Clapper Rail	*Rallus longirostris yumanensis*
Southwestern Willow Flycatcher	*Empidonax traillii extimus*
Sensitive	

Northern Goshawk	*Accipiter gentilis*
Yellow-billed Cuckoo	*Coccyzus americanus*
Loggerhead Shrike	*Lanius ludovicianus*
Sage Thrasher	*Oreoscoptes montanus*
Brewer's Sparrow	*Spizella breweri*

REPTILES

Protected

Gila Monster	*Heloderma suspectum*
Sierra Alligator Lizard	*Elgaria coerulea palmeri*
Shasta Alligator Lizard	*Elgaria coerulea shastaensis*
Sonoran Mountain Kingsnake	*Lamprpeltis pyromelana*

Threatened

Desert Tortoise	*Gopherus agassizi*

Responses for Document 00012

00012-001: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

00012-002: The proposed action is to implement amendments to the land use plans identified in Table 2.2.4-1 and Appendix C through this PEIS process. The scope of the proposed land use plan amendments identified in Appendix C is limited to the adoption of the Wind Energy Development Program proposed policies and BMPs and the identification of a limited number of additional exclusion areas. The BLM has determined that the PEIS process adequately meets the NEPA requirements for public review of these proposed amendment changes. As required by the proposed policies and BMPs, additional site-specific NEPA analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. The scope and appropriate level of site-specific NEPA analyses will assess local conditions and site-specific environmental impacts and will support the development of project-specific stipulations.

00012-003: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

00012-004: While there would be some level of habitat loss and wildlife impacts, the magnitude of these impacts is not expected to affect wildlife to the extent that there would be any significant negative impacts on fishing, hunting, and other recreation activities, or on recreational use values associated with these locations and in the surrounding local economy. It may be the case that improved accessibility associated with the provision of access roads to wind projects actually increases recreational use values in certain locations, potentially increasing the local economic impact of recreational activities in these locations. Evaluation of the precise relationships among particular wind projects, habitat and wildlife losses, and recreation use values would be the subject of site-specific analyses, and, as such, is beyond the scope of the PEIS.

00012-005: The Categorical Exclusion (CX) identified in the PEIS would not apply to wildlife monitoring activities undertaken during development or operation of a wind energy project. Rather, it would be limited to short-term access during the site monitoring and testing phase. Activities during this phase are limited to meteorological monitoring and testing activities. If proposed site monitoring and testing activities could result in extensive site disturbance, including

disturbance to wildlife or threats to human safety, the CX would not be applicable. This determination will be made on a case-by-case basis.

00012-006: As indicated in the Final PEIS, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into the siting, design, and operation of any proposed wind energy project on BLM-administered lands.

00012-007: The Categorical Exclusion (CX) identified in the PEIS specifically requires that the proposed activity "includes rehabilitation to restore the land to its natural or original condition." If extensive site disturbance is anticipated at a specific location as a result of site monitoring and testing, such as could occur during the development of new roads, the CX would not be applicable. This determination will be made on a case-by-case basis.

00012-008: The BMP has been rewritten to require, rather than recommend, that meteorological towers shall not be located in or near sensitive habitats, in areas where ecological resources known to be sensitive to human activities are located, or in a manner that will disrupt wildlife reproductive activities or other important behaviors. These requirements will serve to minimize wildlife mortality as well as other, less severe impacts to wildlife.

00012-009: The 3rd paragraph of that section indicates that developers are erecting ever-taller meteorological towers in order to measure wind characteristics at or near the hub heights of the proposed wind turbines. Since the wind turbines likely to be proposed for future wind farms cannot be reliably specified at this time, the specification of a height that is considered representative of future meteorological towers is not possible; however, this language adequately describes the probability that meteorological tower heights may be equivalent to eventual wind turbine hub heights.

00012-010: Comment noted. The table and text have been revised. With regard to the chukar and other species, the Wind Energy Development Program proposed policies and BMPs require that site- and species-specific analyses will be conducted for any proposed project on BLM-administered lands. The purpose of these analyses is, in part, to identify any habitats or species that warrant special consideration during project siting, design, construction, operation, and decommissioning. The scope and approach for these analyses, as well as any particular species or habitats to be evaluated, will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. With regard to possible changes in species distributions related to climate change (or any other factor), Wind Energy Development Program proposed policies and BMPs also require the development of monitoring programs with adaptive management stipulations for monitoring environmental conditions during all phases of a wind energy project. Because of their adaptive management stipulations, these monitoring programs may be revised as necessary to track species that have moved into the

project area for whatever reason. Through this process, the BLM will develop project-specific siting, design, operation, decommissioning, and monitoring stipulations for incorporation into the POD.

00012-011: The flyways discussed in this section are applicable to most birds. The source document discusses warblers, sparrows, raptors, and others in addition to waterfowl. In fact, the text in this section states "Birds migrating north from wintering areas to breeding areas use these pathways in the spring, and birds migrating southward to wintering areas use them in the fall. Each flyway encompasses broad geographic areas and includes many specific routes and subroutes, the use of which varies by species. Consideration of these more specific routes will be an important parameter for identifying site-specific concerns related to migratory birds."

The BMPs and policies of the proposed Wind Energy Development Program require operators to evaluate avian use, which includes migratory patterns, of the project area and design the project to minimize or mitigate the potential for bird strikes. Thus, the evaluation of avian migratory activities will be conducted at the project- specific level in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific design and siting stipulations for incorporation into the POD that have incorporated site-specific and species-specific considerations of avian migration at the project area. No text change has been made to the document in response to your comment.

00012-012: Thank you for your comment. The raptor numbers presented in the text (page 4-21) and Table 4.6.2.2 separate and discuss the birds of prey in four categories, the raptors (eagles, osprey, and falcons), the falcons, the owls, and the vultures. The commentor sums the species numbers of all three categories in the comment. The data in the draft PEIS were based on previous information from the Nevada Department of Conservation and Natural Resources, Natural Heritage Program; the species numbers in the draft PEIS total 25. New bird-of-prey data provided by the commentor and the Nevada Department of Wildlife (NDOW) identifies 31 species, including 5 species that have an "accidental" status in the state and were not included in the species counts presented in the PEIS. This new NDOW list also does not identify the grey falcon, which is included in the NDOW bird list for Northeastern Nevada, nor the great horned owl, which NDOW staff subsequently stated was an oversight in the newest listing. Because of these discrepancies and omissions, no text change has been made to the document in response to your comment.

00012-013: These species were not included in the species counts for Nevada because of their status in the state. The California condor, great gray owl, and elf owl are classified as accidental visitors to the state. The text and table will be revised to include these species.

00012-014: The bighorn sheep has been added to the text. This species is included in the BLM sensitive species mammal species count provided in Table 4.6.5-3.

00012-015: The text has been revised accordingly.

00012-016: The table has been revised as indicated.

00012-017: The text has been revised accordingly.

00012-018: The species lists presented in the tables identified in the comment were derived using the cited information, which was the most current available at the time. The numbers presented for Nevada in Table 4.6.5-4 were derived, in part, from the Nevada Natural Heritage Program Nevada Sensitive Species List (NNHP 2004). Comparison of this list with the list provided in Attachment 1 of the comment shows a number of inconsistencies, with some species on one list and others on the other list, and more mammals and birds identified in the PEIS than in the attachment. While there may be such differences in species numbers identified for Nevada (or other states), changes in these numbers will not alter the analyses or conclusions in the PEIS. Considerations of state listed species and their habitats will be evaluated on a site-specific basis for each wind energy project proposed for BLM-administered lands. No text change has been made to the document in response to this comment.

00012-019: The projected numbers of economically developable acres of BLM-administered lands presented in Tables 5-1 and 6.4.1-1 are based on the results of WinDS model analyses. These projections do not include existing capacity and are unlikely to correspond with specific initiatives underway or being considered. In addition, these numbers do not reflect the total number of acres associated with ROW authorizations or applications.

It is not always true that wind development in an area makes nearby areas more economically feasible for wind development. There are several, often counterbalancing, factors to consider. Transmission access may be reduced if a new line is built for one wind farm with spare capacity for further wind development. However, it can also be the case that the first wind farm might consume the spare capacity on any existing transmission line or substation, thereby increasing the cost of transmission access for any subsequent wind farms that will have to tie into the grid at a more remote point. Furthermore, the addition of more and more wind into a particular control area exacerbates the impact of intermittency from wind, thus increasing ancillary services costs and reducing the new wind plant's ability to contribute to reserve margin requirements. In fact, these intermittency impacts may be somewhat mitigated by spreading out the wind farms so that their generation is not coincident in time. These are the kinds of factors that WinDS considers.

00012-020: The impacts identified as being important are not intended to be threshold conditions above which there would be no concern. Rather, they represent unacceptable impacts against which potential impacts were compared in order to identify wind energy development activities or actions that would need to be carefully evaluated and either mitigated or prohibited. The text has been revised to indicate that these are not only unacceptable, but that impacts that could lead to these were also considered in the evaluations. As stated in the text following these bullets, the importance of these impacts can only be fully evaluated at the project-specific level, which is beyond the scope of this document.

00012-021: The bullet has been revised to include bats.

00012-022: The text has been revised to indicate a potential for noxious plants to be introduced during monitoring and testing activities.

00012-023: Because no construction has yet occurred, "may impact" is correct. No text change has been made to the document in response to your comment.

00012-024: The text has been revised accordingly.

00012-025: The table refers only to impacts that would occur during the construction phase, which would be short-term. The Wind Energy Development Program proposed policies and BMPs require a storm water management plan for the prevention of increased soil erosion for any wind energy project proposed for BLM-administered land. The BMPs also require the development of a habitat restoration plan. Both of these plans would include measures to avoid, minimize, or mitigate both short-term and long-term erosion and runoff. The specific measures in these plans will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific design, siting, construction, and operation stipulations for incorporation into the POD. No text change has been made to the document in response to your comment.

00012-026: The table and associated text have been revised accordingly.

00012-027: The table refers only to impacts that would occur during the construction phase, which would be short-term. The Wind Energy Development Program proposed policies and BMPs require a storm water management plan for the prevention of increased soil erosion for any wind energy project proposed for BLM-administered land. The BMPs also require the development of a habitat restoration plan. Both of these plans would include measures to avoid, minimize, or mitigate both short-term and long-term erosion and runoff. The specific measures in these plans will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop

project-specific design, siting, construction, and operation stipulations for incorporation into the POD. No text change has been made to the document in response to your comment.

00012-028: Comment noted. The text in Table 5.9.3-2 has been revised to indicate that the loss or impediment of a migration corridor would affect only mammals. Migratory birds and other volant species are not expected to avoid wind-energy-related structures located along migratory pathways (thus the concern for collisions of migratory bats and birds with wind turbines and towers). Impacts to migratory volant species are addressed in Section 5.9.3.2.3, Collisions with Turbines, Meteorological Towers, and Transmission Lines.

00012-029: While the potential for population-level affects is identified in the text, this information was not included in the table. The table has been revised to indicate that for some species, population level effects may be possible.

00012-030: While electrocutions of birds have been well documented, there is little evidence that collisions that occur every year along transmission lines throughout the United States have resulted in population-level effects for any species. The Wind Energy Development Program proposed policies and BMPs require that migratory corridors for birds and bats be considered during siting. In addition, surveys are required to be conducted for protected species and species of concern, just those species that could incur population-level effects from electrocutions or collisions with wind facility structures. Such surveys would be designed and implemented with input from federal, state, and local agencies, and interested stakeholders, and would be required for all wind energy development projects proposed for BLM-administered lands.

00012-031: The discussion regarding compressor noise is appropriate. That study found some local bird populations to be affected at noise levels greater than 40 dB(A), which is less than the noise levels measured at some wind facilities. No text change has been made to the document in response to your comment.

00012-032: The text has been revised accordingly.

00012-033: The presentation of the bird-strike mortality data is intended to illustrate the range of average annual mortalities and mortalities per turbine and facility that have been reported from a variety of facilities. The PEIS acknowledges the importance of habitat-specific, species-specific, and facility-specific considerations in collision mortalities at wind energy facilities. While differences in the reported mortality rates are likely because of differences in site- specific habitats and the study designs employed to generate the mortality estimates, the range of reported mortalities across the different facilities is relatively small.

The Wind Energy Development Program proposed policies and BMPs acknowledge the importance of habitats and monitoring study designs for siting and operating a wind energy development. The policies and BMPs require site-specific analyses, including monitoring study designs and habitat surveys, for all wind energy projects proposed for BLM-administered lands. The scope and approach of these site-specific analyses will be developed on a project-by-project basis with input from other federal, state, and local agencies, and other interested stakeholders.

The text has been revised to point out that strict comparisons of the reported mortalities is problematic because of differences among the sites in the habitats present, the types of birds (and their natural history and behavior) that use the habitats, and the mortality study designs.

00012-034: The data presented in the PEIS are intended to show the range of bird mortalities that have been estimated for wind energy facilities in the western United States. The data summarized in this section and table are based on available information; the results from other ongoing monitoring studies, as suggested in the comment, were not available for use in the PEIS. The Wind Energy Development Program proposed policies and BMPs require the design and conduct of site-specific analyses, including habitat surveys, wildlife use surveys, and avian mortality monitoring, at any wind energy project proposed on BLM-administered lands. The scope and approach of these site-specific analyses will be determined on a project-by-project basis and in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Site-specific analyses are beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

00012-035: The comparison of the species that have been reported killed at wind energy facilities with the species reported to occur in the western United States where wind energy projects may be proposed for BLM-administered lands is appropriate. While both lists are subject to change and are dependent on the quality of the surveys that generated the data, the comparison is useful in that it clearly suggests that not all species are equally vulnerable, regardless of the basis for the mortality (site-specific habitats, inappropriate facility siting). Given the distribution of BLM- administered lands potentially suitable for wind energy development, it is possible that a wind energy facility in 1 of the 11 western states may be sited in a location where many of the bird species reported from that state may occur (for at least at some time of the year). No text change has been made to the document in response to your comment.

00012-036: The text, as written, was misleading and suggested that long-range migrants are not expected to be affected. The text has been revised to state that because long-range migrants typically fly at relatively high altitudes, they would not be expected to interact with turbines except when taking off and landing, or when

forced by bad weather to migrate at lower heights. It was not the intent of the original text to suggest that long-range migrants are likely not to be impacted.

00012-037: The impacts to volant species from wind energy facilities have been studied for up to 20 years or more at some facilities (i.e., Altamont), and, to date, none have demonstrated a population-level effect on raptors. These studies have documented avian and bat mortalities, but the effect of these mortalities on local and migratory birds and bats is not known. The document does not state that wind energy projects do not induce population-level effects on raptors. No text change has been made to the document in response to your comment.

00012-038: The Wind Energy Development Program proposed policies and BMPs require that other existing and relevant BLM mitigation guidance be incorporated into project-specific Plans of Development that will be required for any wind energy project proposed for BLM-administered lands. Additional mitigation measures, such as those identified in Section 5.9.5, will be incorporated as project stipulations, as needed, to address site-specific and species-specific issues. The need for these mitigation measures will be determined on a project-by-project basis with input from other federal, state, and local agencies, and interested stakeholders. No text change has been made to the document in response to your comment.

00012-039: Comment noted. The text has been revised to indicate that to date, only nine species have been documented as fatalities at wind farms. In addition, the Wind Energy Development Program BMPs require the design and conduct of scientifically rigorous bat use surveys to support the design of wind energy facilities proposed for BLM-administered lands. The BMPs also require ongoing surveys to monitor wildlife mortality (including that of bats) during operation of the proposed facility. These studies will be developed on a project-specific basis; their design and implementation are beyond the scope of this document.

00012-040: The presentation of bat mortality data is intended to illustrate the range of annual mortalities and mortalities per turbine and facility that have been reported from a variety of facilities. Text has been added to the PEIS to indicate that the survey methods may not be equivalent among facilities.

00012-041: The text regarding the applicability of the Buffalo Ridge WRA has been revised as suggested. The referenced paragraph includes text stating that population-level effects on migratory bats from sustained collision mortality are unknown.

00012-042: Comment noted. The text has been revised to indicate that permanently displaced wildlife may experience a high mortality rate if the surrounding habitats are at carrying capacity.

00012-043: The text box on bats has been modified to delete the mention of the subnational ranking of the little brown bat in Nevada. Information on the hoary and silver-haired bats has been added to the text box, which now has a discussion on all bat species that have been observed as fatalities in the 11 western states. These species are either migratory or travel long distances to hibernacula from their summer ranges. The potential impacts of a wind energy development on bats during nonmigratory periods (e.g., elevational movements between roosting and feeding sites) would be largely dependent on site-specific habitat conditions. The BMPs for POD development (Section 2.2.3.2.2) address wildlife and other ecological concerns. These include siting wind energy developments in the least environmentally sensitive areas.

As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for both site- and species-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations, for incorporation into the POD. Site- and species-specific analyses are beyond the scope of the PEIS.

00012-044: The Wind Energy Development Program proposed policies and BMPs specify the requirements for scientifically rigorous surveys of bat use, including the presence of bat colonies; the avoidance of placing turbines near known bat hibernation sites, maternity/nursery colonies, migration corridors, and known flight paths between colonies and feeding areas; and the design of wind energy projects to minimize the potential for bat strikes. These policies and BMPs apply to any wind energy project proposed for BLM-administered lands. Additional mitigation measures, such as those identified in Section 5.9.3.2.6, will be developed and implemented on a site- specific, project-by-project basis with input from other federal, state, and local agencies, and interested stakeholders. Requiring specific mitigation measures in the PEIS is beyond the scope of the document.

00012-045: Text has been added stating that wind energy facilities are not expected to block migratory movements of birds and bats. Impacts to migratory birds and bats will result primarily from collisions with wind facility structures, and these impacts are discussed in Section 5.9.3.2.3.

00012-046: As required by the Wind Energy Development Program proposed policies and BMPs, species-specific mitigation measures will be developed for all wind energy projects proposed for BLM-administered lands. The nature of the species-specific mitigation measures will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Regarding sage-grouse species, existing BLM guidance

on the management of sage-grouse and sage-grouse habitat will be incorporated into the development of a wind energy project, including appropriate mitigation measures. Specifying required mitigation measures is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

00012-047: While the presence of a wind facility may increase access to surrounding areas, the document is correct in stating that activities of visitors in these areas are beyond the control of the project operators, and impacts that would result from nonfacility visitors would be unrelated to facility operations as stated. The document does not ignore potential impacts. It specifically states that impacts to threatened and endangered species from visitors would be similar in nature to the impacts from visitors identified to vegetation, fish, and wildlife. These are discussed in Sections 5.9.3.1.3, 5.9.3.1.4, 5.9.3.1.5, 5.9.3.2.6, and 5.9.3.3. No text change has been made to the document in response to your comment.

00012-048: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land. However, the nature of mitigation measures developed for a project will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific mitigation stipulations for incorporation into the PODs. The identification of specific, required mitigation measures is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

00012-049: The text regarding relocation has been deleted. As required by the Wind Energy Development Program proposed policies and BMPs, species-specific analyses, including the evaluation of listed species and their habitats, will be conducted for any proposed project on BLM-administered lands. The scope and approach for species-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD.

00012-050: The discussion in Section 6.1.2 goes on to state that the proposed policies and BMPs would considerably reduce potential impacts to wildlife by requiring that these issues be addressed comprehensively and by providing some minimum standards for mitigation. The intent of this discussion was to underscore the need for site-specific analyses to identify all the potential impacts to wildlife and flora and the appropriate mitigation measures. Numerous BMPs and policies have been proposed to require adequate analyses of these resources and to incorporate input from other federal, state, and local agencies, and interested

stakeholders. The BLM is fully committed to minimizing potential impacts to these resources to the greatest extent possible.

00012-051: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

00012-052: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

00012-053: Habitat loss and habitat fragmentation will be evaluated on a project-by-project basis. A new BMP has been inserted in Section 2.2.3.1, Proposed Policies, to ensure that site-specific NEPA analyses will identify and assess any cumulative impacts that are beyond the scope of the cumulative impacts addressed in the PEIS.

00012-054: The projected numbers of economically developable acres of BLM-administered lands for wind presented in Tables 5-1 and 6.4.1-1 are based on results of the WinDS model analyses. These projections do not include existing capacity and are unlikely to correspond to specific initiatives underway or being considered. In addition, these numbers do not reflect the total number of acres associated with ROW authorizations or applications.

It is not always true that wind development in an area makes nearby areas more economically feasible for wind development. There are several often counterbalancing factors to consider. Transmission access may be reduced if a new line is built for one wind farm with spare capacity for further wind development. However, it can also be the case that the first wind farm might consume the spare capacity on an existing transmission line or substation, thus increasing the cost of transmission access of any subsequent wind farms that will have to tie into the grid at a more remote point. Furthermore, the addition of more and more wind into a particular control area exacerbates the impact of intermittency from wind, thereby increasing ancillary services costs, and reducing the new wind plant's ability to contribute to reserve margin requirements. In fact, these intermittency impacts may be somewhat mitigated by spreading out the wind farms so that their generation is not coincident in time. These are the kinds of factors that WinDS considers.

Document 00013

PLANNING DEPARTMENT

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RESOURCE MANAGEMENT AGENCY

DAVID PRICE III, RMA DIRECTOR
Community & Economic Development Department
Engineering & Survey Services Department
Environmental Health Services Department
Planning Department
Roads Department

December 6, 2004

File: BLM
Wind Energy PEIS

BLM Wind Energy Programmatic EIS
Argonne National Laboratory, EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

Re: BLM Wind Energy Development Program and Programmatic Environmental Impact Statement Public Review Comments

The Kern County Planning Department appreciates the opportunity to submit comments on the proposed Policies, Best Management Practices and Restrictions that comprise the proposed Wind Energy Development Program. Eastern Kern County, California encompasses over 700,000 acres acres of federal land, including Bureau of Land Management Land, Edwards Air Force Base and China Lake Naval Weapons Station.

Kern County has been working on land use in the area of wind energy development over the last twenty years and has established wind farms totaling over 20,000 acres. The Tehachapi-Mojave Wind Resource Area, located in Kern County, is the state's largest, currently responsible for over 40% of California's wind energy generation. This area has been identified by the California Energy Commission (CEC) as being the plausible source for 42% of the new renewable generation needed to meet the goals of the state Renewable Portfolio Standard. Based on our experience with wind energy development, Kern County Planning concurs with the following important proposed policies.

2.2.3.1 Proposed Policies
Page 2-6

- Entities seeking to develop a wind energy project on BLM-administered lands shall consult with appropriate federal, state, and local agencies regarding specific projects as early in the planning process as appropriate to ensure that all potential siting, design, construction, operating, monitoring, and decommissioning issues and concerns are identified and adequately addressed.

- Entities seeking to develop a wind energy project on BLM-administered lands, in conjunction with BLM Washington Office and Field Office staff, shall consult with the U.S. Department of Defense (DoD) regarding the location of wind power projects and turbine siting as early in the planning process as appropriate. This consultation shall occur simultaneously at both the installation/field level and the Pentagon/BLM Washington Office level.

13-1

The siting and height of wind turbines,which now can exceed 460 feet for the largest 1 MW to 2.5 MW turbines, has come into conflict with the important Military Operating Area, Military Training Routes and Restricted Airspace essential to the Department of Defense mission in California, as well as other areas of the United States.

While the consultation policy is important, the Bureau of Land Management should take a more comprehensive approach and work directly with the Department of Defense to review all potential lands and create areas of exclusion and areas where a height limit on the turbines would apply. Such an approach has been completed for private lands here in Kern County and a map identifying areas by color with certain height restrictions is being presented to the Kern County Board of Supervisors for appropriate zoning restrictions. This map was formulated through the diligent work of the wind energy industry, local Military Installation planners and the Department of Defense. It will provide certainty for wind energy developers as well as a streamlined process for staff planners. .Such as effort should become a policy in the program , with the individual consultations occurring as an interim measure. 13-1 (cont.)

Kern County Planning appreciates this effort to address the streamlined development of wind energy on BLM lands and still provide protection for other multiple use activities and the Department of Defense mission. Please provide all notices of the Final adoption of the program and the Environmental Impact Statement to this department. Thank you. 13-2

Sincerely,

Lorelei H. Oviatt, AICP
Supervising Planner

cc: Board of Supervisors
CAO
RMA
Kern Wind Energy Association
Edwards Air Force Base
China Lake Weapons Station

Responses for Document 00013

00013-001: Thank you for your comment. We appreciate your input and participation in the public review process.

00013-002: The Kern County Resource Management Agency, Planning Department has been added to the Wind Energy Development PEIS mailing list.

Document 00014

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC 8 2004

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

BLM Wind Energy Programmatic EIS
Argonne National Laboratory
EAD/900 (Attn: Mr. Lee Otteni)
9700 S. Cass Avenue
Argonne, IL, 60439

Dear Mr. Otteni:

The U.S. Environmental Protection Agency (EPA) has reviewed the Bureau of Land Management's (BLM) **Programmatic Draft Environmental Impact Statement (DEIS) on Wind Energy Development on BLM-Administered Lands in the Western United States** pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementation Regulations at 40 CFR 1500-1508, and Section 309 of the Clean Air Act.

EPA supports increasing the development of renewable energy resources, as recommended in the National Energy Policy. The Programmatic DEIS is a comprehensive document that provides background on the issues, discusses the current process for developing wind energy projects, identifies the four stages of implementing wind projects and outlines the expected growth of our energy needs in the next 20 years. The document analyzes the environmental, social, and economic impacts associated with three alternatives, (No Action, Limited Development, and Comprehensive Development [preferred alternative]). The DEIS alternatives address most direct and indirect impacts, and suggest mitigation at the programmatic level. However, the final EIS should discuss impacts associated with the construction of new or modified infrastructure to connect wind generated energy to the general electric grid. In particular, EPA has concerns with the potential impacts from these actions on wetlands, water quality and wildlife habitat. The final EIS should include best management practices (BMPs) and mitigation measures in addition to information to address these concerns. 14-1

EPA supports the Proposed Policies in section 2.2.3.1, Proposed BMPs in section 2.2.3.2, and Mitigation Measures in section 5, and considers the framework outlined under the Proposed Action Alterative to be appropriate at the programmatic level. While the document states that "compliance with the CWA and BLM restrictions regarding activities in wetlands on BLM-administered lands would limit the likelihood of construction occurring in wetland 14-2

habitats," there is no mention of the Section 404 regulatory requirements. The final EIS should reference Clean Water Act requirements, and reflect that site-specific actions will have to comply with Sections 404 of the Clean Water Act. 14-2 (cont.)

The DEIS proposes voluntary bonding or financial assurance for decommissioning and reclamation. Based on the potential risks identified in the DEIS, we suggest that BLM consider requiring bonding for these activities. The expected life span of these projects, which we did not find discussed in the DEIS, would be useful in determining the correct financial instruments that could be used for bond calculations. 14-3

Portions of the eleven states covered by this programmatic DEIS have been designated as non-attainment areas for Particulate Matter (PM10). The final EIS should clarify that individual projects proposed in these areas must be in conformance with state air quality implementation plans (SIPs). 14-4

In accordance with EPA policy we have rated the document EC-2 (Environmental Concerns - Insufficient Information). The rating reflects EPA's concerns about the potential for impacts to aquatic resources, water quality and wildlife habitat. The 2 portion of the rating is based on the request for additional information on infrastructure impacts and on conformity. A copy of EPA's rating criteria is attached.

EPA appreciates the opportunity to review this DEIS, and is willing to work with BLM should you wish to discuss these issues further. If you have any questions, please call me at 202/564-5400 or have your staff contact Elaine Suriano at 202/564-7162.

Sincerely,

Anne Norton Miller
Director
Office of Federal Activities

Enclosure

Environmental Impact of the Action

LO - - Lack of Objections: The Environmental Protection Agency (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 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 potential 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 of 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 analyzed 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 analyzed in the draft EIS, which should be analyzed 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 National Environmental Policy Act 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. February, 1987.

Responses for Document 00014

00014-001: Section 6.4.3 acknowledges that wind energy development on BLM-administered lands may require the construction of new transmission lines. Such construction is considered to be a separate but related activity and will require interagency cooperation and multidisciplinary environmental reviews. New text has been added to Section 6.4.3 to describe the existing and proposed rules and regulations governing wind project grid interconnections and transmission system upgrades. These regulations will be applicable to wind energy development projects on BLM-administered lands. Given the need for interagency cooperation regarding transmission line siting and approval, a more lengthy review of this issue is beyond the scope of the PEIS. The potential impacts of transmission system interconnects or expansions that would be required by an individual wind energy project on BLM-administered lands will be assessed as part of the site-specific analyses, with input from other federal, state, and local agencies, and interested stakeholders. These site-specific analyses will consider potential impacts on wetlands, water quality and wildlife habitat; stipulations will be developed for each project as an outcome of the site-specific analyses.

00014-002: Language has been added to Section 3.2 under Floodplains and Wetlands to indicate that such activities are governed by Section 404 of the CWA. No language change is needed in Appendix E, since the CWA is already listed under Table E-3, Floodplains and Wetlands.

00014-003: The reclamation efforts needed to restore a site as close as possible to a predevelopment state will be evaluated at the site-specific level at the point in time when a decision is made to decommission a site. Development of a decommissioning plan at the Plan of Development phase is premature, given that decommissioning may not occur for several decades. A BMP has been added to Section 2.2.3.2.5, Decommissioning, requiring the development and implementation of an approved decommissioning plan prior to termination of the ROW authorization. Required elements of the decommissioning plan include a site reclamation plan and monitoring program.

The BLM will require financial bonds for all wind energy development projects on BLM-administered lands to ensure compliance with the terms and conditions of the ROW authorization and the requirements of applicable regulatory requirements, including reclamation costs. The amount of the required bond will be determined during the ROW authorization process on the basis of site-specific and project-specific factors. The BLM may also require financial bonds for site monitoring and testing authorizations. A requirement regarding the establishment of bonds has been added to the proposed policies (see Section 2.2.3.1).

00014-004: The text has been changed in Section 4.4 and in the first paragraph of Section 5.4 to clarify that all activities must be carried out in conformance with the SIPs.

Document 00015

Howard G. Wilshire

3727 Burnside Road, Sebastopol, CA 95472

December 9, 2004

BLM Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

The following comments on the Draft PEIS on wind energy focus on Best Management Practices as they affect site evaluation, construction, operation, and decommissioning, p. 2-9 to 2-23, and mitigations to reduce adverse impacts on natural resources deriving from site evaluation, construction, operation, and decommissioning, p. 5-76 to 5-83, which are said to be the basis for the BMPs.

On page 6-3, it is stated that "Implementation of the proposed policies and BMPs would ensure that potential adverse impacts to most of the natural and cultural resources present at wind energy development sites...would be minimal to negligible..." [emphasis added].

It is further stated on page 6-28, that the proposed program "...would establish programmatic policies and BMPs to ensure that potential adverse effects resulting from wind energy developments on BLM-administered lands would be mitigated to the fullest extent possible."

These two statements are not equivalent, and neither provides any assurance that the well-known adverse impacts of centralized wind energy developments will be at all mitigated. The reason is that virtually all of the BMPs, and mitigations listed in Chapter 5, are permissive. "Requiring" the inclusion in PODs of BMPs couched in the language of "should be" and other similar terms offers no assurance that such BMPs or mitigations will be implemented. 15-1

It does not make any sense that such obvious mitigations as keeping the area disturbed to a minimum, minimizing the number, size/length of roads, fences, lay-down areas and borrow pits should be permissive BMPs. Why should operators have a choice in such matters as posting and enforcing speed limits, obtaining borrow material only from permitted areas, documenting hazardous material spills, to instruct employees, contractors, and visitors to not harass wildlife, deciding whether to salvage and reapply topsoil during final reclamation, and a host of other BMPs/mitigations all couched in permissive terms.

As it stands, the proposed Program, is not a suitable document to include by reference in any development plans because it does not impose any binding requirements on developers to mitigate the inevitable adverse impacts, and provides no support to BLM staff to secure those mitigations. This problem is simply resolved by converting the permissive language to mandatory language--replacement of "should" by shall, "could" by "will," etc., including in a very few cases, provisios—for example, use shall be made of existing roads except where they are found to be environmentally unsatisfactory.

Other Matters

On page 2-10, it is stated that a monitoring program shall be developed to monitor environmental conditions through all phases of development and decommissioning; it is further stated that the monitoring program should incorporate adaptive management strategies, yet on page 6-28 it is stated that "The proposed program would require the BLM to adopt adaptive management strategies regarding wind energy development." [emphasis added]. 15-2

phone/FAX: (707) 829-0591

Access and site roads are major problems at existing wind developments. It is stated on p. 5-6 that access roads should follow contours and side hill cuts minimized. In hilly terrain roads can be designed to follow contour, but cannot avoid side hill cuts. Such roads are extremely damaging as sources of debris flows, and as sources of downslope damages caused by side-casting road development. Three mitigations might help: 1) prohibit side-casting (material that is removed to create the road notch must be hauled to a suitable location for use in decommissioning and stabilized); 2) introduce special methods to stabilize the cut slope face; 3) disallow side-slope turbine installations (so that only access roads present the side hill cut problems). 15-3

The issue of decommissioning is not dealt with adequately in this document. Doing it right will be expensive and time-consuming. To avoid problems so rampant in mining, decommissioning should be bonded at a level adequate to hire contractors to restore the site to a functioning natural state or to a state suitable for other planned use. Road removal is likely to be a major item in site restoration, and standards to achieve suitable restoration must be spelled out specifically. An explicit requirement should be a monitoring program designed to assure successful reestablishment of native vegetation. 15-4

Sincerely,

Dr. Howard Wilshire
3727 Burnside Rd.
Sebastopol, CA 95472

Responses for Document 00015

00015-001: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

00015-002: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

00015-003: As many potential wind energy sites are located in hilly areas, construction of access roads, site roads, and turbine pads on hill slopes is likely to occur in the development of some projects. These issues are adequately addressed by the requirements of the proposed BMPs. As required by the proposed BMP under the Roads heading of Section 2.2.3.2.2, existing standards for road design, construction, and maintenance (e.g., BLM Manual 9113 and the "Surface Operating Standards for Oil and Gas Exploration and Development") will be incorporated into an access road siting and management plan. In addition, the proposed BMPs require additional practices for stabilization of unstable slopes and the reduction of soil erosion (see, among others, Section 2.2.3.2.3 Construction, General, 7th bullet and Roads, all bullets). As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Issues related to turbine location, access road construction, face stabilization, and soil erosion will be addressed during these analyses.

00015-004: The reclamation efforts needed to restore a site as close as possible to a predevelopment state will be evaluated at the site-specific level at the point in time when a decision is made to decommission a site. Development of a decommissioning plan at the Plan of Development phase is premature given that decommissioning may not occur for several decades. A BMP has been added to Section 2.2.3.2.5, Decommissioning, requiring the development and implementation of an approved decommissioning plan prior to termination of the ROW authorization. Required elements of the decommissioning plan include a site reclamation plan and monitoring program.

The BLM will require financial bonds for all wind energy development projects on BLM-administered lands to ensure compliance with the terms and conditions of the ROW authorization and the requirements of applicable regulatory requirements, including reclamation costs. The amount of the required bond will be determined during the ROW authorization process on the basis of

site-specific and project-specific factors. The BLM may also require financial bonds for site monitoring and testing authorizations. A requirement regarding the establishment of bonds has been added to the proposed policies (see Section 2.2.3.1).

Document 00016

ANADARKO PETROLEUM CORPORATION

P.O. BOX 50648 • CASPER, WYOMING 8260_

November 23, 2004

BLM Wind Energy Programmatic EIS
Argonne National Laboratory, EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

RE: Wind Energy Development Draft Programmatic EIS

Dear BLM Manager:

Anadarko Petroleum Corporation (APC) appreciates the opportunity to comment on the referenced document. APC and its subsidiaries have considerable interests – both as a landowner and as a lessee of federal minerals - in the proposed analysis area that may be affected by the outcome of this planning effort. APC's interests as a landowner stem from its merger in 2000 with Union Pacific Resources. As a result of that merger, APC owns what is commonly referred to as the "land grant strip," which is almost 700 miles long and 40 miles wide. The strip passes through southern Wyoming and portions of Northeast Colorado and Utah. This land has the potential to be developed both for its mineral resources and its wind energy. Further, APC owns a large number of federal leases in the states that will be covered by this EIS.

The development of the Programmatic EIS, whether or not it results in amendments to individual land use plans, has the potential to affect APC's interests in these states. Therefore APC provided comments during the scoping process and will continue to actively participate in the EIS process.

In our December 19, 2003, letter APC requested that the DEIS address:

- *Management of mineral lease development on lands underlying wind farms that have been or may be permitted under a right of way.*
- *The interplay between issuance of competitive lease for wind energy and either existing or future leases for mineral resources*
- *Cumulative impacts (visual, wildlife etc.) from wind farm projects and the potential impact on the ability to develop resources on adjacent lands.* 16-1

APC does not believe that the probable interaction of wind energy projects and mineral development (e.g. oil and gas) is clearly described and analyzed. The document's discussion of potential impacts to mineral development is limited to statements that defer analysis of cumulative impacts until site specific information is available (DEIS at 6.4.1.13). Furthermore, the possible negative impacts from a wind energy project may have on the ability to develop leasable minerals is all but dismissed (". . . the relatively

small amount of land required for wind energy projects and their typically isolated location means that the cumulative impact on other commercial uses of BLM-administered lands would likely be small." (DEIS at 6.4.1.13). For instance, it appears that the Bureau of Land Management blindly assumed that owners of valid leases for minerals would be able to fully enjoy their vested rights if a wind energy project were to precede mineral development. This is not necessarily true given siting and access issues. The document fails to address the potential conflict between prior existing mineral leases and subsequent wind energy right-of-way requests.

In stark contrast, BLM recognized the potential conflict between wind energy development and hard rock mineral development. BLM provides for the protection of valid existing rights of mineral claimants by restricting wind energy development to the degree that it does not "materially interfere with the claimant's right to mine, remove, or sell the minerals". APC believes that similar protections should be provided for other mineral development. The language on page 2-7 of the DEIS is not sufficient to address this issue. There, the BLM provides that:

> To the extent possible, wind energy projects will be developed in a manner that will not prevent other land uses, including fluid minerals extraction, grazing, recreation use, and other ROW uses.

DEIS at 2-7.

16-1 (cont.)

It appears from statements made in the DEIS at 1-1 that BLM intends to continue granting access to federal lands for wind energy development pursuant to its existing right of way regulations, except in certain areas where BLM has determined that it will issue competitive leases. The DEIS lacks an analysis regarding the potential impacts of this decision. For example, the right-of-way regulations do not contain any provision authorizing BLM to require the payment of royalties. Presumably, private landowners will require payment of a royalty. Therefore, it is possible that wind energy development would be concentrated on public lands potentially causing a greater impact to public lands.

16-2

Sincerely,

Tom Clayson
Environmental Affairs Coordinator

Responses for Document 00016

00016-001: As required by the Wind Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and stakeholders. Management and development of mineral resources, including conflicts with the proposed wind development project, will be among the issues assessed at the project-specific level.

The 2nd bullet in Section 2.2.3.1, Proposed Policies, has been revised. The specification “fluid” minerals has been deleted so that all mineral extraction activities are included.

00016-002: As stated in Sections 1.2 and 2.2.4, none of the alternatives in the PEIS include amendment of land use plans to provide for competitive right-of-way bidding, in part because interest in this approach was limited to two areas in California (the Palm Spring-South Coast Field Office and the Ridgecrest Field Office). If competitive bidding is conducted, it will be addressed on a case-by-case basis in local BLM land use planning efforts. The ROW authorization for wind energy development on BLM-administered lands will require the payment of rent rather than royalties. However, the formula used to calculate minimum rent payments incorporates a 3% royalty as part of the calculation (see Appendix A, BLM's Interim Wind Energy Development Policy). We agree that the proposed Wind Energy Development Program may increase use of BLM-administered land for wind energy projects. The potential impacts associated with that increased use are the primary subject of the PEIS. The proposed program will establish mitigation requirements to ensure that potential adverse impacts are minimized to the greatest extent possible. Development on non-BLM-administered lands would potentially be subject to less federal environmental oversight.

Document 00017

DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION

JUDY H. MARTZ, GOVERNOR
1625 ELEVENTH AVENUE

STATE OF MONTANA

DIRECTOR'S OFFICE (406) 444-2074
TELEFAX NUMBER (406) 444-2684
PO BOX 201601
HELENA, MONTANA 59620-1601

December 9, 2004

BLM Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

The Montana Department of Natural Resources and Conservation (MDNRC) manages approximately 5 million surface acres of State owned land. This land is used to generate revenue for the School Trust funds. Our goal is to manage the State of Montana's trust land resources to produce revenue for the trust beneficiaries, while considering environmental factors, and protecting the future income-generating capacity of the land. The MDNRC is commenting in consideration of the potential for the full adoption, or partial adoption, of the PEIS on current and future projects.

The MDNRC has reviewed the Bureau of Land Management's (BLM's) Wind Energy Programmatic EIS (PEIS). The general effects of wind energy development are well covered in the PEIS, as well as possible mitigation actions. We see the advantages of completing a programmatic wind EIS; we would like to explore the possibilities of expanding the PEIS to a broader base. The expansion of the PEIS should cover the complex ownerships of fee, State and other federal lands. Attached is a map referencing the NREL wind priority regions in relation to the State of Montana lands. As you can see, the majority of the wind energy projects have a high possibility of encompassing State lands due to the complex interspersed ownership patterns. These complex ownerships are common in Montana and general throughout the Western United States. 17-1

The MDNRC finds the Tiered ROD process as a promising way to make a more efficient and effective method for better site specific decision. We strongly endorse your development of comprehensive policies and best management practices (BMPs), as well as the use of tiering project-specific environmental analyses and decisions to the PEIS and its Record of Decision (ROD). However, the future MDNRC adoption of the PEIS's BMPs, mitigations, and stipulations would be made on a case by case basis as determined appropriate by the MDNRC. 17-2

We would like to commend you for your excellent work in the BLM PEIS. Please let us know how we can coordinate with BLM in the final development of the PEIS.

Sincerely,

Jeanne Holmgren

Jeanne Holmgren, Chief
Real Estate Management Bureau

Cc: Hoyt Richards
Clive Rooney
Mike Sullivan

Responses for Document 00017

00017-001: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. These consultations will provide an adequate opportunity for assessing the issues associated with interspersed ownership patterns.

00017-002: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 18

David J. Ryzak
617 E. 18th Way
Burley. Idaho 83318

December 9, 2004

BLM Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

Dear Sir or Madam:

The following comments are in regards to wind energy development on BLM administered lands under the program designated as BLM's Draft Environmental Programmatic Environmental Impact Statement on Wind Energy Development. I recommend and support the Proposed Action — **Implement a Wind Energy Development Program**. The BLM can and should be a leader in supporting renewable alternative energy sources for the United States. The BLM administers large tracts of lands here in Idaho as well as in all western states. We all know that total energy consumption in the United States is increasing despite efforts by the government and private industry to encourage energy conservation. Energy consumption is growing because of several factors including the continuing increase in population, increasing per capita energy consumption, especially by the rich, the increasing average size of new homes and other living units with their energy consuming lighting, electronics, appliances, hot tubs, three car heated garages, etc.; increased size and opulence of public areas such as shopping centers, entertainment centers, sports arenas, government offices, etc.

Meanwhile the percentage of imported oil and natural gas continues to rise annually, making the United States ever more dependent on supplies of foreign oil; some of which is imported from countries which are politically unstable. Recently the price of imported oil went to $55/barrel; a horrible shock to the economy. Although prices have fallen they will for sure go up again when a real or imagined threat to supplies occurs. In either case, world demand for oil continues to increase and there will be a time in the not too distant future when world demand will outstrip the world supply. 18-1

What should be done about this? The answer is to support development of alternative energy sources including wind, water, geothermal, oil shale, ethanol, solar, etc. The BLM can and should be a leader in the development of clean renewable energy resources to lessen if not stop our dependence on foreign oil.

Unfortunately, current BLM regulations are clearly dampening the development of wind energy. The chart below taken from a newspaper article clearly shows that to be true.

	Projected Wind Power Development in Idaho Idaho's wind power in megawatts		
	2005	2015	2025
Non-BLM	75	156	916
BLM	52	105	185
Total	127	261	1,101
% on BLM lands	41	40	17

18-1 (cont.)

The BLM needs to rewrite their regulations to encourage private industry to develop wind energy resources on BLM lands. Will a few sage grouse have to relocate? Yes. Will a few acres of sagebrush have to be removed? Yes. Will a few people have their favorite place in the world be developed? Yes. But look at the alternatives. How much pollution do you see on the news reports when oil pipelines and refineries get blown up in the Middle East? There's lots of it. How many millions of barrels of oil have leaked from ocean going super tankers over the years? Surely more than we would like to know about. How strong are the environmental laws in Russia and other former East Bloc nations? Their environmental record is very poor. So an alternative is to **Implement a Wind Energy Development Program**.

I tried to send you an e-mail at the address in the newspaper article: windeis.anl.gov; however, it is not a valid address.

Sincerely,

David J. Ryzak

David J. Ryzak

Response for Document 00018

00018-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 00019

THE STATE OF ARIZONA
GAME AND FISH DEPARTMENT
2221 WEST GREENWAY ROAD, PHOENIX, AZ 85023-4399
(602) 942-3000 • AZGFD.COM

GOVERNOR
JANET NAPOLITANO
COMMISSIONERS
CHAIRMAN, SUSAN E. CHILTON, ARIVACA
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JOE MELTON, YUMA
MICHAEL M. GOLIGHTLY, FLAGSTAFF
WILLIAM H. MCLEAN, GOLD CANYON
DIRECTOR
DUANE L. SHROUFE
DEPUTY DIRECTOR
STEVE K. FERRELL

December 8, 2004

Bureau of Land Management
Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

Re: Draft Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States

Dear Sir or Madam:

The Arizona Game and Fish Department (Department) appreciates the opportunity to review and comment on the Bureau of Land Management's (BLM) draft Programmatic Environmental Impact Statement (DPEIS) on Wind Energy Development in the western United States. The Department supports establishing programmatic policies and Best Management Practices (BMPs) to guide the mitigation of impacts from wind energy development. Improved consistency provided by the Wind Development Program would be a beneficial streamlining effort with regard to the ROW application and granting process. 19-1

The Washington Department of Fish and Wildlife published guidelines pertaining to wind development project in August 2003. These guidelines outline steps for a pre-project assessment of the project area, including the following; a review of the existing information on species and habitats potentially influenced by proposed projects; mapping of vegetation, topography, and land cover types, wildlife habitat, habitat quality, and the extent of noxious weeds; and the development of an analysis process in cooperation with the state wildlife agency. More specifically, the Washington guidelines recommend conducting raptor nest, general avian, and threatened and endangered species surveys during the appropriate breeding seasons within 1-mile of the project site to determine the location of active nests and associated species potentially disturbed by construction activities. The Department appreciates that many of these recommendations have been incorporated into the BLM DPEIS. 19-2

However, the Department believes that habitat fragmentation issues, as well as direct and indirect effects to wildlife associated with site development are important aspects of planning that deserve more thorough development within the land use and wildlife sections of the document (specific comments are attached). The effects of wind developments on wildlife, in particular birds and bats, are well documented. These affects may include direct habitat loss from the wind plant footprint, including turbine base, access road, and substation construction; indirect habitat loss from increased human presence and/or turbine operation noise; habitat alteration, such as soil erosion and construction of migration-hindering obstacles; death by power

line electrocution; and death by collision with structures, turbine blades or wires (Grand Canyon Trust, 2004). 19-2 (cont.)

Although wind development opportunity has been rated relatively low in Arizona on BLM-administered lands, the Department has received several project proposals for wind plant development, mostly on private properties. We have emphasized the need to conduct post-construction monitoring to assess the validity of pre-construction predictions. Ongoing assessment will ensure that mistakes harmful to wildlife are corrected and not repeated. Similarly, we recommend that BLM emphasize and incorporate post-construction monitoring requirements into the DPEIS. This will improve the BLM's ability to provide sound guidance and policies for individual sites on a broader scale by recognizing the ecological distinctiveness of each wind resource area (not only in the case where threatened and endangered species are present). We stand to learn a great deal more about wildlife interactions with wind plants after construction than we may be able to assess a priori. 19-3

Based on guidelines developed by the U.S. Fish and Wildlife Service (May 2003), factors to consider during the project evaluation process include regional topography, bird and bat migration routes, protected-bird habitats, and wind resource potential. The site specific nature of these recommendations (both by the USFWS and by the Washington Department of Fish and Wildlife) require a detailed NEPA analysis and evaluation of each proposed project, that is not possible through the use of a broad programmatic EIS. Consideration of this limitation should be made more evident in the DPEIS. 19-4

The Department appreciates the opportunity to provide comments on the BLM DPEIS. We look forward to working closely with the BLM to address wildlife concerns during future planning efforts for wind energy development on BLM-administered lands in Arizona. Please contact me at (602) 789-3605 if you have any questions regarding this letter.

Sincerely,

Bob Broscheid
Habitat Branch Chief

BB:rfd

cc: Bruce Taubert, Assistant Director, Wildlife Management Division
Regional Habitat Program Mangers
Rebecca Davidson, Project Evaluation Program Supervisor, Habitat Branch

BLM Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
December 6, 2004
3

Arizona Game and Fish Department Comments on the Draft Programmatic EIS for Wind Energy Development on BLM-Administered Lands in the Western United States

Chapter 2 – Proposed Action and Alternatives:

2.2.1 Description of the Maximum Potential Development Scenario
The screening criteria applied by the BLM to eliminate areas for wind energy projects currently includes 1) location of BLM-administered lands determined to be off limits for wind energy development by virtue of statutory or administrative controls (i.e., Wilderness Areas, Wilderness Study Areas, National Monuments, and National Conservation Areas), and 2) occurrence of Class 3 or higher wind resources. The BLM is required by provisions in the Endangered Species Act to consider actions that would prevent the future listing of species, as well as to assist in the recovery of listed species. Therefore, the Department recommends additional screening criteria that includes areas where state or federal species of concern or listed species (and/or their critical habitat) are known to occur. 19-5

2.2.2 Phases of Wind Energy Development on BLM-Administered Lands
Although decommissioning of a site once developed is included in the analysis, the DPEIS should also include an analysis of reclamation efforts to bring the developed land back as close to a pre-development state as possible. Site reclamation efforts should also be included in section 2.2.3.2.2 "*Plans for Development Preparation*" in the discussion of monitoring. 19-6

2.2.3.2.2 Plan of Development Preparation
Wildlife and Other Ecological Resources
The BMP requiring installation activities to be conducted outside of wildlife breeding seasons should be further emphasized. The guidelines provided by the Washington Department of Fish and Wildlife state that a 1-mile distance from the project site should be evaluated. This recommendation should be incorporated into the BMPs to minimize disturbance to breeding wildlife. The BMP should also address the impacts of project installation and operational activities on dependant young. 19-7

The BMPs state that known bird migration routes and high usage areas should be avoided. We recommend that the BMP better define these areas and *require* that they be avoided. The same measures should be taken with respect to areas known as migratory pathways for bats. 19-8

As with the BMPs for installation activities, the specific wildlife BMPs should address impacts to dependent young and how to minimize impacts to this group of animals. Likewise, with the exception of birds, the document does not address wildlife movement corridors for other species. 19-9

Excavation and Blasting Activities

The BMP states *excess excavation materials should be disposed of only in approved areas.* In the event of excess excavation materials, these materials should be used during the reclamation process. If that is the intent of BLM, please provide clarification. 19-10

Noise

The BMP states that *stationary construction equipment (compressors and generators) be located as far as practicable from residences.* This BMP should also include wildlife breeding and brooding areas. 19-11

2.6.2 Comparison of Environmental Impacts

Although the Wind Energy Development Program will likely minimize the overall environmental impacts within the region (western United States), it is possible that analysis at the regional level will not adequately address more localized yet important and possibly intensive impacts. It should be emphasized within the DPEIS that project specific environmental analysis should not be overlooked. 19-12

Chapter 3 – Overview of Wind Energy Projects:

3.1.1 Site Monitoring and Testing Activities

The BMPs presented in Chapter 2 of the document include the minimization of guy wires and above ground support structures or wiring. If guy wires and other similar support equipment are deemed necessary, then BMPs need to be established to increase the visibility of these structures to birds and bats, as well as making them unappealing to birds as perches or roost sites. 19-13

3.1.2 Site Construction Activities & 3.1.2.1 Site Access, Clearing, and Grade Alterations

Similar to the concern brought up in section 3.1.1, some activities identified in these sections are counter to what is proposed in the BMPs identified in Chapter 2. The Department understands that the BMPs are guidelines and do not have a regulatory function, and that the logistics of individual site locations might make full compliance with BMPs impracticable. In these cases, we recommend that the BMPs be applied to approved applications and incorporated to the fullest extent possible. 19-14

3.1.2.4 Miscellaneous Ancillary Construction

To address fugitive dust BLM is proposing water spraying (pg.2-19 *Air Emissions*). Developers of the proposed Table Mountain Wind Generating Facility anticipate using an average of 120,000 gallons of water per day during construction to effect adequate dust control. Where no municipal water sources are available, BLM suggests that water might be obtained from nearby surface water features. The BLM must ensure that water sources are accounted for, and environmental impacts be analyzed to assess impacts to aquatic systems and organisms. We recommend that alternative dust abatement measures be included in the proposed alternative. 19-15

BLM Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
December 6, 2004
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3.1.4 Site Decommissioning
Although this section addresses the reclamation of the site through plantings with indigenous vegetation, it does not provide for monitoring to ensure that the actual reclamation efforts are successful with regard to native vegetation establishment. This section should also address the possibility of invasive species encroachment to the area, and any necessary remediation and/or control of such species. 19-16

3.2 Regulatory Requirements for Wind Energy Projects
The BLM is required by provisions in the Endangered Species Act to consider actions that would prevent the future listing of species, as well as to assist in the recovery of listed species. There appears to be a discrepancy between the mandate to protect and improve habitat for federal listed species and BLM sensitive species and the evaluation of projects to *ensure that they will not contribute to the need to list the species as threatened or endangered.* We believe that protection and improvement of habitat for species of conservation concern differs from ensuring that project activities will not contribute to the need to list a species as threatened or endangered. As mentioned earlier, we recommend that stronger measures be considered under the screening criteria (described in Chapter 2) to eliminate areas from consideration from development if they fall within known areas of occurrence of threatened or endangered species (and their critical habitats), and other particularly sensitive species. 19-17

3.4.2 Solid and Hazardous Wastes
The determination of which wastes to deem as hazardous is to be determined by the project operator. To avoid inconsistent determinations, BLM should provide a comprehensive and standardized list (similar to the list provided on pages 3-22 to 3-24) of all known hazardous substances that are commonly associated with the construction, operation and decommissioning of wind energy projects. This list should be maintained regularly or as technological advances in wind energy production are made. This regular maintenance will help provide a consistent understanding among all wind energy project operators and the BLM as to what substances are hazardous and need to be treated and handled as such. 19-18

Chapter 4 – Affected Environment:

4.6.2.2 Birds
This section does not provide information regarding the migration pathways of birds outside of the standard flyways attributed to waterfowl and to a lesser extent, shorebirds. Flyways used by passerines and raptors are not represented in the document. Passerines are frequently the primary group of species documented as suffering negative impacts as a direct or indirect result of wind energy development. Therefore, we recommend that the migration pathways of raptors and passerines be addressed in the document. 19-19

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Chapter 5 – Potential Impacts of Wind Energy Development and Analysis of Mitigation Measures:

5.9.3.2.6 Disturbance of Wildlife – Box, page 5-70
The Department supports the mitigation bullets, but recommends adding a third measure:

> "To the extent possible, post development mortality studies should be a part of the site development plan, to determine if or to what extent mortality occurs."

19-20

5.9.5.4 Mitigation During Operation
Post construction monitoring is essential because of the limited information currently available on impacts of wind turbines on bats and other wildlife. An appropriate monitoring effort (dependent on the potential for impacts to wildlife) should be developed at each site to determine if or to what extent mortality occurs. Monitoring should occur for other key species of concern, as well as federally listed species.

19-21

Chapter 6 – Analysis of the Proposed Action and Its Alternatives

6.1.2 Environmental Impacts
Under the DPEIS, project operators will be required to collect and review information regarding protected species and sensitive habitats at the project site and to design the project to minimize or mitigate impacts. The Department supports this requirement, and would add some additional analysis at a regional or landscape level to ensure that cumulative impacts to species and habitats are also addressed. This will ensure a better level of protection against habitat fragmentation and degradation of habitat.

19-22

Literature Cited

Grand Canyon Trust. 2004. Wind Energy Development and Avian Effects in Northern Arizona: A Review of the State of Current Knowledge and Recommendations for Minimizing Impacts.

U.S. Fish and Widlife Service. May 2003. Interim Guidelines to Avoid and Minimize Wildlife Impacts from Wind Turbines. U.S. Department of the Interior. Washington, D.C. www.fws.gov/r9dhcbfa/windenergy.htm

Washington Department of Fish and Wildlife. August 2003. Wind Power Guidelines. http://wdfw.wa.gov/hab/engineer/windpower/index.htm

Responses for Document 00019

00019-001: Thank you for your comment. We appreciate your input and participation in the public review process.

00019-002: As required by the Wind Energy Development Program proposed policies and BMPs, a variety of site- and species-specific analyses, including surveys for important habitats and wildlife abundance and use, will be conducted for any wind energy project proposed for BLM-administered lands. In addition, the policies and BMPs require the development of invasive weed and invasive species control plans and monitoring plans, as well as the avoidance of raptor nests and bat roosts, and consideration of other important ecological factors (see Section 2.2.3.2.2). The scope and approach of these site- and species-specific analyses, as well as details for any monitoring plans and noxious weed control plans, will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting, design, operation, mitigation, monitoring, and decommissioning stipulations for incorporation into the POD. The identification of detailed site-specific analyses and stipulations is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

00019-003: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land. The BLM is committed to full implementation of the proposed Wind Energy Development Program, elements of which require the incorporation of adaptive management strategies and monitoring programs at all wind energy development sites (see Section 2.2.3.1 Proposed Policies, last bullet, and Section 2.2.3.2.2, Plan of Development Preparation, General, 7th bullet). The application of adaptive management strategies will ensure that programmatic policies and BMPs will be revised as new data regarding the impacts of wind power projects become available. The monitoring program requirements include not only postconstruction monitoring, but also monitoring during construction and decommissioning. The scope and approach of the monitoring program will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific monitoring stipulations for incorporation into the POD that will encompass construction, operation, and decommissioning activities.

00019-004: As discussed in the 9th bullet under Section 2.2.3.1, Proposed Policies, site-specific NEPA analyses will be conducted on all wind energy development projects on BLM-administered lands. The level of environmental assessment, including whether an EA or an EIS is required, for individual wind energy

projects will be determined at the Field Office level. In certain instances, it may be determined that a tiered EA is appropriate in lieu of an EIS.

00019-005: Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. This process will address issues related to federal- and state-protected species and their critical habitat. Through this process, the BLM will develop project- specific stipulations for incorporation into the POD.

00019-006: The reclamation efforts needed to restore a site as close as possible to a predevelopment state will be evaluated at the site-specific level at the point in time when a decision is made to decommission a site. Development of a decommissioning plan at the Plan of Development phase is premature given that decommissioning may not occur for several decades. A BMP has been added to Section 2.2.3.2.5, Decommissioning, requiring the development and implementation of an approved decommissioning plan prior to termination of the ROW authorization. Required elements of the decommissioning plan include a site reclamation plan and monitoring program.

00019-007: The identification and specification of any exclusion areas from wind energy development will be determined at the project level as part of the site-specific analyses, or through local land use planning efforts with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands, and these analyses will provide the basis for the identification of project-specific exclusion areas. The scope and approach for site-specific analyses, as well as the specifications for any exclusion areas, will be determined on a project-by- project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting, exclusion, and design stipulations for incorporation into the POD. The stipulation of specific exclusion areas is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

00019-008: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land. In addition, the BMPs related to identifying important habitat, such as high bird usage areas, has been reworded to include a requirement that impacts to these habitats be avoided, if possible. As required

by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, which will address the presence of known migration pathways and high usage areas, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

00019-009: As required by the Wind Energy Development Program proposed policies and BMPs, species-specific analyses, including evaluations of young and the identification of mitigation measures, will be conducted for any proposed project on BLM-administered lands. The scope and approach for species-specific analyses will be determined on a project-by-project basis, in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Species-specific analyses are beyond the scope of the PEIS.

Sections 5.9.2.2.8 and 5.9.3.2.7 discuss potential impacts to the movements of biota other than birds and bats, including elk and deer.

No text change has been made to the document in response to your comment.

00019-010: The Wind Energy Development Program proposed BMP in the 3rd bullet under Excavation and Blasting Activities in Section 2.2.3.2.3, Construction, has been changed to clarify that suitable excavated materials can be stockpiled for use during reclamation.

00019-011: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, which will address issues related to noise impacts on wildlife, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

00019-012: As discussed in the 9th bullet under Section 2.2.3.1, Proposed Policies, site-specific NEPA analyses will be conducted on all wind energy development projects on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

00019-013: The proposed BMPs include requirements to design facilities to discourage their use as perching or nesting substrates and to prohibit the use of guy wires on permanent meteorological towers (see the Wildlife headings under Section 2.2.3.2.2, Plan of Development Preparation, and Section 2.2.3.2.3, Construction). Empirical evidence does not exist to prove that bird deterrent devices designed to make wires more visible to birds are effective at reducing bird kills. Therefore, such devices will not be required by the BLM. However, the application of adaptive management strategies, as required by the proposed program, will ensure that programmatic policies and BMPs will be revised as new data regarding impacts and effective mitigation measures become available. This would include new data regarding the effectiveness of bird deterrent devices.

00019-014: Section 3.1 provides information describing activities likely to occur on typical wind energy development projects during each of the major phases and is not limited to a description of what activities will be allowed on BLM-administered lands. The proposed BMPs presented in Section 2.2.3.2 provide minimum standards for the development of all wind energy projects on BLM-administered lands. All of the BMPs have been rewritten to make them requirements for projects on BLM-administered lands rather than recommendations. The manner in which each BMP will be implemented for a specific project will be determined during the required site-specific analyses.

00019-015: Section 3.1 provides information describing activities likely to occur on typical wind energy development projects during each of the major phases and is not limited to a description of what activities will be allowed on BLM-administered lands. Water spraying was provided only as an example dust abatement technique in Section 2.2.3.2.3, Construction, Air Emissions, 1st bullet. Other techniques tend to be costly, adversely impact plants and animals, or simply be impractical. Any measures to mitigate fugitive dust at specific sites will be determined as part of the site-specific analyses that will be conducted as required by the proposed policies and BMPs for any proposed project on BLM-administered lands. The proposed BMPs have been rewritten to remove any indication that water is the preferable method for dust abatement.

00019-016: Section 3.1 provides information describing activities likely to occur on typical wind energy development projects during each of the major phases and is not limited to a description of what activities will be allowed on BLM-administered lands. As stated in Section 2.2.3.2.5, Decommissioning, the first BMP specifies that all stipulations, BMPs, and management plans developed for construction of a wind facility shall be applied to similar activities during decommissioning. In addition, a BMP has been added to Section 2.2.3.2.5, Decommissioning, requiring the development and implementation of an approved decommissioning plan prior to termination of the ROW authorization. Required elements of the decommissioning plan include a site reclamation plan and monitoring program. With specific regard to the control of noxious weeds and

invasive species, one of the BMPs for the construction phase (Section 2.2.3.2.3), which would be applicable during decommissioning, requires the development of a plan to control noxious weeds and invasive species.

00019-017: Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. The 2nd bullet under the Wildlife and Other Ecological Resources heading in Section 2.2.3.2.2, Plan of Development Preparation, has been reworded to require that projects be designed to avoid (if possible), minimize, or mitigate impacts to federal- and/or state-protected species or other species of concern. Site-specific analyses required by the proposed policies and BMPS will address specific issues associated with these species. These site-specific analyses will be conducted in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD.

00019-018: Federal regulations promulgated under the authority of the Resource Conservation and Recovery Act (RCRA) explicitly define what constitutes a hazardous waste. (See 40 CFR Part 261.) Under those rules, the generator is responsible for determining whether his wastes meet the definition of a hazardous waste. (See 40 CFR 262.11.) This determination can often be accomplished by the application of process knowledge (i.e., knowing the constituency or physical and chemical characteristics of the material or substance that is now being recovered from a process or activity as a waste). When process knowledge is not fully available or otherwise does not allow for a sufficient determination, the generator must test a representative sample of his particular waste, utilizing all applicable testing methodologies specified in regulations. State hazardous waste regulations take a similar approach, obligating the generator to determine if their waste is hazardous. The BLM has no intention of assuming these regulatory responsibilities from wind farm operators. Because the specific chemicals that could conceivably be used in the construction and operation of a wind farm are myriad, and because state hazardous waste program wastes listings vary, the suggestion that the BLM be responsible for developing a "comprehensive, standardized list" is infeasible.

00019-019: The flyways discussed in this section are applicable to most birds. The source document discusses warblers, sparrows, raptors, and others in addition to waterfowl, and the PEIS text cited in the comment states "Birds migrating north from wintering areas to breeding areas use these pathways in the spring, and birds migrating southward to wintering areas use them in the fall. Each flyway encompasses broad geographic areas and includes many specific routes and subroutes, the use of which varies by species. Consideration of these more specific routes will be an important parameter for identifying site-specific concerns related to migratory birds."

The BMPs and policies of the proposed Wind Energy Development Program require operators to evaluate avian use, which includes migratory patterns, of the project area and design the project to minimize or mitigate the potential for bird strikes. Thus, the evaluation of avian migratory activities will be conducted at the project- specific level in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific design and siting stipulations for incorporation into the POD that have incorporated site-specific and species-specific considerations of avian migration at the project area. No text change has been made to the document in response to your comment.

00019-020: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific monitoring will be determined on a project- by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific monitoring stipulations for incorporation into the POD. No text change has been made to the document in response to your comment.

00019-021: As specified in the Wind Energy Development Program proposed policies and BMPs, a monitoring program will be required for all wind energy projects proposed for BLM-administered lands. The scope, focus, and approach of the monitoring program, which must address the construction, operation, and decommissioning phases of the proposed project, will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific monitoring stipulations for incorporation into the POD.

00019-022: Habitat loss and habitat fragmentation will be evaluated on a project by project basis. A new BMP has been inserted in Section 2.2.3.1, Proposed Policies, to ensure that site-specific NEPA analyses will identify and assess any cumulative impacts that are beyond the scope of the cumulative impacts addressed in the PEIS.

Document 00020

UINTAH COUNTY

STATE OF UTAH

Our past is the nation's future

December 9, 2004

Mr. Ray Brady
BLM Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

RE: Draft Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States

Dear Mr. Brady,

Thank you for the opportunity to comment on the Draft Programmatic EIS on Wind Energy Development on BLM Administered Lands in the Western United States.

The following are our comments regarding the document:

3-20 3.36 Shadow Flicker
The American Wind Energy Association (AWEA) compared the US with Europe and said in Europe shadow flicker has been considered a serious issue, but in the US shadow flicker is generally not considered as significant in the US. AWEA states that "shadow flicker is not a problem during the majority of the year at US latitudes." The latitude of France and Oregon are approximately the same. There is nothing to indicate why it is felt they are not considered significant in the United States. 20-1

Chapter 4
There is no discussion in the document of the effects that such developments will have on wind currents which may effect bird migrations, air quality and other such resources or activities. It would appear that depending upon the size of a project there could be considerable impact on wind currents. These issues should be discussed. 20-2

4-22, 4.6.2.2.6
The second full paragraph states Federal agency and USFW must work together to minimize impacts to migratory birds. Will this action take place before or after the turbines are installed? Will this be a local or National effort? How will this affect the Migratory Bird Act? 20-3

For the eleven study states the document lists a high number of threatened and endangered 20-4

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species existing. According to table 5.9.3.3 turbine related fatalities are quite high. It would appear that despite protections in mitigation measures proposed in this draft that there will be unpreventable fatalities of threatened and endangered species. The document fails to analyze or disclose potential impacts on them. 20-4 (cont.)

Although this is a programmatic document and that it provides for additional environmental NEPA analyzes at the local level when a project is proposed the adequacy of analysis on local culture and tradition were not adequately addressed in this document. Most of the cultural discussion of this document was directed at sites and artifacts, but did not address life styles aspect of culture resources. The West has a history and persona of open space, grand vistas and has steeped traditions in Western culture. Wind energy development is not consistent with local culture and values and such developments would create huge impacts on these values. 20-5

Overall the document fails to address the advisability of wind development in general. There is no discussion in efficiency or impacts of such development compared to other energy sources such as comparing efficiencies, surface damages, duration of impacts, etc. 20-6

Sincerely,

UINTAH COUNTY COMMISSION

David J. Haslem, Chairman

Michael J. McKee

Jim Abegglen

Responses for Document 00020

00020-001: Text was revised in Section 3.3.6 to point out that it is relatively straightforward to calculate where and for how long a flickering shadow would fall in a given location near a wind farm. If shadow flicker is expected to be a problem from the operation of a wind turbine, site-specific recommendations for mitigation would be incorporated into the project design.

00020-002: One factor affecting the spacing between wind turbines in a wind farm is the need to keep wind current disturbances caused by one turbine from affecting the other turbines. These disturbances would also be smaller than those associated with buildings of the same height. Thus, the spatial scale of the disturbances is small compared with the scale of wind patterns and, therefore, is unlikely to affect bird migration and would not affect air quality. In addition, wind turbines are only capable of extracting a fraction of the kinetic energy from the incoming air and thus have little impact on the overall wind currents. No text change has been made to the document in response to your comment.

00020-003: As specified in the Wind Energy Development Program proposed policies and BMPs (see Sections 2.2.3.1 and 2.2.3.2, respectively), these activities will be conducted during project planning and plan development, and will be used in facility siting and design. These policies and BMPs will be required for any wind energy project proposed for BLM-administered lands. In addition, the development of any wind energy project on BLM-administered lands will be required to comply with all applicable federal regulations, including the Migratory Bird Treaty Act (see Section 4.6.2.2.6).

00020-004: Potential impacts to threatened and endangered species are discussed in Section 5.9.3.4. As stated in this section, the siting of wind energy projects would require compliance with the Endangered Species Act and other applicable laws, regulations, policies, program guidance, and management plans (e.g., FLPMA), and such compliance would make it unlikely that a wind energy project would be sited in a location known to have one or more federal listed species. The siting and design of a facility would also be conducted in coordination with federal, state, and local agencies, and interested stakeholders, so as to avoid or minimize, to the maximum extent possible, impacting threatened and endangered species. The siting, construction, and operation of a wind energy project on BLM-administered land would be conducted in compliance with BLM *Manual 6840 — Special Status Species Management* (BLM 2001), which provides policy and guidance for the conservation of special status species and the ecosystems on which they depend. The incorporation of these laws, policies, guidance, and coordination would be conducted on a project-by-project, site-specific basis, and is beyond the scope of this document.

00020-005: As stated in the text, the National Historic Preservation Act of 1966 as amended requires the assessment of a project's effects on traditional cultural properties as well as on archaeological sites and artifacts.

00020-006: As stated in Chapter 1, the National Energy Policy recommends that the Department of the Interior work with other federal agencies to increase renewable energy production on public lands. The BLM has focused on wind energy development in this PEIS in part in response to the number of ROW applications it has received. Section 6.4.2 provides a brief discussion of the impacts of wind energy development as opposed to other sources of energy with respect to land area disturbance, air quality, water use, and waste generation. A comprehensive analysis of other energy sources compared with wind energy is beyond the scope of the PEIS.

Document 00021

December 10, 2004

Comments on the Bureau of Land Management's
Draft Programmatic Environmental Impact Statement (DPEIS) on Wind Energy
Development on BLM-Administered Lands in the Western United States

In summary, there are serious problems with the draft Programmatic Environmental Impact statement (PEIS). The comments that follow are focused primarily on the portions of the draft that deal with the economics of wind energy development.[1] The data and conclusions reflected in those parts of the draft are invalid because:

- Major elements of the true costs of producing and delivering electricity from wind energy have not been taken into account.
- The "economic model" underlying the economic analysis is defective.

It is important that Department of the Interior (DOI) and Bureau of Land Management (BLM) officials recognize that much of the information relied on by those drafting the statement has come from organizations that promote wind energy development.[2] This information is often biased and should not be relied on as a basis for BLM decisions.

The net effect of the deficiencies is that the draft PEIS grossly overstates the potential benefits of wind energy while grossly understating the true costs. In fact, it is far from clear that the PEIS justifies *any* development of wind energy on BLM-administered lands. Any conclusions in that regard will have to await correction of the fundamental deficiencies in the economic analysis.

DOI and BLM officials should also be aware that much of the information distributed during the past decade by the wind industry and other supporters of wind energy development is biased. However, as development of wind energy has occurred in US and other countries, problems with its development and facts about its true costs have begun to emerge.

Even a casual review of the literature about wind energy from around the world reveals information about problems caused and costs incurred when wind energy is developed. There does not appear to be any valid reason why those who have developed the draft PEIS should ignore the problems and the true costs and chose to rely on only the literature, economic models, and data that are favorable to wind energy development.

Clearly, DOI and BLM officials have a responsibility to act in the public interest, and not limit their consideration to information favorable to the development of wind energy. In particular, DOI and BLM officials should note that the draft PEIS largely ignores the interests of electricity customers and taxpayers who would bear the burden of higher cost of electricity from wind energy and taxpayers who would bear the burden paying for the tax breaks, other subsidies and other economic benefits achieved by "wind farm" developers and owners.

In addition to the primary focus on the economic deficiencies of the draft PEIS, the detailed comments that follow also mention one key safety problem that has been ignored and identify an omission in the sections on decommissioning. Further, DOI and BLM officials should be aware

that the two studies cited as justification for the draft PEIS conclusion that property values are not adversely affected by wind energy development have been publicly discredited because of deficiencies in methodology, assumptions and factors considered.

Before proceeding, BLM needs to do a complete and objective economic analysis, avoid reliance on biased information from wind energy advocates, and take into account the full, true environmental, energy and economic costs of wind energy development.

Detailed comments

A. Economic Analysis Deficient. The PEIS Executive Summary (page ES-1) states, in part, that "The objectives of the draft PEIS are to (1) assess the environmental, *social, and economic* impacts associated with wind energy development on BLM-administered land....." (Emphasis added). This certainly is a valid and necessary objective but it has not been pursued adequately in the PEIS. Critical deficiencies, as detailed below, include:

- Failure to consider key elements of cost that would be borne by the public (particularly electric customers and taxpayers),
- Reliance on "economic models" that are demonstrably flawed, including economic models developed by or for DOE's National Renewable Energy Laboratory (NREL).[3]

The JEDI or Wind Industry Model developed for and distributed by NREL for use in calculating state or local economic impacts, which model is referred to in the draft PEIS is demonstrably deficient in that it grossly overstates economic benefits and understates some economic costs and ignores other real economic costs. Attachment #1 to these comments is a paper describing and demonstrating deficiencies and errors in that model. That paper should be considered an integral part of these comments on the BLM's draft PEIS

BLM has an obligation to represent the public interest, not the interests of the wind industry or other wind energy supporters.

1. The concept of the *economic cost* of electricity from wind energy reflected in the PEIS is incomplete. The wind industry and its supporters (including DOE[4] and NREL) typically ignore large elements of the full, true costs of electricity from wind energy and, unfortunately, this basic error has been perpetuated in BLM's draft PEIS. Only during the past year or two has the truth about the full, true costs of wind energy begun to emerge in public discussions.

The true cost of electricity from wind energy borne by the public is NOT the price claimed by wind energy supporters OR that charged by "wind farm" owners. Key elements of the full, cost that are typically omitted (and not considered adequately in BLM's document) include the following:

a. Real costs ultimately borne by electric customers not considered in BLM PEIS, but which show up in monthly electric bills.

1) Backup power costs. Wind turbines produce electricity only when the wind is blowing in the right speed range.[5] Their output is intermittent, highly volatile

from minute to minute, and largely unpredictable (except in the very short term). Because of these limitations, reliable ("dispatchable") generating units must be kept immediately available to keep the grid in balance (supply-demand, voltage, frequency). These back up units must be running in automatic generation control (AGC) mode, at less than full or optimum capacity, or in spinning reserve mode.

Providing this backup power involves costs and those costs (in whole or part) are properly attributed to the cost of wind energy. Also, recognize that ramping generating unit output up and down tends to add to unit wear and tear cost on those backup units

2) Costs of providing reliable generating capacity. Because wind turbines cannot be counted on to be available when needed to satisfy electricity customer demand (that is, they have little, if any, "capacity value"), sufficient reliable generating capacity must be built and maintained to assure that adequate capacity is always available. This, too, involves costs for building and maintaining that capacity even if it is not fully utilized. Those costs must be recovered in some way and are almost certain to end up in monthly electric bills. Wind generating capacity does not replace the need for reliable generating capacity.

3) Higher cost of providing transmission capacity for electricity from wind turbines. Transmission costs are inherently higher for electricity from wind turbines for at least three reasons:
   - The first reason is due to the intermittence of wind generation. In practice, enough transmission capacity must be available to handle the full rated output of a "wind farm." However, that full capacity is not used efficiently and effectively because of the intermittent availability of the electricity output
   - The second reason is that windmills, because of their large size, noise and other factors, tend to be found acceptable in areas that are remote from populated areas. The practical effect is that electricity from wind is likely to have to travel over longer distances and, therefore, "line losses" tend to be higher than for generating units that are located near load centers.
   - The third reason is that areas where siting of windmills may be acceptable tend to be in areas where adequate transmission capacity is less likely to be available. At least two states (Minnesota and Texas, as well as other countries such as Denmark and Germany) have found it necessary to add expensive transmission capacity to serve "wind farms." Such costs are appropriately counted as part of the full, true cost of electricity from wind. In any case, these costs end up in electric customers' monthly bills even if this is not clearly admitted by the wind industry, regulators, or advocacy groups.

4) Grid management costs to maintain reliability. Because of intermittence, volatility and unpredictability, "wind farms" tend to detract from grid reliability and, therefore, require greater care to assure integration into electric grids. This is an additional cost factor.

5) Mandated "Renewable Portfolio Standards" (RPS) add to consumer costs. RPS requirements specify minimum shares of electricity that must come from "renewables" have been adopted by some states and applied to government buildings and activities in other states. Electricity from wind is inherently more costly than alternative existing sources of electricity. These costs are passed on to consumers. The fact that RPS create artificial, high cost markets also helps push up customers' costs.

6) "Green energy" programs mandated or encourage for electric utilities also add to electric customer costs. Typically, these programs provide that electric customers are to be given the option of purchasing "green" electricity – i.e., electricity produced from certain renewable energy sources – if they are willing to pay a premium price for that electricity.

   To the extent that customers volunteer to pay premium prices, there should be no objection. However, nationally less than 1% of the customers of 100+ electric utilities offering such programs "volunteer" to pay the premium prices. The premium revenue collected by the utilities is not enough to cover the utilities' costs of buying the high cost renewable-generated electricity and the cost of administering the programs. The result is that the costs that are not recovered through premium payments are passed on to all the utilities' customers, adding to their monthly bills.

b. Real costs borne by ordinary taxpayers that have not been taken into account in BLM's draft PEIS "economic analysis." Wind energy is now one of the most heavily subsidized sources of electricity in the US *when considered in light of its existing and potential contribution toward supplying US electricity requirements.*

The tax breaks and other subsidies currently available for commercial-scale wind energy have led to a situation where the principle motivation for building "wind farms" is tax avoidance – not their environmental, energy or economic benefits. BLM should not be encouraging misallocation of resources. The federal, state and local tax breaks and other subsidies which run in the hundreds of millions annually include:

1) Federal five-year double-declining balance accelerated depreciation (MACRS[6]) which permits "wind farm" owners to deduct 20% of the capital cost[7] of a "wind farm" from otherwise taxable income in the 1st tax year, another 32% in the 2nd tax year, and the remainder over the succeeding four tax years.[8]

2) A ten-year, $0.018 per kilowatt-hour (kWh) Production Tax Credit which permits the owners of "wind farms" or their parent companies to deduct additional millions of dollars each year from their tax liability.

3) In states that conform their corporate income tax system to the federal system, the five-year double declining balance accelerated depreciation also serves to reduce "wind farm" owners' income that would otherwise be subject to state corporate income tax. *This loss of revenue has not been taken into account in the BLM draft PEIS.*

4) Dozens of state and local government tax breaks, enacted in response to wind industry lobbyists, including (depending on the state) state production tax credits, reductions in or exemptions from business and occupation taxes, sales and use taxes, and state and local property taxes. In some states, some of the taxes have been eliminated and in others have been reduced substantially. *These losses of revenue have not been taken into account in the BLM draft PEIS.*

5) Direct DOE subsidies (via contracts, grants and subcontracts) for wind energy R&D and for wind promotional activities carried out by DOE "national laboratories," trade associations and numerous "non-government organizations" that have been created to promote expensive "renewable" energy. These, too, are a real economic cost and money involved almost certainly could have been used more effectively elsewhere, particularly if left in the private economy.

6) Similar state subsidies (e.g., in California), some of which are paid from appropriated funds and some provided from funds collected via consumers' monthly electricity bills and often labeled as "public benefit funds." These also are a real economic cost.

2. **The "economic analysis" in BLM's PEIS has another fundamental deficiency**. The higher true costs of electricity from wind energy – including the hidden costs for electric customers and taxpayers described above -- that less money is available for other uses and is, therefore, a net "drag" on those sectors of the local, state or national economy where those incremental funds would otherwise be spent or devoted to savings.

   For example, the higher true cost of wind energy borne by electric customers and taxpayers means that less money is available for other uses including, for residential customers, spending on food, clothing, shelter, medical expenses, education, and other purposes (e.g., spending in local hardware stores, dry cleaners and other retail establishments). Also, less money is available for savings.

B. **Claims of costs per kWh of electricity from wind generation distributed by the US Department of Energy (DOE) and DOE's NREL are not valid or reliable.** DOE, NREL, the wind industry and other wind advocates often distribute information purporting to show the costs per kWh of past, current and potential future wind turbine generation.

Apart from all the real costs that are excluded from the DOE and NREL calculations, it must be recognized that the DOE[9] and NREL numbers are not valid or reliable.

The principle reason the numbers are invalid, unreliable and, really, quite meaningless is that they are based on three assumptions that have no basis in fact; specifically:

- That the useful life of the wind turbines is known. Often it is assumed that the useful life will be 20 or 30 years. Keep in mind that "wind farms" require very large capital cost compared to other generating sources. In fact, there is no long-term experience with the large (1+ MW) turbines now being installed to predict their life expectancy. If those turbines turn out to have a useful life of 10 years rather than 20, the actual costs per kWh of the electricity they produce over the 10 years would be nearly double the cost estimates based on a 20 year useful life assumption.
- Actual costs of operating, maintaining, repairing and replacing wind turbines over their useful life is unknown for the same reason noted above; i.e., no long term experience. Some "wind farms" have experienced many unexpected turbine failure problems.[10]
- Actual performance – in terms of kWh output -- over their useful life is unknown, again, because there is no long term experience with today's turbines and blades. It is known that performance of wind turbines deteriorates over time for a variety of reasons, including blade fouling.

C. **BLM's PEIS does not adequately reflect the fact that electricity from wind turbines has less value than electricity from reliable generating sources and detracts from, rather than adds to, electric system reliability.** As pointed out above electricity form wind turbines is available only when the wind is blowing in the right speed range – with the result that the electricity produced is intermittent, volatile and largely unpredictable.[11]

Because of these limitations, wind turbines have little, if any, "capacity value" as that term is used in the electric industry and the *electricity has less real value than electricity from reliable generating units that can be called upon whenever needed to supply electricity users demands.*

Those responsible for assuring the reliability of electric systems and grids must assure that *reliable ("dispatchable") generating capacity is available at all times to satisfy electricity demands and keep control areas and grids in balance.* The practical effect of the limitations of wind energy is that reliable generating capacity must be built and available for use *even if wind turbines are built and are available at some times (when the wind is blowing at the right speed) and the reliable capacity is not fully utilized. The cost of building and maintaining the reliable capacity – which may not be used at full capacity or peak efficiency -- is also borne by electric customers, in addition to the high costs of the electricity from wind.*

D. **Overestimation of emission reduction impacts.** BLM's PEIS overestimates the potential reduction in emissions from fossil-fueled electric generation. For example, the draft PEIS does not reflect adequately the fact that emissions are produced when dispatchable fossil-fueled generating units continue to produce emissions when they are run in "spinning

reserve" mode or run at less than peak efficiency to "back up" intermittent, volatile, unpredictable output from wind turbines. BLM should not assume that each kilowatt-hour of electricity produced by a wind turbine offsets emissions associated with an equal number of kWh produced by a fossil-fueled generating unit. Furthermore, no emissions are offset if the electricity displaced by a wind turbine (if any) would have been produced by a hydropower generating unit. Also, any emissions that are avoided are far different if the electricity would have been produced by, for example, an efficient gas-fired combined cycle generating unit rather than an old coal-fired generating unit that does not yet meet new source performance standards.

E. **"Studies" relied on by BLM's draft PEIS to claim that property values are not adversely affected are invalid.** The draft PEIS cites two studies to justify its conclusion that property values are not adversely affected by construction of windmills in the area. Both studies funded and were prepared by organizations known to be advocates of wind energy development and both have been publicly discredited because of basic deficiencies in their methodology, assumptions and data. The fact that they have been discredited is no secret and should have been know to those developing the draft PEIS. Any assertion that the value of property, particularly residential property, near "wind farms" is not adversely affected in quite absurd.

F. **Those preparing the draft PEIS seem to have carefully ignored the growing literature that challenges the claims of the wind industry and other wind energy supporters, such as DOE-EERE, NREL, and NWCC and has largely ignored the interests of electric customers and taxpayers.** These comments from the introductory summary of these comments are repeated here so that they will not be overlooked when BLM officials undertake a more complete analysis that covers all the true costs and benefits of wind energy development.

G. **BLM's PEIS fails to consider a key decommissioning risk.** While the draft PEIS discusses some decommissioning issues, it does not deal adequately with a key economic risk associated with decommissioning. That risk is whether a financially viable and responsible owner will be available to carry out decommissioning and restoration responsibilities.

In particular, BLM officials need to be aware that:

1. **Most "wind farms" in the US are "owned" by Limited Liability Companies (LLCs),** many of which have only a single physical asset (i.e., the "wind farm") and, perhaps, a contract for the sale of some or all of the electricity for some period of time. When it comes time for decommissioning and restoration of lands affected the LLC or whoever owns the "wind farm" at the time may not have the financial resources to pay the costs involved and may resort to bankruptcy or other measures to escape liability.

2. **The tax incentives and other subsidies available from federal, state and local governments[12] are heavily "front-end" loaded, creating strong financial incentives for "wind farm" owners to sell or abandon the facilities once the value tax benefits**

and subsidies have been captured and/or when maintenance, repair and replacement costs begin to climb as facilities age. Note, for example, that the tax avoidance value of federal and state accelerated depreciation is fully captured in the first 6 tax years from start of operation, and the production tax credits are captured in the first 10 years.

3. **Assuring that money will be available to pay for decommissioning and restoration probably can be achieved only through cash bonds posted in advance of construction starts AND held by an independent third party.** Surety bonds probably will not provide adequate protection, particularly if periodic premium payments are required. Funds held in some sort of "trust" by the "wind farm" owner would not be secure because such funds would be part of the assets of the "wind farm" owner that would be available to all creditors in the event of bankruptcy.

In summary, BLM regulations should require that full cash bonds, held by an independent third party, be posted before a permit is granted for a wind energy facility on BLM-administered lands.

H. **BLM's PEIS fails to consider at least one key public safety risk.** The draft PEIS does not deal with the need for safety standards for the components, construction and operation of wind turbines in cold climates. This problem has been faced in European countries but continues to be neglected in the Untied States. BLM rules should address this issue before additional wind turbines are permitted on BLM-administered lands.

One final comment: The draft PEIS reflects an underlying presumption that wind energy is environmentally and economically advantageous. This probably reflects the fact that key participants in the preparation of the draft are avid wind energy supporters or, perhaps, reflects the political decisions inherent in the current Administration's "Energy Plan." When preparing an EIS, BLM has an obligation to rise above both personal views and political objectives and strive for objectivity.

* * *

These comments are submitted in my role as a citizen, consumer and taxpayer and are not on behalf of any client or other interest. Nevertheless, BLM has a public interest responsibility to take them fully into account as it has in the case of the interests of the wind industry and other wind energy development proponents.

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Attachment #1: Errors and Excess in the NREL's JEDI-WIM Model that Provides Estimates of The State or Local Economic Impact of "Wind Farms"

Endnotes:

[1] Sections 2-31; 4.10 and subsections 1-7; 5-13 and its subsections; Subsection 6.1.1, 6.1.3, 6.2.1, 6.2.3, 6.3, 6.4.1.13, and Appendix B.

[2] Much of the data relied upon by those drafting the statement does not meet the basic standards established by the Data Quality Act and OMB regulations implementing that Act. Use of any such data is unwarranted.

[3] It is critically important that BLM officials recognize that NREL cannot be relied on for objective analysis and information about the costs and benefits of wind energy. Undoubtedly, some at NREL carry on research and development activities that follow scientific methods and engineering principles. However, much of what NREL does "in-house" or under subcontracts – particularly that relating to wind energy -- is more akin to the activities of a trade association. That is, it collects and distributes information that is favorable to wind energy and ignores information that is unfavorable to wind energy. Would BLM be comfortable with basing its findings about oil on information from the American Petroleum Institute, or on coal from the National Mining Association?

[4] Particularly DOE's Office of Energy Efficiency and Renewable Energy – DOE-EERE.

[5] Today's turbines begin producing some electricity when wind is about 6 MPH, achieve rated capacity when wind speed is about 33 MPH, and cut out around 56 MPH to avoid equipment damage or destruction.

[6] MACRS = Modified Accelerated Cost Recovery System.

[7] Whether financed with debt or equity.

[8] During the period ending December 31, 2004, "wind farm" owners have been able to deduct 60% of capital costs in the first tax year, 16% in the second tax year and the remainder over the succeeding 4 tax years – because of a "bonus" depreciation provision which apparently has not been extended.

[9] For example, DOE's publication, "Windpowering America," graph on page 4.
<http://www.eere.energy.gov/windandhydro/windpoweringamerica/pdfs/wpa/35873_21century.pdf>

[10] Iowa Department of Natural Resources, "Top of Iowa Wind Farm Case Study."
http://www.state.ia.us/dnr/energy/MAIN/PROGRAMS/WIND/documents/topofiaWindFarmCaseStudy.pdf

[11] Except, potentially, during a few hours before the electricity is actually produced and wind conditions can be predicted with some accuracy. These are well known facts and are widely acknowledged in the literature and demonstrated repeatedly.

[12] Described earlier in these comments.

Attachment #1

Errors and Excesses in the NREL's JEDI-WIM Model that Provides Estimates of the State or Local Economic Impact of "Wind Farms"

Includes

A demonstration of the NREL Model's Overestimates -- Using the Example of a "Wind Farm" proposed for Highland County, Virginia

By

Glenn R. Schleede

Reston, Virginia

April 28, 2004

Errors and Excesses in the NREL's JEDI-WIM Model that Provides Estimates of the State or Local Economic Impact of "Wind Farms"

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April 28, 2004

Errors and Excesses in the NREL's JEDI-WIM Model that Provides Estimates of the State or Local Economic Impact of "Wind Farms"

Introduction and Summary

One of the US Department of Energy's (DOE) national "laboratories,"[1] NREL, has developed and begun promoting a "wind farm" "Jobs and Economic Development Impact" (JEDI) model, also referred to as the "Wind Impact Model" (WIM). This interactive model purports to permit calculating the state or local economic impact resulting from building a potential "wind farm."[2]

The model is designed to estimate job and economic benefits by (i) using various "default" assumptions provided in the model or (ii) changing those default assumptions to fit better the facts for a particular "wind farm."

As detailed below, anyone using the model should recognize that:

- Acceptance of the "default" assumptions would produce unrealistically high estimates of economic benefit for a state or locality, in both potential jobs and potential economic activity.
- Key factors affecting net state or local economic benefits and costs that offset benefits are not reflected in the model and, if taken into account, would further reduce the net local economic benefits.

To show the extent of overstated economic benefits, this paper includes a demonstration of the model that permits comparing results when using NREL's "*default*" *assumptions* with the results when using *more realistic assumptions*. A potential "wind farm" in Highland County, Virginia, is used for the demonstration.

In summary:

- The demonstration using JEDI-WIM shows that NREL's "default" recommendations produces estimates of local economic benefits and jobs that are more than 200% higher than estimates based on more reasonable assumptions.
- If costs resulting from a "wind farm" – which are ignored by the JEDI-WIM model -- were taken into account by the model, those costs would almost certainly exceed benefits.

Fundamental errors underlying NREL's JEDI-WIM model assumptions

As detailed below, there are two types of fundamental errors reflected in NREL's JEDI-WIM model:

- The first type of error, discussed in paragraph 1, below, is in the "default" assumptions that result in gross *overestimation* of local economic benefits. Errors in the assumptions affect calculations of "direct" benefits as well as claimed "indirect" and "induced" job creation and other economic benefits.
- The second type of fundamental error, discussed in paragraph 2, below is failure to consider the *costs* that would result from having a "wind farm in the state or locality.

1. **Errors Resulting in Overestimation of State and Local Economic Benefits.** These errors include:

   a. **Overestimating the number of jobs that will be created and filled by local residents.**[3] These overestimations occur at both the construction and permanent operation states.

      1) **During Construction.** Experience at other "wind farms" demonstrates that few jobs during construction are filled by local residents. In fact, most are filled by imported workers. For example, data on the 80-megawatt Top of Iowa "wind farm" (consisting of eighty-nine 900 kW turbines collected by the Iowa Department of Natural Resources (DNR) indicates that only 20 of 200 jobs created during the construction period (which lasted about 6 months) were filled by local people.[4]

         This low number of jobs for local workers is quite understandable since workers with specialized skills required during construction – such as erection of towers, installing turbines and electronic controls – often would not be available locally.

      2) **Permanent jobs.** The default assumptions in the JEDI-WIM overstate both the total number of permanent jobs that would be created and the number of these jobs that would be filled by local residents -- rather than by workers who would travel to the site (e.g., technicians skilled in repairing and maintaining turbines, electronic equipment) only when needed, rather than remaining in the area continually. The Top of Iowa "wind farm" with 89 turbines apparently requires fewer permanent employees that NREL's model would assume for the 30 turbine Highland County project.

   b. **Overstating local economic benefit by counting full price of goods and services rather than value added.**[5] The "default" values in JEDI model incorrectly assume that the full price paid by the "wind farm" owners or employees for goods and services purchased in a state or locality results in a state or *local* economic benefit.[6]

      Specifically, the default values are incorrect because they ignore the fact that part – generally a large part -- of the price paid to a local supplier has to be paid out by that local supplier to someone else, often located outside the local area. The money paid out is a part of the local supplier's cost of acquiring the goods (e.g., the purchase of fuel, wiring, cement) that the local supplier is reselling to the "wind farm."

      The only portion of the price paid by the "wind farm" that should be counted in NREL's JEDI-WIM model (which might result in a local economic benefit) is the difference between the local supplier's cost and the price he or she charges; i.e., the "value added" portion. Furthermore, it should be noted that if the local business providing the goods and services to the "wind farm" is not locally owned, the portion of the "value added" that is profit to the owner may also flow outside the local area and, therefore, not contribute to any local economic benefit.

   c. **Overstating local value of land rental payments.** The default values also assume incorrectly that all land rental payments (i.e. land for turbines, substation, lines) should be counted as a local economic benefit. This assumption could be justified only if the land is locally owned AND the income from the rental payments is spent locally. There would be little or no local economic benefit from the land rental payments if:

      1) The payments go to an absentee land owner, OR

2) The money is spent or invested outside the area (e.g., in a mutual fund managed in some distant city that invests in stocks or bonds having no local connection).

2. **Failure to consider costs that offset benefits**. The model focuses only on potential *benefits* and fails to consider *costs* that will be borne in the state or locality if a "wind farm" is constructed. Three examples of such costs deserve particular attention:

   a. **Counting state and/or local taxes without counting costs incurred by state and local governments because a wind farm is constructed.** The model counts as an economic benefit state or local taxes that may be paid by a "wind farm" owner. However, there is no provision in the model to offset that revenue with costs incurred by state or local governments because a "wind farm" is built. Without question, governments will incur costs to provide facilities and services required by the "wind farm," or its owner and employees, or by the people filling the jobs that the model says would be created "indirectly" or "induced." Such costs would include:

      1) Building and/or repairing roads required to transport equipment, materials and supplies to the site. A lot of heavy equipment, materials (e.g., tons of rebar, crushed stone, and cement) must be hauled to the site. (Materials that are produced locally and jobs filled by local workers – such as truck drivers – would legitimately be counted as potential economic benefits during the construction period.[7])

      2) Police and fire protection.

      3) Education and social service costs for workers and their families.

   b. **Potential adverse impact on environmental, ecological, scenic and property values, business income and other factors because of the existence of a "wind farm."** Reports from areas with "wind farms" in the US and Europe increasingly show concerns about adverse impacts on scenic and property values, and strong adverse citizen opposition to having to live near "wind farms" because of lights, noise, "blade flicker" and other annoyances. Environmentalists are also concerned about adverse impacts on birds, bats, wildlife and other ecological values. Some people are also concerned about the potential loss of business and adverse impact on tourism and retirement or second home purchases in areas affected by "wind farms." NREL's model apparently does not consider any of these costs.

   c. **Higher electricity costs imposed on electric customers via monthly bills.** No one disputes the fact that the true cost of electricity from wind is higher than the cost of electricity produced from traditional energy sources. Those higher costs are passed through in some way to electric customers via monthly bills.

      If the 50 MW "wind farm" being considered for Highland County, Virginia were to be built and it achieves a capacity factor of 30%, it would produce 131,400,000 kilowatt-hours (kWh)[8] of electricity each year (i.e., 50,000 kW x 8760 hours in year x .30 capacity factor). If that electricity cost electric customers only $0.02 per kWh more than electricity from other sources, the added cost to consumers annually would be $2,628,000 per year. When consumers are required to pay higher electricity bills they have less money to spend on other needs such as food, shelter, clothing education or health care. These are costs and adverse economic impacts that should be considered in a legitimate economic analysis.

Testing the Extent of the NREL Model's Overestimation of Economic Benefits

A "wind farm" being proposed for Highland County, Virginia, is used in this analysis to demonstrate the model's significant upward bias when using the default assumptions to estimate economic benefits. While final details of the proposed "wind farm" are not available at this time, information in an application for a Department of Agriculture grant indicates that the "wind farm" would make use of NEG Micon 1.65 MW turbines and have a total rated capacity of about 50 MW. This suggests that the wind farm would have about 30 turbines (i.e., 30 x 1.65 = 49.5 MW).

Note that NREL's JEDI-WIM model – as it has been made available publicly – permits calculation of alleged economic benefits at the State level. Additional detailed economic data are necessary to get the model to make calculations at the County or other regional level. NREL does not make county level detail available but instead refers potential users to Minnesota IMPLAN, Inc. of Stillwater, MN, to purchase such data.

The cost of the IMPLAN data can be significant and not readily affordable for this self-financed analysis. Therefore, I have used an alternative approach. Specifically, I have:.

- Used the Highland "wind farm" parameters (i.e., 50 MW; 30 turbines of 1.65 MW each).
- Run the model using NREL's "default" assumptions.
- Run the model using "local share" assumptions that would much more closely reflect the potential local economic benefit in the Highland County area.

Certainly, the people of Highland County (or any other area where the model is used) deserve a much more thorough analysis of economic benefits and costs than is permitted by the NREL's JEDI-WIM model and this paper. If the NREL model were to be used, several actions – in addition to the demonstration undertaken for this paper – should be taken. Specifically:

1. The validity of the IMPLAN data on Virginia's economy that underlies the NREL model should be checked.
2. The assumptions regarding taxes, including property taxes that would be applicable to the proposed "wind farm" should be checked.
3. Detailed information should be compiled on the following matters and substituted for data assumed in the NREL model.
    a. The supplies, equipment and materials that would be available and procured in the Highland County, VA, area – and the local *value added* for each product or service procured IN that area. Clearly, the total price paid by the "wind farm" developer or owner should not be used when estimating potential local economic benefits.
    b. The short term construction jobs and the few permanent jobs that will be available to and can be filled by existing residents of the Highland County area and, in the case of the few permanent jobs, the number that would be filled by permanent residents rather than visiting workers who live elsewhere.
    c. The additional costs that will be incurred locally – by governments, businesses and individuals – during and after construction because of the existence of the "wind farm."

Details of the Analysis that Demonstrates the NREL model's overestimation of local economic benefits -- Using the potential Highland County, VA, "wind farm"

As indicated above, different and more realistic "local share" assumptions have been used to determine the extent of the overestimation of local economic benefits and jobs that results from using NREL's assumptions. A 3-page attachment to this paper provides:

- On pages 1 and 2, the input assumptions – including:
  - All of the dollar cost numbers specified in the NREL model. (none of which were changed).
  - The "default" values for "local share" which are the assumptions specified by NREL (none of which were change).
  - Alternative, lower, "local share" assumptions which are more realistic than those developed by NREL.
- On page 3, the model outputs – derived from the two sets of input assumptions.

NOTE however, that the changes in assumptions for this demonstration are limited to the "Local Share" assumptions. Changes have NOT been made in the assumptions with respect to Permanent jobs – which seem to be overstated in the default assumptions. Therefore, the resulting calculations will still OVERSTATE potential local economic benefit and local jobs. Further, overstatements in the *direct* jobs and are likely to contribute to overstatement in the *indirect* and *induced* jobs and economic impacts.

The table below – which continues on to the next page -- shows the changes from the default "local share" assumptions used in the demonstration to produce a more realistic estimate of local job and economic benefits. The table also shows the rationale for using the lower percentage.

Identification of "Default" Assumptions that have been changed to provide more realistic estimates of local benefits			
Variable	Local Share		Rationale for Changing Assumption
	JEDI-WIM Default Assumption	More Realistic Assumption	
Construction Cost			
Material			
Construction (concrete, rebar, equip, roads and site prep)	90%	45%	Count only "value added" (e.g., cement, rebar, equip originate elsewhere)
Electrical (drop cable, wire)	100%	15%	Count only local "value added"
HV line extension	100%	15%	
Labor			
Foundation	100%	20%	Most workers during construction imported
Erection	75%	10%	Skills likely imported
Electrical	75%	10%	Skills required for turbines likely imported
Other Costs			
HV Sub/Interconnection	100%	20%	Little local content likely; some value added
Legal Services	100%	50%	Only small part likely provided locally
Site Certificate/Permitting	100%	50%	Only small part would be done locally
Wind Plant Annual Operating & Maintenance Costs			
Personnel			
Field Salaries	100%	50%	Apparently few of the small number of
Administrative	100%	50%	Employees needed for an operating "wind
Management	100%	50%	Farm" spend full time AT the "wind farm"

Identification of "Default" Assumptions that have been changed to provide more realistic estimates of local benefits Continued			
	Local Share		
Variable	JEDI-MIM Default Assumption	More Realistic Assumption	Rationale for Changing Assumption
Materials and Services			
Vehicles	100%	15%	Only local "value added" should be counted
Misc. Services	80%	15%	Only local "value added" should be counted
Fees, Permits, licenses	100%	50%	Only part of these costs is local.
Utilities	100%	20%	Only local "value added" should be counted
Fuel (motor vehicle gasoline)	100%	15%	Only local "value added" should be counted
Tools and Misc. Supplies	100%	15%	Only local "value added" should be counted
Financial Paramcters			
Individual Investors (% of total equity)	100%	10%	Important consideration is whether equity investors are local or absentee AND where their profits are spent.
Land Lease (total cost)	100%	10%	Even 10% is too high if landowners are absentee and the money is spent or invested elsewhere

Results from the Demonstration

The numbers shown in "boxes" on page 3 of the attachment show the significant differences in the results from the model by using more realistic assumptions in lieu of the default assumptions.

The following table summarizes the most significant reductions in estimated local economic benefit and jobs when more realistic assumptions are substituted for NREL's "default" assumptions.

Reductions in Local Economic Benefits and Jobs when Using More Realistic "Local Share" Assumptions			
	Using NREL Default Assumptions	**Using More Realistic Assumptions**	**Reduced Local Benefits**
Project Construction Costs Local Spending	$5,846,329	$1,864,084	Drop by $3,982,245
Direct Operating & Maintenance Costs (annual) Local Spending	$390,811	$172,465	Drop by $218,346 annually
Other Annual Costs Land leases	$136,400	$13,200*	Drop by $123,200 annually
Construction Period Jobs: Direct Indirect Induced Total	 47.9 31.3** 34.5** 113.7	 14.9 9.9** 11.1** 36.0	 Drop by about 33 jobs Drop by about 21 jobs Drop by about 23 jobs
Jobs During Operating Years: Direct Indirect Induced Total	 12.9*** 1.9*** 4.8*** 19.7	 5.6*** 0.8*** 2.5*** 8.9	 Drop by about 7 jobs Drop by about 1 job Drop by about 2 jobs

* The $13,200 is still too high if the landowners are absentee owners and/or if the income from land leases is spent or invested other than in Highland County.

** Any claims of jobs created "Indirectly" or "Induced" should be treated VERY skeptically because they are based on underlying assumptions about the make up and workings of the economy of Virginia at the state level which may have NO applicability to Highland County. As indicated earlier, specific information about the Highland County economy should be substituted in the NREL model before any credence is given to "indirect" or "induced" jobs.

*** All the numbers on jobs during operating years produced by NREL's model are highly suspect because the assumed number of jobs during operating years is higher than is demonstrated by actual "wind farm" experience – such as is documented by the Iowa Department of Natural Resources paper, "Top of Iowa Wind Farm Case Study."

Principal Conclusions

Clearly, the NREL JEDI-WIM model as it as been provided by NREL, in its "default mode" grossly overestimates potential local economic and job benefits from a potential "wind farm" in Highland County, Virginia, by over 200% during the short term construction period and 180% to 200% annually during continuing operation.

Also, the model is seriously deficient because it does not take into account significant costs that are incurred by governments, organizations and individuals when a "wind farm" is constructed – which cost may offset in part or completely the expected economic benefits.

The model would, similarly, overestimate local benefits and understate (or ignore) costs if used to analyze economic costs and benefits associated with other "wind farms."

Hopefully, NREL will correct the fundamental errors identified in this paper and begin using more realistic "local share" assumptions.

* * *

Author: The analysis underlying this paper and views expressed are provided in my role as a citizen, consumer and taxpayer and are not on behalf of any client or other interest. All the analysis and writing was entirely self-financed. I am semi-retired after spending more than 30 years on energy matters in the federal government and private sector. I now work without compensation to shed light on the adverse impacts of government and private policies, regulations, programs and projects that are *detrimental to the interests of consumers and taxpayers*. "Wind energy" meets this criterion, as does the NREL JEDI-WIM Model.

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Endnotes:

[1] DOE's government-owned, contractor-operated national "laboratories" undertake a variety of research, development and analytical activities. Virtually all of the activity is financed with tax dollars. Quite likely, the work in the "hard" sciences is objective, conducted in accordance with accepted scientific methods and engineering principles, and undergoes credible peer-review. Some of the national "laboratories," such as the National Renewable Energy "Laboratory" (NREL), also engage in analyses involving public policies, programs and regulations. Much of that work turns out not to be credibly objective, scientific or peer reviewed. Instead, these activities all too often appear biased and designed to promote a particular technology, policy, program, regulatory requirement, special interest, or perhaps even a personal philosophy. Such "analyses" often appear designed to support preconceived notions and conclusions. These "analyses" are often driven by assumptions that virtually assure that the desired conclusion is reached. As demonstrated in this paper, NREL's "JEDI-Wind Impact Model" is an example of a "laboratory" product that overstates benefits and understates or ignores costs -- in this case resulting in a faulty estimate of the potential local economic benefits of a "wind farm." In summary, the NREL model produces results that are highly biased.

[2] NREL release, http://www.nrel.gov/docs/fy04osti/35872.pdf. As of April 23, 2004, The JEDI model is also described at http://www.eere.energy.gov/windpoweringamerica/economics.html An article at that site provides a PowerPoint presentation on the model and indicates that a paper on the model will soon be available. The model and documentation were kindly provided to this analyst by NREL. The documentation uses the name "Wind Impact Model" or WIM.

[3] In addition to overestimating jobs that would be filled locally and, therefore, the compensation that would be paid to local residents, the model – in its calculation of indirect or induced effects – appears to assume that the taxes on income will flow to the state or locality. When workers are imported for temporary or intermittent work, revenue from any income tax that they pay generally will flow to the government(s) in the state or locality where they reside – not where they work temporarily.

[4] Iowa Department of Natural Resources, *Top of Iowa Wind Farm Case Study*, July 2003.
http://www.state.ia.us/dnr/energy/MAIN/PROGRAMS/WIND/topOfIowaWindFarm.html
http://www.state.ia.us/dnr/energy/MAIN/PROGRAMS/WIND/documents/topofiaWindFarmCaseStudy.pdf

[5] "Value added is defined by one economics textbook as "The difference between the value of goods produced and the cost of materials and supplies used in producing them. In a $1 loaf of bread embodying $0.60 worth of wheat and other materials, the valued added is $0.40. Value added consists of the wages, interest and profit components added to the output by a firm or industry. Samuelson, Paul A. and William D. Nordhaus, Economics, 14th Edition, p. 748.

[6] Unfortunately, this is a common mistake made in "input-output models" that purport to calculate state or local economic benefits.

[7] The total construction period reported in the *Top of Iowa Wind Farm Case Study* was less than 6 months.

[8] 131,400,000 kWh of electricity may sound like a lot but it is not. That amount of electricity is equal to 18/100 of 1% of the electricity produced in Virginia during 2002 (US Energy Information Administration data).

April 28, 2004

Response for Document 00021

00021-001: The commentor suggests that the analysis undertaken to estimate the economic impacts of wind energy development is deficient because (1) the impacts of these developments on individual utility generation and transmission systems are not explicitly considered in the analysis, and (2) the models used in the analysis are flawed.

As is stated in the Executive Summary (page ES-1) and in Chapter 1 of the PEIS, the purpose of the PEIS is "to assess the environmental, social, and economic impacts of wind energy development on BLM-administered land." A cost-benefit analysis would likely have considered a range of factors relevant to the development of wind energy compared with other forms of electricity generation. These factors would include impacts on individual utility generation and transmission systems, specifically the impacts on generation capacity and reliability considerations, air quality, and ratepayer and taxpayer impacts. Although the analysis undertaken for the PEIS used a wind development scenario that takes into account some of these factors, in particular capital costs, fossil fuel prices, and transmission systems issues, the analysis is limited specifically to those environmental and economic impacts that result from wind energy developments on BLM-administered land. The analysis of impacts on utility systems, and environmental and economic impacts that occur beyond BLM- administered land is therefore beyond the scope of the analysis undertaken for the PEIS.

The amount of predicted wind capacity in each state was calculated by the National Renewable Energy Laboratory (NREL) by using the Wind Industry (WinDs) Model, which uses the best available data and modeling methodology for this purpose. The calculations are based on a maximum market capacity for wind development subject to environmental and other planning constraints on BLM-administered lands. Data generated by NREL in the WinDs Model were used as a basis for estimating the impacts of wind development over the time period 2005 to 2025. The WinDs data show the timing of maximum potential wind development for each of the 11 states with BLM-administered land, given a series of assumptions relating to location, capital costs, fossil fuel prices, and transmission systems issues. A large proportion of the data used in the model comes from federal government sources, in particular the U.S. Department of Energy's Annual Energy Outlook, which forecasts fossil energy prices over the time period used in the PEIS. A full description of the WinDs model appears in Appendix B of the PEIS.

The purpose of the modeling efforts in this PEIS is to provide a general framework of possible development over the next 20 years, in order to assess the impacts of implementing a Wind Energy Development Program for BLM-administered lands. The BLM recognizes that many factors can affect the accuracy of the projections, and, as discussed in Appendix B, a variety of

factors will determine actual development levels. However, the maximum potential development scenario (MPDS) and WinDS models employed in the PEIS are adequate for forecasting potential development levels over such a large geographic area and long, projected time frame. Greater accuracy in these forecasts would not likely result in changes to the requirements of the Wind Energy Development Program; that is, the proposed policies and BMPs would not be changed at this time. The program requires that the BLM employ adaptive management strategies to the oversight of wind energy development on BLM-administered lands. The BLM will monitor the level of wind energy development into the future as well as the effectiveness of its policies and BMPs. If necessary, adjustments to the programmatic requirements will be made.

Although the Jobs and Economic Development Impact (JEDI) Model developed by NREL (2004e) can be used for local and state-level analyses of wind projects, it was not used to estimate these impacts in the PEIS. As discussed in Section 13.1, representative data were taken from the JEDI model and other sources to support the PEIS economic impact calculations. Specifically, data describing the breakdown of specific cost elements for a generic wind project were taken from the JEDI model. Beyond the use of these cost data, the estimation of impacts of wind development for each of the years and states was undertaken independently of the JEDI model.

Regarding overestimation of emission reduction impacts, we agree that each kWh of electricity produced by a wind energy production facility might not offset the emissions from an equal number of KWh produced by a coal-fired generating unit. Text acknowledging that offsets might be less than one-to-one has been added to Section 6.4.2.2, Air Quality, and the discussion expanded to included the lower offsets from natural gas combined-cycle generation.

Regarding the validity of property value studies, two studies that deal specifically with the impact of wind developments on property values had been undertaken by the time the PEIS was prepared, both showing that no negative impacts occur. One study was published by ECONorthwest (2002) and the other was published by Sterzinger et al. (2003). Both studies provide a comprehensive analysis of the problem, one through a survey of county property assessors, and the other through the analysis of housing sale prices. Although additional studies may provide more insight on the impact of wind developments on property values, numerous studies that consider the impact of energy (power generation and transmission) and waste (nuclear and hazardous waste and landfills) facilities on property values are also useful in this context. The majority of these studies contend that while proximity to potentially objectionable facilities can create significant opposition in local communities, the overall economic impact of these facilities is not negative. Often opposition does not translate into economic impact, either on property values or on the local economy, or any negative impact that does occur is often offset by

economic benefits of a particular facility into the local community in terms of employment, income, and local tax revenues. Positive impacts of this nature, in turn, benefit local property values by making the local community a more desirable place to live and work.

Regarding decommissioning risk and restoration costs, the BLM will require financial bonds for all wind energy development projects on BLM-administered lands to ensure compliance with the terms and conditions of the ROW authorization and the requirements of applicable regulatory requirements, including reclamation costs. The amount of the required bond will be determined during the ROW authorization process on the basis of site- specific and project-specific factors. The BLM may also require financial bonds for site monitoring and testing authorizations. A requirement regarding the establishment of bonds has been added to the proposed policies (see Section 2.2.3.1).

Regarding safety standards for operation of wind turbines in cold climates, as required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Health and safety issues, such as the need for specific safety standards for wind turbine operation in cold climates, will be addressed at the site-specific level. Section 2.2.3.2.2 describes the proposed BMPs that would occur during preparation of the POD, and in this section, the first proposed BMP under the Health and Safety subsection states that a safety assessment shall be conducted.

Document 00022

Montana Department of
ENVIRONMENTAL QUALITY
Judy Martz, Governor
P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • www.deq.state.mt.us

December 9, 2004

BLM Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

RE: Comments on Draft Wind Energy Development Programmatic EIS

The Montana Department of Environmental Quality (DEQ) files these comments on the Bureau of Land Management's (BLM) recently released Draft Wind Energy Development Programmatic EIS. Trying to describe the impacts of wind farm proposals in a programmatic EIS that covers BLM lands in the western US is a tall order, and we have to applaud BLM and its consultants' efforts in the recently released draft. The description of the sequence of activities during construction and operation is very informative and the mitigation measures are clearly tied to each step of the development process.

The programmatic EIS generally describes the types of impacts that should be examined in more detailed site-specific environmental assessments (EAs) or environmental impact statements (EIS). These site-specific EAs or EISs tiered to the programmatic EIS would provide the public the opportunity to review and comment on interdisciplinary analyses and trade-offs that could not possibly be addressed in a programmatic document. Preparing a single site specific EA or EIS allows decision makers and the public the opportunity to review and comment on all aspects of a project at once. The alternative would be a piecemeal process where several resource specific analyses and reports are produced but results from individual resource areas are not integrated. The site-specific EA or EIS is the better process because it fully informs and discloses impacts and tradeoffs between resource areas that decision makers need. 22-1

Where site-specific follow-up studies are necessary, standard protocols should be required of or by BLM. This approach helps ensure that there is some predictability and consistency in decisions made on projects throughout the West being examined by different interdisciplinary teams. Standard protocols for conducting impact studies should be identified while still recognizing that protocols for some resource areas are evolving. Where protocols are still evolving, interim protocols should be identified and schedules presented for review and updating the study protocol. For example, the USFWS has identified an interim baseline study protocol for conducting avian studies that should be adopted.

Because the scope of the programmatic EIS only addresses BLM lands, it does not adequately address off-site impacts caused by new transmission lines that may be required for wind farms. If the programmatic EIS is not expanded, it should identify a series of procedural steps to be taken to integrate analysis of off-site impacts into the decision making process to ensure that all secondary and cumulative impacts are identified and considered.

The programmatic EIS described the general types of impacts that occur on BLM lands but did not adequately describe the cumulative impacts from development on adjacent private owned, state owned, tribal owned, or non-BLM federal lands. Where new transmission lines may be required and could extend off a proposed wind farm site and onto adjoining public, private, or tribal lands, the programmatic EIS should describe the process and scope of additional environmental analyses in an EA or EIS that would be required by BLM or other agencies on these off-project lands. Would BLM be responsible for the analyses or would another agency such as the Western Area Power Administration, Bonneville Power Administration, Federal Energy Regulatory Commission, state siting agency or local government be responsible for analyses? Would this impact and siting analysis be conducted concurrently with the preparation of the site specific EA or EIS or would this occur in subsequent fragmented analyses that could lead to piecemeal decision-making on associated development? 22-2

DEQ believes there is a case to be made for joint review of associated development such as transmission lines on non-BLM lands at the time the site specific EA or EIS described in the programmatic EIS is prepared for BLM lands. If this is not possible, then BLM's decision-making process should allow results of state and local planning processes to be incorporated into BLM's record of decision. 22-3

The Wind Energy EIS does a good, thorough job at discussing the societal costs of the proposed action. As the EIS explains, expedited wind development on BLM lands may lead to adverse impacts on wildlife, soil quality, aesthetics, noise, and other land uses. One additional societal cost that should be mentioned is the challenge that transmission grid operators currently face in integrating wind-generated electricity into their regional transmission grid. Expediting wind energy on BLM lands would increase this particular challenge for the operators to the extent that more wind power comes onto the system as a result of the proposed action. 22-4

The EIS also discusses societal benefits from the proposed action, such as the direct and secondary economic development that would occur in areas near the wind turbines. There are some societal benefits from accelerating wind development on BLM land, however, that are not discussed in the EIS. For example, the EIS mentions that there are economic benefits from energy generation that produces few or no air emissions (as compared to coal and natural gas generation). It does not, however, state clearly what those economic benefits are. Benefits from lower air emissions include increased human health, lower levels of damage to agricultural crops and buildings, higher levels of visibility, higher quality outdoor recreation, and a higher level of ecological quality (including the slowing of global climate change). These benefits from expedited wind energy should be mentioned, even if their magnitude from this particular project is small. 22-5

Another significant societal benefit of expediting wind energy on BLM lands is the advantage of renewable energy over non-renewable energy. Renewable wind energy does not deplete the Earth's resources for its operation, and is not affected by fuel prices, since the wind itself is free. These characteristics of wind energy may create benefits to energy customers of greater energy security and more stable prices. Another benefit that should be mentioned from the proposed action is advancing the goal of U.S. energy self-sufficiency. Such benefits deserve to be mentioned, if only briefly. 22-6

Attached you will find more detailed comments. Thank you for the opportunity to comment on BLM's programmatic EIS for development of wind energy resources in the Western US. Please contact Tom Ring (406) 444-6785 if you have any questions.

Sincerely,

Warren D. McCullough

Warren D. McCullough
Chief, Environmental Management Bureau

Page by page comments:

Page 2-28 and page 6-7
In Montana another wind project is proposed in Valley County. It is being proposed by Wind Hunter, LLC and is for an eventual build out to 500 MW on state, private, and BLM lands. At full build out much of this generation would be located on BLM land and therefore you may wish to revisit the information presented in table 5.13-1. contact Scott Powers with BLM in Billings, Montana for more information. 22-7

Page 3-13 under wind energy project siting. Montana also has a siting statute that pertains to transmission lines. 22-8

Page 3-18, section 3.3.3
Conclusions from recent reports including the following deserve mention:

Brain, Joseph D., Robert Kavet, David L. McCormick, Charles Poole, Lewis B. Silverman, Thomas J. Smith, Peter A. Valberg, R. A. VanEtten, and James C. Weaver 2003. Childhood Leukenia: Electric and Magnetic Fields as Possible Risk factors. Environmental Health Perspectives vol. 111, number 7, June 2003.
Ahlbom, A, N Day et al 2000: A pooled analysis of magnetic fields and childhood leukemia, Brit J Cancer 83:692-698, 2000 22-9

Also studies, conducted by research teams led by Dr. Geraldine Lee at the California Department of Health Services (CDHS) and Dr. De-Kun Li at the Kaiser Foundation Research Institute, found an increased risk of miscarriage among California women who were exposed to high peak magnetic fields (maximum exposure above 16 milligauss during the measurement day) in early pregnancy.

Page 3-26 section 3.4.4
Montana has regulations in place to reduce impacts to surface waters from construction disturbance. 22-10

Page 5-5 section 5.1.3
In addition to the mitigation measures that would be used on site during and following construction, the amount of time to stabilize disturbed sites would depend on environmental conditions. Arid sites with soil limitations could take much longer to stabilize than moister sites with no limitations. At any site prolonged drought can delay or inhibit reclamation success. 22-11

Page 5-24 paragraph 4.
Is the sound power level of 100 to 104 dB (A) for small turbines in the 1 to 1.4 kW range or for larger turbines in the 1 to 1.5 MW range? If this is not a typographical error then sound levels from the current commercial scale turbines should be presented. 22-12

Page 5.5.3.3 transmission line noise. 22-13

Although the remote location of most potential wind developments on BLM lands would result on low impacts from corona noise, transmission lines connecting wind developments to the grid could easily extend off BLM lands into more populated areas where corona induced noise could be an issue. 22-13 (cont.)

Also note that in Montana a recently proposed wind development on state, private, and BLM land would require a 230 kV line about 30-35 miles in length. Thus the assumption in the first paragraph should be revised.

Page 5-82 under section 5.9.5.3.5
Biological controls could also be used as appropriate to help control weeds. 22-14

5.9.5.4.3 First bullet
There is a limit to the height of vegetation that should be allowed to grow under a transmission line. If vegetation becomes too tall, the transmission line can arc possibly causing a fire and line outage. 22-15

Second bullet
If native species are used in site reclamation/stabilization it is likely that one wildlife species or another would use the available habitat. Managers should weigh the benefits of reduced raptor foraging with the costs of potential introduction of non-native vegetation or the increased reclamation costs later of having to deal with a gravel surface. 22-16

Page 5-86 section 5.10.2
Power lines leading off-site to a grid connection may cross croplands. Construction of a transmission line in cropland may interfere with crop dusting operations and increase the risk of collisions. 22-17

Responses for Document 00022

00022-001: The Wind Energy Development Program proposed policies and BMPs identify those issues that need to be addressed for each individual wind energy project and specify that site-specific NEPA analyses will be conducted for each project. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. At this time, the BLM does not intend to establish uniform protocols for conducting studies at individual sites. However, the application of adaptive management strategies, as required by the proposed program, will ensure that programmatic policies and BMPs be revised as new data become available. This would include the incorporation of new analytical protocols and methods, if appropriate.

00022-002: Section 6.4.3 acknowledges that wind energy development on BLM-administered lands may require the construction of new transmission lines. Such construction would constitute a separate but related activity and will require interagency cooperation and multidisciplinary environmental reviews. The designation of new transmission corridors on BLM-administered lands will occur as a result of interagency consultations, not as a result of a unilateral decision by the BLM. Any such designations would be evaluated through either regional or local land use planning efforts, with opportunities for full public involvement. The potential impacts of transmission system interconnects or expansions that would be required by an individual wind energy project on BLM-administered lands will be assessed as part of the site-specific analyses, with input from other federal, state, and local agencies, and interested stakeholders.

New text has been added to Section 6.4.3 to describe the existing and proposed rules and regulations governing wind project grid interconnections and transmission system upgrades. These regulations will be applicable to wind energy development projects on BLM-administered lands. In addition, under Section 2.2.3.1, Proposed Policies, the 9th bullet addressing required NEPA analyses has been reworded to define how NEPA analyses of proposed wind energy development on adjacent private or state-owned lands will be conducted.

00022-003: The BLM agrees that the review of new transmission line construction will be a multi-agency process. In part, because of this, it is not possible to fully assess impacts associated with transmission line construction or expansion in the PEIS. As discussed in Section 6.4.3, an existing protocol ensures that issues associated with transmission lines will be addressed at the site-specific level. New text has been added to Section 6.4.3 to describe the existing and proposed rules and regulations governing wind project grid interconnections and transmission system upgrades. These regulations will be applicable to wind energy development projects on BLM-administered lands.

00022-004: The BLM recognizes that power grid operators will need to be prepared to accommodate power fluctuations that may occur in operating the energy flow because of fluctuating wind energy production. New text has been added to Section 6.4.3 to describe the existing and proposed rules and regulations governing wind project grid interconnections and transmission system upgrades. These regulations will be applicable to wind energy development projects on BLM-administered lands. Detailed discussion regarding how power grid operators would have to change their mode of operation is beyond the scope of the PEIS.

00022-005: As is stated in the Executive Summary (page ES-1) and in Chapter 1 of the PEIS, the purpose of the PEIS is "to assess the environmental, social, and economic impacts of wind energy development on BLM-administered land." A cost-benefit analysis of wind energy development would likely have included a regional analysis of the comparative economic and environmental costs of wind energy development compared with other forms of electricity generation, and conservation measures. Such an analysis would likely also have included impacts of wind development on fossil fuel consumption, land and water resources, emissions from conventional power plants, and the impact on greenhouse gases. Although the analysis undertaken for the PEIS used a wind development scenario that takes into account some of these factors, in particular power generation capital costs, fossil fuel prices, and transmission systems issues, the analysis is limited specifically to those environmental and economic impacts that would result from wind energy developments on BLM-administered land. The analysis of impacts on comparative power generation costs, and environmental and economic impacts that emanate from other forms of electricity generation are beyond the scope of the analysis undertaken for the PEIS.

00022-006: As is stated in the Executive Summary (page ES-1) and in Chapter 1 of the PEIS, the purpose of the PEIS is "to assess the environmental, social, and economic impacts of wind energy development on BLM-administered land." A cost-benefit analysis of wind energy development would likely have included a regional analysis of the comparative economic and environmental costs of wind energy development compared with other forms of electricity generation, and conservation measures. Such an analysis would likely also have included impacts of wind development on fossil fuel consumption, land and water resources, emissions from conventional power plants, and the impact on greenhouse gases. Although the analysis undertaken for the PEIS used a wind development scenario that takes into account some of these factors, in particular power generation capital costs, fossil fuel prices, and transmission systems issues, the analysis is limited specifically to those environmental and economic impacts that would result from wind energy developments on BLM-administered land. The analysis of impacts on comparative power generation costs, and environmental and economic impacts that emanate from

other forms of electricity generation are beyond the scope of the analysis undertaken for the PEIS.

00022-007: The limited wind energy development alternative considers additional wind energy development on BLM- administered land in areas where it currently exists, will be under review, or has been approved for development at the time the ROD for the PEIS is established. When the Draft PEIS was prepared, it was determined that only six locations were likely to meet these criteria by the time the ROD will be published (anticipated in July 2005). Although applications for additional ROW authorizations for both site monitoring and testing and commercial development may have been submitted to the BLM or may be under consideration by developers, the scope of the limited wind energy development alternative will not be expanded. Including additional projects would not substantively alter the conclusions of the PEIS regarding the alternatives.

00022-008: The Montana siting statute, Major Facility Siting (MCA 75-20-101 et seq.), pertaining to transmission lines is listed in Table E-1, Wind Energy Project Siting, in Appendix E of the PEIS. Montana is listed under the "Wind energy project siting" heading as having equivalent environmental policy acts. No text change has been made to the document in response to your comment.

00022-009: Text was revised by including the recent review by Brain et al. (2003). While there are numerous additional studies that could also be cited, representative articles and reports were used to summarize the current state of the science regarding exposures to extremely low frequency electric and magnetic fields.

00022-010: Appendix E lists the Montana Water Quality Act (MCA 75-5-101 et seq.), which would govern impacts to surface waters from pollutants from construction disturbances. See Table E-4 in Appendix E of the PEIS for similar controls at the federal level and in other states within the study area.

00022-011: The text has been revised for clarification.

00022-012: There was a typographical error. The suggested editorial change has been made.

00022-013: The text has been revised in response to your comment.

00022-014: Biological control of noxious weeds is much less common than the use of chemical or mechanical control methods. The specific approaches that will be used to help control noxious weeds will be developed on a project-by-project basis with input from other federal, state, and local agencies, and interested stakeholders.

00022-015: Any vegetation planted within transmission line corridors would not be allowed to reach a height sufficient to interact with overhead lines. This would be

accomplished through the planting of vegetation that is of sufficient height to discourage foraging by raptors yet short enough so as to not to interact with the overhead lines (e.g., shrub species), and/or by controlling vegetation height through periodic mowing, as is commonly practiced in transmission line corridors. No text change has been made to the document in response to your comment.

00022-016: The design of a site reclamation plan and the selection of reclamation methods and approaches will be conducted on a site-by-site basis, with input from other federal, state, and local agencies, and interested stakeholders. Such site-specific analyses are required by the policies and BMPs of the Wind Energy Development Program and will be required for all wind energy projects proposed for BLM-administered lands. No text change has been made to the document in response to your comment.

00022-017: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. These analyses will be conducted in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Consideration will be given to surrounding land use issues as well as to issues related to the construction of new transmission lines. Concerns about potential impacts to crop-dusting operations will be addressed as appropriate.

Document 00023

Resource Advisory Council
Bureau of Land Management
Boise District
3948 Development Avenue
Boise, ID 83709

December 9, 2004

Konstance L. Wescott
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

Re: BLM Wind Energy Draft Programmatic EIS

Dear Ms. Wescott:

Thank you for the opportunity to comment about the Draft Programmatic Environmental Impact Statement (DPEIS) on Wind Energy Development on BLM administered lands in the Western United States. Please consider the following comments about the draft Wind Energy PEIS.

1) In Idaho, BLM administers millions of acres. Four proposed project areas cover approximately 21,000 acres and of that, only 9,100 will be considered for potential infrastructure development under this PEIS (Total Economically Developable Land). We understand that only areas rated for wind at a 5, 6, or 7 will be considered, the area must be accessible, and have transmission lines, among other criteria. As site-specific projects proceed through the EA or EIS process, we hope staff will continue to work closely with the tribes, public and other interested parties to determine the best approach for exploration and development of the sites. We also hope that agency staff did not eliminate potential sites prematurely or include sites with significant resource or Tribal concerns. In conversations with BLM staff and others to date it seems that they have done a thorough job in determining the locations for exploration. 23-1
2) A broad economic analysis was completed on lands designated as "Total Economically Developable Land" (section 5.13: pp 5-100 through 5-107). Resulting economic impacts on employment, sales, income and taxes are presented at the state level. Staff and developers should consider these results within the context of the broad assumptions on construction and operation, along with projected trends in energy demand through 2025. We encourage BLM staff and developers to include site-specific economic analysis as these potential projects come through the EA process and that this economic information be a critical part of the decision process on individual projects. 23-2

3) Though broad in nature and covering 11 western states, the guidelines set forth in this Wind Energy Draft PEIS will assist land managers and developers as they proceed. Since this is a relatively new endeavor for the BLM there are a lot of "unknowns". We request that national and local BLM offices allow flexibility for developers and land managers on individual projects based on local information, needs, and environmental concerns as they arise. This will also help keep costs down and exploration moving. 23-3

4) Construction Effects on Wildlife –
   a) Table 5.9.2.2 (page 5-43) indicates that the interference with behavioral activities caused by construction will be short term. However, some studies indicate that interference with behavioral activities such as the use of leks for breeding would result in long-term avoidance of traditional use areas and limit reproductive activities. In some locations transmission lines fragment the population and birds avoid the area. 23-4

5) Mitigation –
   a) The cost for development should include on-site improvements to offset the impacts created directly by the project. Mitigation measures could include road improvements, habitat enhancement, or recreation facility improvements. However, everybody will need to work together to strike a delicate balance between addressing the direct impacts while not making production costs prohibitive for development or to drive cost so high that it is an expensive or unaffordable energy source. Staff and developers should work with permittees and other interested parties at the beginning of the process, and continue this cooperation, consultation, and coordination throughout the life of the project. These same individuals should catalog possible mitigation projects or improvements (and costs) at the beginning of the process so the information can be included as the project proceeds through hearings. For example, if the proposed site is located on or near a high use recreation area, improvements can include placement of a bathroom, designated improved trails and a parking area. In addition to offsetting the impact of the towers, the site will be improved so the public can park in marked areas, recreate on groomed, maintained trails and utilize a bathroom rather than partaking in their chosen recreation activity and creating more land use problems. All mitigation should include an education component about the alternative energy source as well as, for example about how to enjoy their recreation activity responsibly (including a comprehensive map) or about wildlife and/or sensitive species located in or near specific project sites. 23-5
   b) With regard to "Compatibility of a Wind Energy Development Project and Gallinaceous Birds" (Section 5.9.3.2 Operational Effects on Wildlife), it should be recognized and stated that it may be very difficult to mitigate the scale of habitat fragmentation and surface disturbance on high quality sage grouse habitat caused by a wind energy development project (transmission lines, turbines, roads, other structures, and activities). 23-6
   c) Regarding page 5-37 and 5-41, habitat fragmentation and surface disturbance caused by a wind energy development project may cause sage grouse to abandon the project area, and impacts may reach beyond the boundaries of the project depending on the needs, behavior, and migration patterns of a local population. 23-7
   d) The discussion on "Compatibility of a Wind Energy Development Project and Gallinaceous Birds" should also mention "Mitigation cannot always replace the 23-8

quality or location of crucial habitat" (National Sage-Grouse Habitat Conservation Strategy, November 16, 2004). Large patches of high quality sagebrush habitats should be maintained, with emphasis on patches occupied by sage grouse. As such, infrastructure for wind energy projects should not be located in areas where there would be conflicts with habitat that is critical for sage grouse. 23-8 (cont.)

6) Monitoring - We encourage the BLM to obtain studies of existing sites, monitor test sites in Idaho and ultimately the projects to obtain site-specific information about on-the-ground impacts of wind energy production. Too often, public agencies spend a lot of time trying to answer "what if" questions as projects proceed through the process. Time and money can be saved if staff can present information that has been validated as questions arise. Monitoring needs to be incorporated at the beginning of the process, continue throughout the life of the project, and possibly even continue for a time after the project has reached completion. Long-term monitoring is essential in collecting accurate trend data and other information that can be used for future project consideration. Long-term monitoring also offers reference for site-specific information and trend data for staff, developers, and interested parties to review for reference, education, and management guidance. Sufficient funding for long-term monitoring is critical to the success for this and other possible alternative energy projects. 23-9
7) Rent/Royalties – We understand that the landowner will receive "rent" for the site based on the number of megawatts produced by each tower. Where public lands under the management of the BLM are in use, we recommend that all of the rent/royalties be paid directly to the local BLM office to be spent on the site to help with long-term education, maintenance, operating expenses and monitoring in the direct vicinity of the project. Since this is only one potential source to assist with these expenses, we strongly encourage the BLM to request continued sufficient funding for long-term monitoring and education, operation and maintenance for all project areas. 23-10

On behalf of the BLM LSRD-RAC, I thank you for considering these comments. We appreciate the BLM's efforts to explore for places to site alternative viable renewable energy sources on public lands.

Sincerely,

/s/

Don K. Weilmunster
Chairman, Boise District RAC

Cc: Kathleen Clarke, Director, BLM
K Lynn Bennett, Idaho State Director, BLM
Jack Peterson, Idaho State Office, BLM
Glen Secrist, Boise District –DM
MJ Byrne, Boise District RAC Coordination

Responses for Document 00023

00023-001: Thank you for your comment. To clarify, lands with wind resources of Class 3 and 4 were also included in the MPDS and estimates of total economically developable land.

00023-002: As required by the 9th bullet under Section 2.2.3.1, Proposed Policies, additional NEPA analysis will be conducted on individual projects, the scope of which would include site-specific economic analyses.

00023-003: We agree. Flexibility and consideration of local information, needs, and concerns are built into the proposed Wind Energy Development Program and will be addressed in detail at the site-specific level.

00023-004: The text in Table 5.9.2-2 has been revised to indicate that effects may be short term for some species, but long term for other species that may completely abandon the disturbed habitats and surrounding areas.

00023-005: The 3rd bullet in Section 2.2.3.1, Proposed Policies, requires entities seeking to develop a wind energy project on BLM-administered lands to consult with appropriate federal, state, and local agencies as early in the planning process as appropriate to ensure that all potential construction, operations, and decommissioning issues and concerns are identified and adequately addressed. In addition, the 9th bullet in this section ensures that site- specific NEPA analyses will be conducted for each project with opportunities for public involvement. These requirements will ensure that appropriate mitigation measures are identified.

00023-006: Implementation at the project-specific level of the Wind Energy Development Program proposed policies and BMPs identified in the PEIS that address the preconstruction surveys, siting, monitoring, construction, operation, and decommissioning is expected to avoid impacts to high-quality sage-grouse habitat, and minimize or avoid habitat fragmentation to the extent practicable.

00023-007: The text in the PEIS states that the significance of the effects of habitat disturbance (including fragmentation) will depend on the habitats and species present at the wind energy development site. The Wind Energy Development Program proposed policies and BMPs presented in Section 2.2.3 identify a number of requirements and restrictions for avoiding or minimizing impacts (including impacts from habitat fragmentation) to wildlife during the siting, design, construction, operation, and decommissioning of wind energy projects. The application of the policies and BMPs will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. In addition, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated, where applicable, into any proposed wind energy project on BLM-administered

lands. The application of the policies, BMPs, and sage-grouse guidance will occur at the site-specific level and is beyond the scope of the PEIS.

00023-008: Exclusion of specific areas from wind energy development will be determined at the project level employing site- specific analyses. As required by the Wind Energy Development Program proposed policies and BMPs, site- specific analyses will be conducted for any proposed wind energy development project on BLM-administered lands. The scope and approach for the site-specific analyses and the identification of specific exclusion areas will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. In addition, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated, as applicable, into the local site-specific analyses and identification of exclusion areas. The identification of site-specific exclusion areas is beyond the scope of this PEIS.

00023-009: Monitoring will be a key part of the site-specific analyses required by the proposed Wind Energy Development Program policies and the BMPs. BMPS included in Chapter 2 call for monitoring to establish initial baselines as well as monitoring throughout the course of the project to evaluate the effectiveness of mitigative actions taken before and during the project's life. Such adaptive monitoring will ensure incorporation of all relevant data in real time. Although these data will be site-specific, much of the data are transferable and may also have some value for developers contemplating wind farms in other locations. Developers will be expected to incorporate all relevant experiences and data into their Plans for Development for future wind farms and, in some cases, make modifications to their technological approach on the basis of accumulated data and experiences.

00023-010: Your comment addresses issues that are beyond the scope of the PEIS, the mission and responsibilities of the BLM, and/or the defined programmatic scope of the proposed Wind Energy Development Program. We appreciate your input and participation in the public review process.

Document 00024

SAVE OUR SOUND
alliance to protect nantucket sound

December 10, 2004

Mr. Ray Brady
BLM Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Ave.
Argonne, IL 60439

Re: Draft Programmatic Environmental Impact Statement – Wind Energy Development on BLM-Administered lands in the Western United States

Dear Mr. Brady:

I am writing on behalf of the Alliance to Protect Nantucket Sound (Alliance) regarding the draft Programmatic Environmental Impact Statement (PEIS) on Wind Energy Development on BLM-Administered Lands in the Western United States. The Alliance has been deeply involved in the United States Army Corps of Engineers' (Corps) review of the nation's first proposed offshore wind energy plant – the Cape Wind project – which has been proposed for Nantucket Sound. Unlike wind energy development on BLM lands, Congress has not authorized the development of offshore wind, and no federal program exists to ensure that offshore natural resources are developed in a sensible, fair, and environmentally sound manner. The Corps has nonetheless assumed jurisdiction over the proposed development and is in the process of conducting its NEPA review, despite the lack of authority, a federal program, an adequate environmental review framework, a competitive bidding process, a mechanism for obtaining compensation to the United States, a mandatory decommissioning requirement and boundary system, a cooperative relationship with affected states and local governments, and numerous other deficiencies. The mark of a successful program for promoting environmentally-sound energy development on federal land is measured against these standards. To the extent the BLM PEIS includes some of these key elements, it is a marked improvement over the offshore program administered by the Corps.

From very early in the process, the Alliance has urged the Corps to develop a PEIS that evaluates the environmental, social, and economic impacts of offshore wind

24-1

396 Main Street, Hyannis, Massachusetts 02601 · 508-775-9767 · Fax 508-775-9725

energy plants, to determine appropriate siting parameters and to establish a national management approach. In short, we have recommended that the Corps follow for offshore wind the same basic approach the BLM is following for onshore wind energy development. Wind energy will play an important role in the renewable energy portfolio for the nation, but only if it is properly managed so as to minimize impacts and protect the nation's natural resources. To do so, it is necessary first to evaluate the impacts of wind energy development on a region-wide or national basis. Through the PEIS, BLM has taken the first necessary steps to do that; unfortunately, the Corps has not. Indeed, as the Corps itself admits, it is not the appropriate agency to manage this program, yet it is continuing to do so despite glaring deficiencies.

During the review of the Cape Wind project, a few groups have argued that the Corps should review the project application, despite the lack of any federal authorization, so that wind energy development is accelerated. Your PEIS confirms what the Alliance has repeatedly argued – i.e, that implementation of a region-wide Wind Energy Development Program would likely result in shorter time lines and reduced costs for wind energy projects. In fact, as you conclude, a Wind Energy Development Program, if properly implemented, should facilitate development and ensure consistency in the review of onshore wind energy applications. Such a plan would also identify specific lands on which wind energy development would not be allowed, and would establish environmentally sound and economically feasible mechanisms to protect and enhance natural and cultural resources. 24-1 (cont.)

Despite the obvious value of developing a national or region-wide policy for siting and mitigation of environmental effects on federally-administered public lands, the Corps has steadfastly refused to follow such an approach. The review of the first proposed offshore facility has consequently suffered from inadequate data and lack of context for its review. The Army Corps would benefit significantly from undertaking an approach similar to this one by the BLM. We offer the following comments regarding this PEIS that we believe would assist in strengthening this document.

Specific comments on the PEIS

Purpose and Need and Alternatives

The PEIS does not clearly explain the rationale behind limiting its review to wind energy only. As currently drafted, the PEIS considers three main policy approaches: 1) a program to facilitate further wind energy development (Wind Energy Development); 2) limit further wind energy development; and 3) no-action alternative 24-2

of continuing the current interim wind energy development policy under which NEPA and related analyses are limited to a project-by-project basis, without the benefit of programmatic policies on siting criteria, mitigation and other parameters.

Other renewable technologies, however, are available and should be considered in this PEIS. It is clear that the western states possess significant wind energy potential. Indeed, it is estimated that the wind energy resources of the western states could supply more than five times the region's current electricity consumption. The Purpose and Need section apparently relies on the National Energy Policy as the motivating factor or justification for the PEIS. The National Energy Policy's recommendation, however, is for the Departments of Interior, Energy, Agriculture, and Defense to work together to increase renewable energy production, not merely wind energy. The PEIS should address other technologies that are feasible, such as solar, geothermal, hydroelectric, etc. for comparison purposes.

Further, it is important to provide context for the review of alternatives. For that purpose, it is necessary to look at conventional technologies as well. These technologies are obviously reasonable alternatives to renewable technologies. The impacts of such technologies differ. As such, they need to be considered in the NEPA review so that agencies are able to comply with NEPA's mandate to conduct environmentally-informed decisionmaking by understanding the relative benefits and adverse impacts of the technology. If other documents are to "tier" off of this PEIS, it is necessary to discuss these technologies.

24-2 (cont.)

Because the PEIS fails to consider other technologies, there is insufficient information available to determine whether any one of the three approaches reviewed is the best management approach to be adopted. While the Alliance has consistently advocated the development of criteria and standards that would apply on a region or nation-wide basis to all offshore wind energy proposals, it is necessary to first determine whether the social, economic and environmental impacts associated with wind energy do not exceed those of other technologies or whether in certain cases, other approaches are more environmentally, socially or economically sound. Whether facilitating the development of wind energy is a good management approach depends on resolution of these questions.

Impacts on Avian Resources

In addition, further research is needed on the impacts of onshore wind facilities on wildlife and other ecological resources. Like any other use of federal lands, wind energy development is subject to thorough, site-specific analysis and public participation in the planning process as mandated by NEPA, Federal Land Policy Management Act, Migratory Bird Treaty Act (MBTA), Endangered Species Act, and other federal law. The PEIS does not adequately consider these authorities, particularly with respect to the MBTA. The PEIS gives short shrift to the potential conflict between the MBTA and the development of wind energy. This is an area of significant controversy and how this issue can be reconciled with a policy of facilitating wind energy should be addressed more thoroughly. 24-3

More robust development of sections dealing with avian impacts is necessary. There have been a number of instances where impacts on birds have been quite significant and on a cumulative basis, the impacts can be devastating. Where a project is sited and the type of turbines used are both critical elements for determining the level of anticipated bird impacts. The PEIS does not satisfactorily address these issues. Multi-year studies using remote sensing equipment are necessary for determining the impacts of such projects on wildlife. In addition, it is necessary to consider the impacts the changing technology, including the impacts of using larger turbines with faster rotor speeds on bird and bat populations.

Best Management Practices and BLM Policies

The Alliance approves of the BLM's decision to exclude Wilderness Areas, Wilderness Study Areas, National Monuments, Wild and Scenic Rivers, National Historic and Scenic Trails, Areas of Critical Environmental Concern and other areas from wind energy development. Such an approach acknowledges that certain areas have inherent natural, cultural, recreational, aesthetic or other values with which wind energy development is fundamentally inconsistent. Development in such areas would severely and adversely impact those values and is simply not appropriate. 24-4

Further, because not all such areas are identified with the designations listed in the BMP, it is important that BLM provide a mechanism for evaluating specific areas not so designated, but that nonetheless have unique values that would be degraded by wind energy development. The Alliance recommends that the BLM formulate a system that allows interested parties to identify such areas and directs BLM decision-making officials, through established criteria and standards, how to evaluate those

areas. In addition, the Alliance believes that the competitive bidding process should allow for interested parties, such as environmental organizations or citizen groups interested in the preservation of specific areas, to participate so that they have an opportunity to preserve valuable natural resources. 24-4 (cont.)

Finally, while the Alliance believes that the PEIS should be used to facilitate development of onshore wind facilities, it does not eliminate the need to consider alternatives and other statutory authorities for site-specific projects. It is not clear from the BMPs how the analyses of alternatives will proceed for site-specific projects, under either NEPA or the National Historic Preservation Act (NHPA). The PEIS indicates that where cultural resources are involved, a cultural resource management plan should be developed with mitigation measures, including potential avoidance of the site. How the BMPs integrate with NEPA and the NHPA alternatives review should be more explicit. The purpose of the PEIS is to address general issues, such as why wind technology may be preferable. The agency must still consider alternatives to the specific project proposed. The PEIS cannot substitute for an alternatives analysis in an individual case and still satisfy NEPA. 24-5

We appreciate the opportunity to offer comments on the Wind PEIS and look forward to continuing our participation in this important undertaking.

Very truly yours,

Susan L. Nickerson
Executive Director

cc: Senator Edward Kennedy
Congressman William Delahunt
Governor Mitt Romney
Massachusetts Attorney General Thomas Reilly
Charles R. Smith, U.S. Army Corps
Colonel Koning, U.S. Army Corps

Christine Godfrey, US Army Corps
James Connaughton, Council Environmental Quality
Dinah Bear, Council Environmental Quality
Horst Greczmiel, Council Environmental Quality
Elizabeth Higgins, U.S. Environmental Protection Agency
Timothy Timmerman, U.S. Environmental Protection Agency
Vernon Lang, U.S. Fish and Wildlife
Edward LeBlanc, U.S. Coast Guard
Barry Drucker, Mineral Management Service
Susan Snow Cotter, Massachusetts Coastal Zone Management Office
Jack Terrill, National Marine Fisheries Service
Al Benson, U.S. Dept. of Energy
Ellen Roy Herzfelder, Executive Office Environmental Affairs
Phil Dascombe, Cape Cod Commission
Truman Henson, Massachusetts Office of Coastal Zone Management

Responses for Document 00024

00024-001: Your comment addresses issues that are beyond the scope of the PEIS, the mission and responsibilities of the BLM, and/or the defined programmatic scope of the proposed Wind Energy Development Program. We appreciate your input and participation in the public review process.

00024-002: As stated in Chapter 1, the National Energy Policy recommends that the Department of the Interior work with other federal agencies to increase renewable energy production on public lands. The BLM has focused on wind energy development in this PEIS, in part, in response to the number of ROW applications it has received.

00024-003: The PEIS identifies and discusses in Section 3.2 the regulatory authorities identified in the comment. The MTBA is further discussed in Section 4.6.2.2.6. As required by the Wind Energy Development Program proposed policies and BMPs, all wind energy projects proposed for BLM-administered lands will be required to comply with the requirements of NEPA, the ESA, the MTBA, and other applicable regulations and requirements. The requirements for that compliance will be determined at the project level in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Specification of the nature and form of that compliance is beyond the scope of this PEIS.

Site-specific impact analyses are beyond the scope of the PEIS. The PEIS identifies the types of potential impacts that ecological resources may incur from a wind energy development, on the basis of impacts that have been reported at existing facilities. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the identification of potential impacts, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting and design stipulations for incorporation into the POD.

In addition, the level of environmental assessment to be required under NEPA for individual wind energy projects will be determined at the Field Office level. In certain instances, it may be determined that a tiered EA is appropriate in lieu of an EIS. These site-specific NEPA analyses will include analyses of project site configuration and micrositing considerations, construction and operation impacts, and appropriate mitigation measures. No text change has been made to the document in response to your comment. In addition, to address concerns regarding multiyear data collection and potential future changes to technology, the proposed Wind Energy Development Program requires the incorporation of adaptive management strategies and monitoring programs at all wind energy

development sites (see Section 2.2.3.1, Proposed Policies, last bullet, and Section 2.2.3.2.2, Plan of Development Preparation, General, 7th bullet). The application of adaptive management strategies will ensure that programmatic policies and BMPs will be revised as new data regarding the impacts of wind power projects become available. The source for a significant portion of the new data is likely to be the required site-specific monitoring programs that will evaluate environmental conditions at a site through all phases of development. A key requirement for the site-specific monitoring programs is the requirement that monitoring observations and additional identified mitigation measures be incorporated into standard operating procedures and project-specific BMPs. No text change has been made to the document in response to your comment.

00024-004: Exclusion of specific areas from wind energy development will be determined at the project level as part of the site-specific analyses. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders, including environmental organizations and groups interested in the preservation of specific areas.

No interest was expressed in competitive bidding during scoping, and none has been expressed by BLM Field Offices or industry. Thus, competitive bidding was not considered in the PEIS.

00024-005: The evaluation of alternative wind energy development sites involves interactions between industry and the BLM regarding possible sites prior to submittal of a ROW application for development. These interactions often serve to screen out sites that are unsuitable for development for a variety of reasons. This PEIS further supports the identification of appropriate sites for development. Once a site is selected both on the basis of the environmental screening process and the presence of economically developable wind energy resources, the alternatives under consideration are essentially limited to the proposed action to develop the site and the no action alternative. The key questions in the project-specific NEPA analyses for the proposed action address the project site configuration and micrositing considerations and development of an appropriate monitoring program and appropriate, effective mitigation measures. As stated in the 9th bullet under Section 2.2.3.1, Proposed Policies, the project-specific NEPA analyses will include analyses of monitoring program requirements and appropriate mitigation measures.

A new bullet has been added to the proposed policies (Section 2.2.3.1) specifying that the BLM will conduct Section 106 consultations on all wind energy development projects on BLM-administered lands.

Document 00025

KENNY C. GUINN
Governor

SCOTT K. SISCO
Interim Director

STATE OF NEVADA
DEPARTMENT OF CULTURAL AFFAIRS
Nevada State Historic Preservation Office
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RONALD M. JAMES
State Historic Preservation Officer

November 29, 2004

MEMORANDUM

TO: Mike Stafford, Nevada State Clearinghouse Coordinator

FROM: Alice M. Baldrica, Deputy SHPO Alice M Baldrica

SUBJECT: DEPIS Wind Energy Development Program NV SAI# E2005-064

I reviewed the draft programmatic EIS on wind energy development. The Bureau of Land Management understands its obligations to satisfy the provisions of the National Historic Preservation Act and a number of other laws that protect historic and archaeological sites eligible for inclusion in the National Register (historic properties) The BLM has devised a number of policies and BMPs (best management practices) to ensure that each BLM state office and district and field office operates under the same procedures and that applicants know up front the means in which historic properties would be identified, evaluated and treated. Although the potential for affecting historic properties exists, implementation of the procedures in this PEIS for each project will minimize effects. In particular, the Nevada SHPO supports the proposed CRMP (cultural resources management plan) to be developed for each project where historic properties are located. Devising and implementing a monitoring plan, taking measures to prevent soil erosion and looting and providing worker education, will all reduce foreseeable impacts to historic properties. 25-1

Regarding effects to historic properties eligible under criterion a of the Secretary of Interior's criteria of significance, it may be possible, on a case-by-case basis, to examine color, design and placement of wind turbines to lessen impacts. Although this is not something that could be part of the BMPs or policies it is worth mentioning that treatment could include these measures. 25-2

Last, it would be helpful if the glossary could include a definition of "adaptive management strategies" so those of us not internal to BLM could understand what this entails. 25-3

Please call me at 775-684-3444 if you have any questions regarding these comments.

Responses for Document 00025

00025-001: Thank you for your comment.

00025-002: These types of considerations are included as part of a visual resources BMP for wind development in general.

00025-003: The term "adaptive management" has been added to the glossary.

Document 00026

Mike Stafford

From: James Morefield [jdmore@heritage.nv.gov]
Sent: Tuesday, November 30, 2004 12:50 PM
To: Mike Stafford
Cc: Jennifer Newmark
Subject: RE: SAI#E2005-064 DPEIS Wind Energy Development Program

This is the Nevada Natural Heritage Program's response to the Nevada State Clearinghouse item referenced below. Please contact us if this response is needed in hard-copy or another format. Otherwise hard-copy will be retained in our files according to our Records Retention Schedule.

NEVADA SAI#: E2005-064
PROJECT: DPEIS Wind Energy Development Program
COMMENTS DUE: 30 November 2004

AGENCY COMMENTS:

Best Management Practices: Ridgeline habitats themselves should also be considered among the sensitive habitat types addressed by the proposed Best Management Practices (BMPs) in the DPEIS. Numerous rare and sensitive plant species specialize in such habitats, making it relatively likely that any given ridgeline area will contain sensitive resources, either already known or yet to be surveyed and documented. BMPs for such habitats should include 1) pre-design and/or pre-disturbance surveys at appropriate times of year, and by biologists well-qualified, for detecting sensitive and/or previously unknown resources, and 2) where possible, avoiding impacts to any such resources found by locating tower bases, access roads, and other project elements as far off-center from ridgelines as feasible (perhaps by using somewhat taller structures), without conflicting with other BMPs designed to minimize erosive impacts to side-slope areas. 26-1

Page 4-15, table 4.6.2-1: Nevada numbers of taxonomic groups should read 17 amphibians, 57 reptiles, 132 mammals and 283 birds (for birds only, this number excludes both accidentals and exotics). 26-2

Page 4-21, 4.6.2.2.5: Nevada has 26 species of raptors, owls, and vultures (not the 15 reported in the DPEIS) 26-3

Page 4-23, Table 4.6.2-3: Nevada has 18 species of Vespertilionidae (not 17 as reported in the DPEIS) 26-4

Page 4-25, 4.6.4: Nevada has about 660,000 acres of vegetated wetlands. This number does not include playas. The reported 236,349 acres grossly underrepresents the amount of wetlands available in the state. 26-5

Page 4-26, Table 4.6.4-1: Total wetland acres for Nevada should read 660,000. Note that this number does not include desert playas. Wetland loss is probably greater than 52%. This number was derived from a study (FWS National Wetland Inventory) that used limited data and therefore this number probably underestimates the actual loss of wetlands in the state. 26-6

Page 4-28, Table 4.6.5-1: Nevada numbers are incorrect. They should read, 22 Endangered, 16 Threatened, and 9 Candidate. 26-7

Page 4-29, Table 4.6.5-2: Nevada numbers are incorrect. They should read: Endangered: 2 plants, 1 invertebrate, 17 fish, 0 amphibians, 0 reptiles, 0 mammals, 2 birds.
Threatened: 7 plants, 1 invertebrate, 6 fish, 0 amphibians, 1 reptile, 0 mammals, 1 bird. Candidate: 4 plants, 1 invertebrate, 0 fish, 3 amphibians, 0 reptiles, 0 mammals, 1 bird. 26-8

Page 4-31, Table 4.6.5-4: Total numbers of taxa on Federal and State lists (including NNHP Watch and Sensitive Lists) should read: 328 plants, 195 invertebrates, 64 fish, 8 amphibians, 13 reptiles, 55 mammals, 39 birds. 26-9

Page 5-42, 5.9.2.2.1, last paragraph: The statement "... fewer impacts would be expected for wind projects located on previously disturbed lands (e.g. mining sites)" can be misleading. Some mine sites are very attractive to bats and some species will congregate in very large numbers in suitable sites. In such sites, impacts could be significantly greater. 26-10

Page 5-54, Table 5.9.3-2: Collision with turbines, towers, and transmission lines: "on-site, low magnitude but long term". It is misleading to say that effects are low-magnitude. In some areas, effects are very significant and would be better characterized as "high magnitude". Many current wind farms are not monitored frequently enough to detect all mortality from collisions. Especially with regards to bats, lack of knowledge and very little research limits our ability to accurately qualify collision rates as "low magnitude". This statement implies that collisions do not present a significant impact but in reality, we do not know enough to say this. It would be more accurate to describe these effects as "low to high magnitude depending on site". 26-11

Page 5-60, 5.9.3.2.3, "Birds conducting long-range migrations are not likely to be impacted....." Many raptors use ridgelines with significant concentrations of wind to aid them in their migrations. It would seem that a large wind farm on such a ridge could significantly impact these migrating birds.

Page 5-65, 5.9.3.2.3, 1st paragraph: In theory, at specific locations, specific species may be killed in large numbers which may represent a significant impact to their population. To make generalizations that collisions with turbines are not biologically significant is misleading - there are not adequate data to support this conclusion. 26-12

Page 5-65, 5.9.3.2.3, Bat collisions: There are 45 species of bats in the US (Bat Conservation International) 26-13

Page 5-67, 5.9.3.2.3, 2nd paragraph: It is extremely important to note that reported numbers of dead bats do not necessarily represent actual mortality counts. Dead bats are very difficult to find, and to accurately assess the numbers killed, searches must be conducted on a daily basis (or even two times a day). Without knowing the survey methods and the frequency of these surveys, reported numbers of dead bats do not accurately represent the impact of wind turbines. Most likely, reported numbers significantly under-represent actual mortality. 26-14

Page 5-69, Text box titled "Compatibility of a wind energy development.....bats":

* First paragraph. Without knowing survey protocols and frequency, reported numbers do not adequately represent the impact of wind turbines on bats. To say that "relatively low numbers of bat fatalities are generally observed" is completely misleading without knowing how often dead bats were searched for. In a Feb 2004 workshop, bat experts, wind industry representatives, and federal and state agencies all agreed that lack of adequate information and consistent survey methods that can be compared across sites is a significant problem that needs to be addressed and because of this, broad conclusions about impacts to bats cannot be drawn. 26-15
* The text box discusses certain species that are expected to be minimally impacted (although these conclusions are based on very limited and preliminary data and therefore such conclusions can be misleading), but it does not discuss the species that have been effected by wind energy developments such as hoary bats and silver-haired bats. 26-16
* On page 5-70, the statement "bats generally do not forage above 25m..." is erroneous - some species such as Brazilian free-tailed bats (Tadarida brasiliensis) have been shown to actively forage thousands of feet above ground. Many species that forage in forests with trees above 82 ft forage above the treeline. All of the molossids and most of the lasiurines spend time above 25meters. Spotted bats and big browns have also been observed foraging over 25 meters. Therefore, conclusions that height of blades on new generation turbines will decrease interactions between bats and blades are completely unwarranted. In addition, preliminary data presented at the North American Symposium on Bat Research (held in Salt Lake City, October 2004) show that bats are attracted to moving blades and that some bats are actively interacting with those blades. 26-17
* At a minimum, mitigation measures should include a strong monitoring and research component. The monitoring component should include adaptive management criteria that incorporates current expert input (there are working groups currently formed that are addressing issues regarding bats and wind turbines) as well as an appropriate frequency of surveys that will provide data on the true impacts to bats. Research should be conducted to explore the reasons why bats may be attracted to wind turbines and what types of deterrents may be effective. 26-18
* The last statement of the text box, "with proper design and 26-19

siting....bat mortality can generally be reduced to relatively insignificant levels" is premature and misleading. We simply have not conducted enough research to draw such conclusions. 26-19 (cont.)

Page 5-83, 5.9.5.4.3: Effective monitoring programs should be added as a mitigation for wildlife interactions. Adequate monitoring is critical and should be a part of all mitigation procedures. In addition, because so little is known with respect to interactions between wildlife, particularly bats, and wind turbines, research should also be added to mitigation measures as well as adaptive management components based on the outcomes of such research. This would include research on the cumulative effects of the entire operation on wildlife. 26-20

Page 5-84, 5.9.5.6: We disagree with and object to the statement, "Biota protected by state statutes should be relocated." The vast majority of T&E species, especially plants, are habitat-specific and cannot simply be relocated. Short-term translocation, even if initially successful, rarely results in long-term survival. Instead, relocation of project components should be pursued when there is a conflict with statutorily protected species. 26-21

The overall tone of this DPEIS downplays the potential impacts on wildlife. We do not have adequate data to draw conclusions that bird and bat collisions will result in minimal impacts to species. Cumulative impacts from a large scale project on wildlife is completely unknown and while the DPEIS discusses each of these impacts individually, there is no analysis of potential impacts of the entire project. While collisions with turbines may be minimal in a particular area, or habitat fragmentation from a road might be minimal, these impacts taken together may have very significant effects on local ecosystems or populations of species. 26-22

There are two new references that should be added to the DPEIS:
Proceedings of the Bats and Wind Power Generation Technical Workshop, sponsored by Bat Conservation International, US Fish and Wildlife Service, US Department of Energy's National Renewable Energy Laboratory and the American Wind Energy Association, Hosted by FPL Energy 19-20 February 2004 (available through BCI's website at www.batcon.org)
Proceedings of the Wind Energy and Birds/Bats Workshop: Understanding and Resolving Bird and Bat Impacts. Washington, DC. May 18-19, 2004. Prepared by Resolve, Inc., Washington,, D.D., Susan Savitt Schwartz, ed. September 2004. 26-23

Thank you for the opportunity to review and comment on this DPEIS.

(signed) Jennifer Newmark, Biologist III, and
James D. Morefield, Biologist III/Botanist
Nevada Natural Heritage Program
30 November 2004

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Nevada Natural Heritage Program
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Responses for Document 00026

00026-001: The Wind Energy Development Program proposed policies and BMPs require site-specific analyses, including surveys of rare and sensitive species and their habitats, as part of the preparation of the Plan of Development for all wind energy projects proposed for BLM-administered lands. The scope and approach of such analyses will be determined on a project-by-project, site-specific basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. The intent of these analyses is to provide precisely for the concern identified in the comment, namely to avoid or minimize environmental impacts. Site-specific analyses are beyond the scope of the PEIS.

00026-002: The text has been revised to update the numbers of taxonomic groups for Nevada.

00026-003: A previous comment from the Nevada Department of Wildlife stated that there are 31 species of raptors in Nevada, and not 26 as indicated in this comment. In both comments, the totals suggested represented the sums of raptors, falcons, owls, and vultures, which are presented separately in the PEIS. Because of the discrepancies in total bird-of-prey species numbers for Nevada, the numbers listed in the document have been retained, reflecting species counts obtained from the Nevada Natural Heritage Program as cited.

00026-004: The text has been revised as suggested.

00026-005: Table 4.6.4-1 has been revised to indicate there are an additional 760,000 acres (307,562 ha) of playa wetlands for Nevada; however, no change has been made to the text in Section 4.6.4. The text and table, which state that the wetland numbers are based on estimates from the 1980s, present wetland information to provide a basis for the importance and scarcity of wetlands in the 11 western states. Revising the Nevada numbers would make interpretation of Table 4.6.4-1 difficult because of the time differences between the reported wetland numbers. Revision of all of the wetland estimates would not result in a change in the conclusions of the analysis nor in the proposed policies and BMPs regarding wind energy development and wetlands on BLM-administered lands.

00026-006: The table has been updated to include recent estimates of playa wetlands.

00026-007: The numbers reported in the referenced table were obtained from the U.S. Fish and Wildlife Service Threatened and Endangered Species System, March 15, 2004, and are correct as cited. While some changes in the listing have occurred since that time for Nevada and the other states, the stated numbers are correct for the cited data. Revision of the document to incorporate changes in these numbers since release of the draft PEIS is not warranted, as the information provided is intended to inform the reader that there are numerous species listed under the Endangered Species Act within each state, and that considerations of

these species and their habitats will be a critical component in any wind energy development project that is proposed for BLM-administered lands. Any related changes to the document would not change the required considerations of these species for any future wind energy projects. No text change has been made to the document in response to your comment.

00026-008: Comment noted. No text change has been made to the document in response to your comment. Please see response to Comment 26-007.

00026-009: Comment noted. The numbers cited in the table were obtained from the Nevada Natural Heritage Program Detailed Rare Animal List of March 18, 2004, and the Detailed Rare Plant and Lichen List of March 18, 2004, and are correct for the citation. While the numbers may have changed since that date for these species in Nevada (and probably other states as well), this information is provided to indicate that there are numerous species within the states that are considered threatened, endangered, rare, etc., and that regardless of the number present, these species will be considered for all wind energy development projects proposed for BLM-administered lands. No text change has been made to the document in response to your comment.

00026-010: The text has been revised to state that, in general, fewer impacts would be expected, and the mining site example has been revised to "open pit mining sites."

00026-011: The table has been revised to indicate that there is a potential for long-term, low-magnitude effects for many species, while population-level effects could be incurred by other species.

00026-012: The text is not making the generalization that collisions with turbines are not biologically significant. The text (next to last sentence of the paragraph) states that researchers estimating mortality at one facility concluded that the mortality they estimated was not significant. The previous sentence states that population effects may be possible, although no studies to date have documented such effects. Table 5.9.3-2 indicates possible population- level effects for some species. No text change has been made to the document in response to your comment.

00026-013: Comment noted. The text has been revised as suggested.

00026-014: Text has been added to this section to state that survey methods used at different sites may or may not be equivalent and may not accurately estimate mortality levels. The Wind Energy Development Program proposed policies and BMPs identified in Section 2 establish the need for site-specific bat surveys (and surveys of other biota) to be developed on a project-by-project basis, and that any such survey designs be scientifically defensible.

00026-015: Comment noted. The text has been revised to indicate that bat mortality surveys conducted at existing facilities may not be equivalent and may have understated actual mortality levels. The intent of presenting these available data is to demonstrate that bat mortalities have occurred at wind energy facilities, and that even with nonequivalent methods, continuous large-scale mortalities have not been reported. The Wind Energy Development Program proposed policies and BMPS identified in Section 2 of this document establish the need for bat surveys to be developed on a site-specific, project-by-project basis, and that the studies be scientifically defensible.

00026-016: Text has been added discussing both the hoary and silver-haired bats.

00026-017: The text referring to the heights that bats forage or fly has been deleted from the text box.

00026-018: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of a comprehensive monitoring program, will be conducted for any wind energy project proposed for BLM-administered lands, and adaptive management strategies will be incorporated into any such studies. The scope and approach for the site-specific monitoring programs will be determined on a project-by-project basis in conjunction with input from federal, state, and local agencies, and interested stakeholders. The application of adaptive management strategies will ensure that programmatic policies and BMPs and site-specific stipulations will be revised as new data regarding the impacts of wind power projects become available. The source for a significant portion of the new data is likely to be the required site-specific monitoring programs that will evaluate environmental conditions at a site through all phases of development. New research will also be incorporated as it becomes available.

00026-019: Comment noted. The policies and BMPs that are part of the Wind Energy Development Program described in the PEIS were developed to mitigate the potential for adverse impacts for any wind energy development project proposed for BLM-administered lands. It is fully expected that the implementation of site-specific surveys, siting considerations, and monitoring programs that have been developed in conjunction with other federal, state, and local agencies, and interested stakeholders will reduce the potential for adverse impacts to bats. However, the text has been slightly revised for clarity.

00026-020: Scientifically defensible monitoring programs and the application of adaptive management strategies are specified by the Wind Energy Development Program proposed policies and BMPs, and will be required for all wind energy projects proposed for BLM-administered lands. The monitoring program would be developed in conjunction with input from other federal, state, and local agencies, and interested stakeholders and would be developed on a site-specific, project-by-project basis, and are beyond the scope of this document. The

requirement for research is beyond the scope of the PEIS or the Wind Energy Development Program, and any such research would be conducted at the discretion of the wind energy development applicant. No text change has been made to the document in response to your comment.

00026-021: This statement has been deleted. In addition, a BMP has been added to Section 2.2.3.2.2, Plan of Development Preparation, under the Wildlife and Other Ecological Resources heading, stating that the BLM will prohibit the disturbance of any population of federal listed plant species.

00026-022: The data presented in this document summarize the impacts that have been reported for a number of existing wind energy projects. While these data are based on a variety of investigations that use variable methods and approaches, the document correctly states that to date, no studies have indicated population-level effects from any existing wind energy facility. The document does point out that population effects are possible for some species, but such a determination is beyond the scope of the PEIS and the Wind Energy Development Program. The program will require site-specific pre- and post-siting and construction surveys and monitoring programs, as well as monitoring programs during facility operations, that are scientifically defensible and implemented to include adaptive management strategies. Site-specific NEPA analysis will also be required for each wind energy facility. This will include the need for a cumulative impact assessment of not only the individual components of the wind energy facility, but other past, present, and reasonably foreseeable actions that could affect ecological resources in the project area. No text change has been made to the document in response to your comment.

00026-023: The references presented in Section 8 are limited to those materials that were specifically used and referenced in the PEIS. We did review the materials from the February 2004 workshop but did not cite them directly. The proceedings from the May workshop were not available at the time the Draft PEIS was prepared; subsequent review indicated that these proceedings do not include information that would alter the conclusions of the PEIS or result in a change in the proposed Wind Energy Development Program described in the PEIS.

Document 00027

DALE J. HOAG LARRY HANDY RICHARD L. (Dick) DOWNEY
CUSTER COUNTY COURTHOUSE 205 SOUTH 6th STREET
P.O. BOX 150

WESTCLIFFE, COLORADO 81252 (719) 783-2552
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November 26, 2004

Mr. Roy L. Masinton, Field Manager Royal Gorge Field Office
Bureau of Land Management 3170 East Main
Canon City, Colorado 81212
Reference

1793 (CO-200)PZ
Dear Mr. Masinton,
This is in reference to your letter of September 10,2004, regarding the Draft Programmatic Environmental Impact Statement (DPEIS) on Wind Energy Development on BLM-Administered Lands in the Western United States, including Colorado. Upon receiving this letter, the Custer County Board of County Commissioners reviewed the information and the DPEIS. I also spoke with Pete Zwaneveld by telephone to learn more of what your office is required to do regarding the planning process. After reviewing this information, the Custer County Board of County Commissioners is taking the following position/s.
Custer County is, one of the few high elevation unspoiled areas with beautiful mountain vistas and lush valley views remaining in Colorado. The Sangre de Cristo Mountains on the west and the Wet Mountain range on the east frame the county. Ranching continues to protect much of the Wet Mountain Valley and adjoining areas. Nearly 40 percent of the county consists of public lands including wilderness. This protected habitat provides for abundant wildlife including endangered species. And, these values contribute in large part to the culture that is Custer County.
Much of the local economy is built upon the desirability of these values which draw tourist, weekenders and part time residents here for recreation such as hiking, camping, equine activities, mountain climbing etc. Many people have invested life savings to build homes and horse properties in Custer County to be able to live in a relative unspoiled environment with the culture, natural beauty and values found here. 27-1
Many years ago, county commissioners recognized the importance that the citizens and the public in general placed on the natural values of this area and made special efforts to protect it. Among these efforts was the adoption of a zoning resolution that significantly

limits housing density and restricts the height of structures to a maximum of 25 feet on level ground.

Taking all of this into consideration, it should be obvious that placing 200 to 300 foot tall wind turbine towers on the landscape of Custer County would run contrary to all the efforts made (to date) to protect this very special place. Installing such equipment in this area would have a devastating effect on the environment, economy, natural view sheds and sociocultural considerations. Other negative impacts would include the loss of protected and endangered wildlife such as the golden eagle and the bald eagle that nest in the area. The disturbance of large tracts of public land along with the noise, that accompanies the turbines, would further reduce winter habitat for large wildlife including elk, antelope and,, deer. There are no mitigation measures that could be implemented that would justify construction of large wind turbines.

27-1 (cont.)

Custer County Commissioners are very well aware of the need for renewable energy production through wind generation and support it's use where appropriate. However, we also recognize that, due to the above listed negative impacts (others could be added including public sentiment and violation of local height restrictions), large wind energy structures are not suitable for public lands in Custer County. Therefore, as you complete the environmental impact statement, we ask you to recognize and identify all of Custer County as an area within which wind energy development would be excluded on public lands administered by the BLM.

Sincerely,

Richard L. Downey County Commissioner

Response for Document 00027

00027-001: Exclusion of areas from wind energy development will be determined at the project level as part of the site- specific analyses. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. It has been proposed to amend the Royal Gorge RMP land use plan to adopt the proposed policies and BMPs (see Appendix C).

Document 00028

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington, D.C. 20240

IN REPLY REFER TO:
FWS/DHRC/BAPHC

JAN 07 2005

Mr. Lee Otteni
Bureau of Land Management Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, Illinois 60439

Dear Mr. Otteni:

The Fish and Wildlife Service has reviewed the Draft Programmatic Environmental Impact Statement on Wind Energy Development on Bureau of Land Management-Administered Lands in the Western United States. Thank you for the opportunity to comment.

The enclosed comments and recommended changes are provided for your consideration. Please contact Dr. Benjamin N. Tuggle, Chief, Division of Habitat and Resource Conservation, at (703) 358-2161, if you have any questions or need further information.

Sincerely,

Steve Williams

DIRECTOR

Enclosure

cc: 3238-MIB-FWS/Directorate Reading File
3238-MIB-FWS/CCU Files
3245-MIB-FWS/AFHC Files
840-ARLSQ-FWS/DFHC Files
400-ARLSQ-FWS/DHRC Files
400-ARLSQ-FWS/DHRC/BAPHC Files
400-ARLSQ-FWS/DHRC/BAPHC Staff

FWS/DHRC/BAPHC/RWillis/im:12/13/04:703-358-2183
S:/DHC/BFA/WILLIS/EC04-0015 11-26.doc

Fish and Wildlife Service Comments on the Draft Programmatic Environmental Impact Statement on Wind Energy Development on the Bureau of Land Management Administered Lands in the Western United States

General Comments

As a general note, our comments are made pursuant to the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*), the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703), the Bald and Golden Eagle Protection Act (BGEPA)(16 U.S.C. 668), the Fish and Wildlife Coordination Act (FWCA)(16 U.S.C. 661 *et seq.*), the U.S. Fish and Wildlife Service Mitigation Policy (*Federal Register*, Friday, January 23, 1981, page 7656), and the National Environmental Policy Act (NEPA)(40 CFR Parts 1500-1508). There are additional executive orders and agency policies that would also apply, specifically where wetland impacts may result from wind development projects. Because wetlands and other sensitive habitats have not been screened from lands available for wind power development, related issues will have to be addressed on a project-specific basis. Federally listed species are also subject to separate consultation requirements pursuant to ESA Section 7.

The draft PEIS provides a very broad analysis of potential wind energy projects on Bureau of Land Management (BLM)-administered lands across 11 States. It is our understanding that BLM intends to utilize this programmatic approach to streamline subsequent consultation requirements required by myriad environmental statutes. Each proposed wind energy project would be analyzed independently to determine potential environmental effects. We encourage BLM to work directly with the U.S. Fish and Wildlife Service (Service) staff to develop site-specific surveys, impact minimization measures, and conservation measures for all species and habitats potentially affected by individual wind energy projects. These cooperative efforts should yield project-specific measures that would be included in design proposals and expedite the environmental review process. We appreciate the attention that BLM gave to the Service's *Interim Guidance on Avoiding and Minimizing Wildlife Impacts from Wind Turbines* (May 13, 2003), and believe they can serve an important role in helping streamline project-specific consultation requirements in the future. 28-1

We believe the PEIS would benefit from a broader description of renewable energy, and wind energy in particular. Specifically, we believe BLM should consider providing more context in the Purpose and Need and Alternatives sections, helping to evaluate and answer the questions 1) why renewable energy, and then, 2) why wind energy in particular. This discussion would be most beneficial if it includes further explanation about the benefits and environmental costs on wind energy. 28-2

Second, we believe the PEIS would be strengthened by addressing the spatial and temporal use of the airspace by birds, bats, and insects in the Class 3 or higher wind resource areas identified by the Department of Energy/National Renewable Energy Laboratory (DOE/NREL) in the Maximum Potential Development Scenario (MPDS). While the PEIS does identify high wind resource areas, we believe it would benefit by providing equivalent data on the use of this same air space by birds, bats, and insects, to the extent it is available. This important information would make it much easier for partners to determine which general areas and specific sites would have minimal environmental impacts. This would allow partners to quickly identify the areas where project implementation would be most streamlined. It would 28-3

also add to the baseline information that would assist in determining potential impacts during site-specific evaluations. We would be happy to direct you to information at our disposal to help facilitate this key discussion in the final PEIS. 28-3 (cont.)

The draft PEIS states that the wind energy program would incorporate adaptive management strategies to ensure that potential adverse impacts related to wind projects were mitigated to the fullest extent possible. We also recommend that BLM consider using adaptive management techniques to evaluate and improve projects with appropriate best management practices (BMPs). Subsequent monitoring and evaluation would be used to confirm the efficiency of the BMPs and to modify the project as necessary to achieve predefined goals and objectives. The Service is committed to helping BLM and project applicants develop monitoring and research needs prior to construction of the project, and recommends this early partnership become standard practice. Monitoring protocols are most effective when they include measurable performance criteria met within time frames appropriate to sensitive periods in the life histories of species of concern, or recovery rates of site-specific vegetation and soil types. To the extent possible, protocols should also establish "triggers" or thresholds for remedial action. The Service welcomes the opportunity to be included in subsequent decision-making processes included in the adaptive management plan. 28-4

Cumulative impacts are mentioned, but the document provides no detailed discussion. Many of the best wind resource areas overlap habitats of several prairie grouse species, most of which are decreasing in population and some of which are species of concern as possible candidates for listing under ESA. A discussion of the potential cumulative impacts of a manifold expansion of wind energy developments across prairie grouse habitat should be a significant part of the document. We also recommend that BLM define how they use the term other than just the NEPA definition, since compensatory and additive mortality are part of cumulative impacts. 28-5

We are concerned that the description about ESA consultation requirements could cause confusion. We understand that BLM is deferring ESA consultation until individual Resource Management Plans are updated. To ensure that potential wind power developers understand the potential requirements, the PEIS should make it clear additional site-specific ESA consultations could be required in some cases. Also, ESA "consultation" seems to be used synonymously with coordination efforts required pursuant to other statues and regulations. When referring to ESA consultation, the EIS should clearly articulate "pursuant to ESA Section 7" and that the applicable ESA regulations apply. This clarification will ensure that partners seeking to develop wind power understand not only the ESA requirements, but also other conservation coordination efforts that could help streamline the process. 28-6

Specific Comments

Section 2.2.3.2.2, Plan of Development Preparation, Wildlife and Other Ecological Resources – We recommend that BLM consider following procedures contained in the Service's *Interim Guidance* for evaluating potential wind energy development sites prior to selecting sites for development. The guidelines could serve as a useful starting point for evaluating sites, and the information gained by BLM, the Service, and wind energy developers could be used to further refine the guidance to enhance streamlining and conservation in the future. 28-7

Section 2.3 and 2.4, No Action and Limited Wind Alternatives – The PEIS includes brief discussions of the no action and limited wind alternatives, and focuses most attention on the MPDS alternative. We believe a more detailed description of the former two alternatives would provide decision makers with a more complete understanding of the range of alternatives. The no action alternative, for example, is the benchmark from which all other alternatives are compared. Expanding this analysis will help best serve the purpose intended by Council on Environmental Quality regulations (40 CFR 1502.14 and Question 3, Forty Most Asked NEPA Questions, 46 FR 18026). 28-8

Section 2.2.3.1, item 1 – We believe BLM should consider adding some designated critical habitats for threatened and endangered species and known major migratory flyways and high bird concentration areas to the list of areas where Rights of Way (ROW) will not be granted. In Utah, for example, at least four of the high potential wind development areas overlap areas of highest density golden eagle populations. This information could be especially helpful when individual step-down Resource Management Plans are developed. The BLM should also consider adopting mechanisms to gather information documenting the spatial and temporal use of the airspace by birds and bats, particularly where little information exists today and requests for ROW grants can be expected in the future. 28-9

Section 2.2.3.2.2, Wildlife and Other Ecological Resources, item 11 – The draft PEIS states that facilities should be designed to preclude bird nesting and perching, and power poles should be required to prevent raptor electrocutions. To minimize electrocution potential, we recommend BLM consider using *Suggested Practices for Raptor Protection on Power Lines. The State of the Art in 1996 (Edison Electric Institute/Raptor Research Foundation 1996).* 28-10

Section 2.2.3.2.2, Noise – We feel that the document would benefit by clarifying procedures for evaluating, avoiding, and minimizing potential noise related effects to wildlife. For example, it could provide information on implementation of raptor temporal and spatial buffers (e.g., blasting should not take place during breeding seasons). 28-11

Section 2.2.3.2.3, Wildlife – The draft EIS states that employees should be instructed to avoid harassment of wildlife, and that their pets should be controlled to avoid the same. To avoid this potential impact and help reduce the spread of diseases, BLM should consider prohibiting pets from worksites. 28-12

Section 2.2.4, Table 2.2.4-1, Land Use Plans Proposed For Amendment under the PEIS – The table indicates that several BLM field offices in Wyoming will undergo amendments to address wind energy development. BLM's Rawlins, Rock Springs, Kemmerer, and Casper Field Offices were not included in the table. Based on the map provided in the document (figure 2.2.1-1, lands with medium or high potential for wind energy), it appears that these offices may also provide lands with medium or high wind energy potential. We recommend that BLM clarify this in the final document. 28-13

Section 3.2, Regulatory Requirements for Wind Energy Projects – The draft PEIS lists several laws, regulations, executive orders, and policies that help to ensure environmental protection and compliance. In addition to those listed, we recommend that BLM include the Migratory Bird Treaty 28-14

Act (16 U.S.C. 703), Bald and Golden Eagle Protection Act (16 U.S.C. 668), and Executive Order 13186. 28-14 (cont.)

Section 4.6.2.2.1, Migratory Routes – This section provides a general description of the western flyways that have traditionally been used to describe waterfowl migration routes. This section does not include information that demonstrates the spatial and temporal use patterns of the airspace by birds, bats, and insects in wind resource Class 3 areas and above within the MPDS. Since many avian species migrate in broad fronts that will vary between seasons and between years, it would be helpful to expand this section to include a discussion of migratory patterns of these species. 28-15

Section 4.6.2.2.6, Regulatory Framework for Protection of Birds – We believe the PEIS would benefit from a more detailed discussion of the MBTA and its possible implications on certain wind energy development projects. In particular, we suggest that this section be expanded to make the connection between bird studies in the airspace and on the ground, wind project siting considerations, and the prohibition on unauthorized take of migratory birds. 28-16

Section 4.6.5.2, Table 4.6.5-2, Number of Listed Species – The table lists the number of endangered, threatened, and candidate species by State. Information contained in the table does not appear to be current and should be verified prior to publication of the final PEIS and subsequent development of specific projects. 28-17

Section 5.9.2.2.1, Habitat Disturbance, paragraph two – A specific discussion about known and suspected impacts of wind facilities on prairie grouse would be very helpful and a timely addition to this section. The draft PEIS states that fewer impacts would be expected for wind projects located on previously disturbed lands (e.g., mined lands). "Previously disturbed lands" as used in this section seems to indicate those lands where reclamation actions had not been completed. In any case, lands should be evaluated based on existing conditions regardless of previous disturbance. 28-18

Section 5.9.2.2.3, Injury or Mortality – A discussion about bird strikes at western wind facilities would be very helpful in this section. Collision is briefly mentioned in Section 5.9.3.2, but would benefit from a more detailed description. The Erickson *et al.* (2001) estimates of collision mortality are based on some 12 studies (mostly in the West), generally at older-style turbines. The estimate is based primarily on site monitoring, often with long periods of monitoring delay between searches (1-2 weeks is not uncommon), corrected for searcher efficiency and scavenging. While the paper provides a baseline for review, it has not yet been independently peer-reviewed for publication in a recognized scientific journal, and therefore should be qualified accordingly. 28-19

Section 5.9.3.2.3, Collisions with Turbines, Meteorological Towers, and Transmission Lines, Raptors – A discussion of raptor fatalities at Almont Pass Wind Resource Area, California, would be very helpful in this section. There is a great deal of new information available that could be useful for planning in other western locations. 28-20

Section 5.9.5.2, Mitigation During Plan of Development Preparation and Project Design – The draft PEIS states that operators should conduct surveys for Federal and State-protected species and other species of concern within the project area. We would like to coordinate with the operators and BLM to provide assistance to qualified surveyors and to ensure appropriate survey techniques are used. 28-21

Section 5.9.5.2.2, Mitigating Site/Wildlife Interactions – The draft PEIS lists several measures to reduce the use of site facilities by perching birds. These include avoiding areas of high bird use, installing anti-perch devices, eliminating guy wires, burying electrical wires, and configuring transmission lines to prevent bird contact. The Service commends BLM for addressing potential bird mortalities with these proactive measures. We further encourage you to ensure that all electrical facilities adhere to *Suggested Practices for Raptor Protection on Power Lines. The State of the Art in 1996 (Edison Electric Institute/Raptor Research Foundation)*. 28-22

Section 5.9.3.2.3, Collisions with Turbines, Avian Collisions – We have a few concerns about the data used in this section. The study completed by Erickson et al. 2001, for example, used data mortality information from studies on older-style wind turbines that are not comparable to the type of wind turbines likely to be installed over the next 20-year period. These newer turbines are taller (> 300' AGL), have larger rotor blades (70-100' m), faster rotor tip speed, and are equipped with aircraft warning lights. To remedy this issue, we believe BLM should use data from peer-reviewed studies on wind turbines that are comparable to those it expects to authorize over the next 20-year period. 28-23

On page 5-57, third paragraph, another concern is evident. The third sentence states that bird fatalities at Searsburg, Vermont were 0.0. The next sentence references the Buffalo Ridge, Minnesota project fatality rate of 4.45 birds per turbine per year. The following sentence then dismisses the Buffalo Ridge data because it was based on one field season of data collection. However, it should be noted that the Searsburg data was also based on only one field season of data collection. Additionally, unlike Buffalo Ridge, the Searsburg mortality study included only the cleared areas around the turbines; uncleared areas were not searched or otherwise included in the study. These clarifications will help people understand what we can learn from the data, and how we can begin outlining future studies to address existing shortcomings. 28-24

The data in Table 5.9.3-3 also should be qualified. The Princeton, Massachusetts project data was not peer reviewed; we would be happy to provide BLM with a copy of this study if it would be useful. In general, we believe the analysis would benefit by focusing on peer-reviewed literature. We understand that even the peer-reviewed literature may be subject to limitations (see, for example, the Preface, page iii, on the Searsburg study (NREL/SR-500-28591)), however, it represents the best available information. 28-25

In the section "Factors Potentially Contributing to Avian Collisions," page 5-61, we believe the PEIS should add a focus on two of the most important factors contributing to avian collisions. These include siting considerations and the height of the turbine and rotor above ground level. We believe the most important consideration with respect to avian collisions is the site itself, including on-the-ground and airspace physical and biological features. The Service believes that multi-year studies would provide a basis for understanding the spatial and temporal uses of the 28-26

airspace in and near the rotorswept zone by birds, bats, and their insect prey. Turbine height is an important variable because newer turbines extend farther up into the airspace, and thus into the zone that is commonly used by migratory birds and bats. 28-26 (cont.)

Page 5-72/73 (Boxed Text), Compatibility of a Wind Energy Development Project and Gallinaceous Birds – The Service's paper justifying our recommended 5-mile buffer zone might be helpful in expanding the discussion about gallinaceous birds on pages 5-72-73 (i.e., "Prairie grouse leks and wind turbines: U.S. Fish and Wildlife Service justification for a 5-mile buffer from leks; additional grassland songbird recommendations," July 30, 2004. A.M. Manville, II, Division of Migratory Bird Management, 17 pages). 28-27

Section 5.9.5.3.2, Mitigating Disturbance and Injury of Vegetation and Wildlife – The draft PEIS states that buffer zones should be established around raptor nests, bat roosts, and biota and habitats of concern. Although the Service supports the use of buffer zones, protocols may differ by State and/or land managing agency. Buffer zones may be considered disturbance-free or allow for specific temporal or spatial actions. We also recommend that buffer zones be developed in coordination with wildlife biologists who are extremely knowledgeable of the particular species for which the buffer is being considered and in coordination with the Service. 28-28

Section 5.9.5.6, Mitigation for Threatened, Endangered, and Sensitive Species – The draft PEIS states that if listed species are present in the project vicinity, informal ESA consultation would be required and subsequently formal consultation may be required. Please correct the final PEIS to state that ESA Section 7(c) requires the preparation of a biological assessment for any major construction project to determine the effects of the proposed action on listed and proposed species. If a biological assessment is not required (i.e., all other actions), the lead Federal agency is responsible for review of the proposed action to determine whether listed species will be affected. 28-29

If it is determined that the project may affect, but is not likely to adversely affect listed species, the Federal agency should request the Service to review the proposed project and biological assessment and concur with the determination. If it is determined that the project may affect, and is likely to adversely affect any listed species, formal consultation should be initiated with the Service. Alternatively, informal consultation can be continued so the Service can assist in modifying the project to reduce impacts to listed species to the "not likely to adversely affect" threshold.

Section 6.1.2, Environmental Impacts – The proposed Wind Energy Development Program would establish policies that would identify specific lands on which wind energy development would not be allowed. These specific lands are wilderness areas, national monuments, etc. We believe BLM should consider expanding this policy to include other areas where migratory birds and bats are frequently present in or near the rotorswept zone for wind turbines of the type and size that may be proposed during the next 20 years. We also suggest including a discussion on likely impacts to prairie grouse within this section. 28-30

Section 6.2, Impacts of the No Action Alternative – We believe the no action alternative would benefit from a more detailed description. According to Question 3, Forty Most Asked NEPA 28-31

Questions, 46 FR 18026, the "no action" alternative may be thought of in terms of continuing with the present course of action until that action is changed. Consequently, projected impacts of alternative management schemes would be compared in the EIS to those impacts projected for the existing plan. The DPEIS, however, does not include a projection for the existing plan over a 5-, 10-, or 20-year period. Instead, BLM has used the DOE/NREL maximum potential development scenario as the baseline from which its evaluation of no action is based. We understand that three projects have been approved on BLM lands and an additional three projects are in the active proposal stage now. This history may provide a useful baseline for extrapolation to more clearly describe the no action alternative. This revision would help provide the benchmark from which reviewers can compare the magnitude of the environmental effects of the other alternatives. 28-31 (cont.)

Appendix A, A-4, Inventory and Planning – We ask BLM to consider explaining what the agency would do if proposed wind development is not in current compliance with land use plans for protected wilderness areas, wilderness study areas, and Areas of Critical Environmental Concern (ACEC). This statement appears to runs counter to mandates protecting designated wilderness areas and ACEC's, as well as to what BLM presents in other sections of this PEIS. We ask BLM to consider emphasizing that proposed wind development should be modified to avoid protected areas or other key areas that may warrant further protection (e.g., breeding sites for grassland songbirds and leks for prairie grouse). We also recommend that BLM provide additional details on how the agency would avoid "major bird migration corridors" and "areas of critical habitat for species of concern." 28-32

The PEIS would also benefit from a discussion of how BLM will help minimize habitat disturbance. Habitat fragmentation, destruction, disturbance, and avoidance are critical environmental issues that face prairie grouse, grassland songbirds, and other species. Grazing is another key environmental issue on BLM lands, and when combined with new wind development, it could cause more mortality to birds. Cattle grazing at the Altamont Pass Wind Resource Area provides a good example of problems created for raptors by less than optimal grazing practices around wind turbines.

Appendix A, A-13, Site Testing and Monitoring Application – Impacts from meteorological towers are very briefly discussed, but no mention is made recommending use of un-guyed, self-supporting towers. Like any tall structure, the Service recommends against use of guy supports, as we have suggested in our voluntary communication tower guidance of September 2000. Since BLM wind development is being proposed for the West, the Bald and Golden Eagle Protection Act (BGEPA) should be added to the list of applicable statutes, and included where additional legislative discussions arise later in the document. BGEPA is referenced within the main text. 28-33

Appendix A, A-14, Commercial Wind Energy Development Application – Setbacks to minimize impacts to birds and bats are mentioned, but this section does not offer any specific recommendations. In general, this section would benefit from a more detailed discussion regarding the use of setbacks. In addition, the Service recommends a minimum 5-mile setback from active prairie grouse leks, and recommends that this issue be addressed within the main body of the PEIS. 28-34

Appendix A, A-15, Commercial Wind Energy Development Application – The sentence, "potential avian and bat mortality remains a concern to many individuals, however, the use of non-perch towers, new blade designs and lower rpm rotation has reduced these potential impacts," needs to be updated. While solid (as opposed to lattice) nacelle towers appear to minimize perching, comparisons at Altamont Pass between the two technologies still do not show a statistically significant difference in perching deterrence. The PEIS might indicate that the data "suggest" non-perching benefits from smooth nacelles. The Service recommends use of smooth, solid nacelles in our voluntary guidance, in major part because the industry is using this technology, and in part because perching opportunities – by the very nature of the structure – are minimized. New blade designs and lower blade rpm's do not necessarily result in less mortality for both birds and bats. Larger, slower-moving blades have much greater surface area than their older, smaller counterparts, providing much greater surface area for collisions. Blade tip speeds of larger, slower rpm rotation blades still have blade tip speeds comparable to older, faster, smaller models (i.e., $\geq$ 160 mph rates). Bats have been shown to collide with very slow moving blades as well as striking non-moving nacelle towers. We recommend further describing these findings in this document. 28-35

Appendix B, B.1.2, GIS Data – Since BLM uses Geographic Information Systems (GIS) overlays to show areas of high wind potential (B.1.2 GIS Data, page B-5), it would be helpful to include a GIS overlay of known and suspected prairie grouse leks (e.g., Greater and Lesser Prairie-chickens, Greater and Gunnison Sage-grouse, and Columbia Sharp-tailed Grouse) within these areas of high wind potential. An overlay of important grassland songbird breeding areas would also be very helpful. A GIS overlay of lands to be excluded from development should also be presented on page G-6 (B.1.3.1). 28-36

Appendix B, B.2, WinDS Model Analyses – Where BLM discusses the WinDS Model (pages B-7-8), we recommend that the model should also include the Service's voluntary recommendation of a minimum distance of 5 miles for wind facilities from active prairie grouse leks. Some believe that this distance could be insufficient for certain species. As summarized by leading grouse expert Dr. Jack A. Connelly (J. Connelly, Wildlife Research Biologist, ID Dept. Fish and Game 2004 personal communication) at the November 3, 2004 public wind research meeting sponsored by the National Wind Coordinating Committee, "the Service's [5-mile] recommendation is reasonable but likely not sufficient for species like Greater and Gunnison's Sage-grouse." We look forward to working with BLM and project applicants to outline appropriate parameters in specific locations. 28-37

Appendix B, B.2.2.4, Variables – We recommend including additional costs with section B.2.2.4 variables, pages B-13/14. These include the costs of maintaining a 5-mile distance from wind facilities and active leks, and the costs of placing facilities closer than 5 miles. 28-38

Miscellaneous Comments

Section 2.2.3.2.2, Wildlife and other Ecological Resources – "Feasible" should be clearly defined in the Glossary as "capable of being brought about." 28-39

Section 2.2.3.2.2, Wildlife and Other Ecological Resources, item 3 – The draft PEIS states that the operators should design projects that minimize or mitigate impacts to sensitive and unique habitats. Pursuant to Council on Environmental Quality regulations, we recommend BLM emphasize that operators should design projects that avoid impacts to sensitive habitats (40 CFR §1508.20(a)) when possible, and are committed to helping meet this objective through early consultation. 28-40

Section 2.2.3.2.2, Human Health and Safety, item 7 – We recommend that the language on Federal Aviation Administration compliance also address Service guidance on tower lighting. 28-41

Section 3.1.1, Site Monitoring and Testing Activities – We recommend the addition of the following sentence to the end of paragraph 1: "Data on wildlife populations and potential impacts are typically not collected at this time." 28-42

Appendix B, B.2.4, WinDS Model Application for Wind Energy Development PEIS – In section B.2.4, page B-16, production tax credits (PTC) are discussed. It would be helpful to review a scenario where wind energy is developed on BLM land without a PTC, comparing energy costs to other sources such as coal, diesel, nuclear, and hydroelectric. This would help put energy costs into perspective. 28-43

Responses for Document 00028

00028-001: As required by the Wind Energy Development Program proposed policies and BMPs, species-specific analyses will be conducted for any wind energy project proposed for BLM-administered lands. The scope and approach for the species-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. In addition, the program policies require that the BLM consult with the U.S. Fish and Wildlife Service as required by Section 7 of the Endangered Species Act of 1973. The specific consultation requirements will be determined on a project-by-project basis. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD.

00028-002: As stated in Chapter 1, the National Energy Policy recommends that the Department of the Interior work with other federal agencies to increase renewable energy production on public lands. The existence of wind energy development on BLM-administered lands and the level of new wind-energy-related ROW applications placed a programmatic emphasis on wind energy. The benefits of wind energy development are discussed in part in Section 6.4.2, Impacts of Wind Energy Development versus Other Sources of Energy. The environmental "costs" of wind energy are discussed thoroughly in Chapter 5, Potential Impacts of Wind Energy Development and Analysis of Mitigation Measures.

00028-003: The evaluation of wind energy development sites is a long-running process that involves interactions between industry and the BLM regarding the suitability of possible sites prior to submittal of a ROW application for development. These interactions often serve to screen out sites that are unsuitable for development for a variety of reasons. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

00028-004: The measures recommended in this comment are incorporated into the proposed BMPs presented in Section 2.2.3.2.2, Plan of Development Preparation. Included among the BMPs is the requirement to conduct environmental monitoring throughout the life of the wind project. Such monitoring shall incorporate adaptive management strategies, identify measurable metrics against which to measure success, and include mechanisms for incorporating mitigative actions into standard operating practices.

00028-005: Section 2.2.3.1, Proposed Policies, has been revised to include a new policy stating that site-specific analyses will identify and assess any cumulative impacts that are beyond the scope of the cumulative impacts addressed in the PEIS (see 10th bullet). The proposed policies already include a policy stating that existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into local, site-specific analyses (see 14th bullet). Section 6.4.1.10 acknowledges that cumulative effects may occur for specific species; however, species-specific analyses are beyond the scope of the PEIS. The definition for cumulative effects established by the CEQ regulations (see Section 6.4) was used in this PEIS analysis.

00028-006: The Wind Energy Development Program proposed policies (see Section 2.2.3.1) have been revised to include a policy stating that the BLM will consult with the USFWS as required by Section 7 of the Endangered Species Act of 1973. The specific details of the consultation process required will be determined on a project-by-project basis.

00028-007: The USFWS interim guidelines, as well as guidelines and recommendations from other agencies and organizations, were reviewed in the development of the BLM Wind Energy Development Program proposed policies and BMPs. The BLM and USFWS share a common objective in terms of minimizing potential impacts to wildlife from wind energy development activities. Many of the USFWS voluntary guidance recommendations are imbedded within the BLM's proposed policies and BMPs, reflecting consistent objectives and parallel approaches. However, because the USFWS guidance is interim and voluntary, it is inappropriate to adopt it wholly in the PEIS or the proposed Wind Energy Development Program.

00028-008: The PEIS meets the requirements of the CEQ regulations for analysis of alternatives by evaluating a set of alternatives that present a range of options. The BLM believes that the no action and limited wind energy development alternatives are adequately described and assessed in order to support the decisions regarding the management approach to be adopted for wind energy development on BLM-administered lands.

00028-009: Proposed BMPs presented under the Wildlife and Other Ecological Resources heading in Section 2.2.3.2.2, Plan of Development Preparation, incorporate requirements that will minimize or mitigate impacts to wildlife and its critical habitat. Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement.

Site-specific monitoring programs will be established to evaluate environmental conditions at a site through all phases of development. The monitoring of the use of airspace by birds and bats may be one element of a site-specific monitoring program. Data collected through site-specific monitoring programs

will be used to evaluate the programmatic policies and BMPs and revise them, if appropriate.

00028-010: The suggested reference has been added to Section 5.9.5.2.2.

00028-011: The proposed BMPs under the Wildlife and Other Ecological Resources heading in Section 2.2.3.2.2, Plan of Development Preparation, require that projects be designed to minimize potential impacts to wildlife and their habitat. Potential noise impacts during construction would be addressed in the design process. Section 5.9.2.2.6 discusses potential noise impacts to wildlife during construction. Noise mitigation for wildlife, including scheduling of blasting, is discussed in the mitigation section (Section 5.9.5.3.2). Site-specific analyses will be conducted in conjunction with input from other federal, state, and local agencies, and interested stakeholders. The development of appropriate buffer zones for wildlife will be evaluated in this process.

00028-012: The text has been revised in response to your comment to prohibit pets on site during the construction phase.

00028-013: The RMPs for the Rawlins, Kemmerer, and Casper Field Offices are scheduled to be revised in the near future, and wind energy development will be addressed during those revisions. The RMP for the Rock Springs Field Office, the Green River RMP, is included in Table 2.2.4-1 for amendment as part of this PEIS.

00028-014: Section 3.2 does not provide a complete listing of all the applicable laws, regulations, policies, and Executive Orders. That listing is provided in Appendix E. The Migratory Bird Treaty Act (16 USC. 703), Bald and Golden Eagle Protection Act (16 USC. 668), and Executive Order 13186 are listed in Table E-8, Wildlife.

00028-015: Section 4.6.2.2.1 provides an overview of the migratory activities of birds in the western states. To provide more detailed discussion of the migratory patterns of individual species is beyond the scope of the PEIS. As specified in the document (Section 2.2.3), the Wind Energy Development Program proposed policies and BMPs require species-specific analyses to be conducted for any proposed project on BLM-administered lands. These analyses include the site-specific evaluation of bird use of the project area, which includes migratory use of the project area. Operators are further required to use this information in designing the project to minimize impacts to birds and bats. The scope and approach for species-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Species-specific analyses are beyond the scope of the PEIS.

00028-016: Section 4.6.2.2.6 identifies the MBTA as a component of the regulatory framework that any wind energy project proposed for BLM-administered lands would fall under. In addition, the BLM Wind Energy Development Program requires that all wind energy project ROW applications, whether for site testing and monitoring or for commercial development, be subjected to environmental review in accordance with the requirements of NEPA, and that such development be in compliance with the requirements of the ESA, Migratory Bird Treaty Act of 1918 (MBTA), National Historic Preservation Act of 1996 (NHPA), and other appropriate laws (see Section 3.2). As required by the Wind Energy Development Program proposed policies and BMPs, species-specific analyses during all phases of a wind energy project will be conducted for any proposed project on BLM- administered lands. The scope and approach for species-specific analyses will be determined on a project-by- project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations that will incorporate MBTA objectives into the POD. Because MBTA issues will be addressed in detail at the project level and on a site-by-site basis, the inclusion of additional details is beyond the scope of the PEIS.

00028-017: The information provided in the table was current at the time it was obtained and incorporated into the document. While the information has been updated by the USFWS since that time, it will likely undergo additional revision between the time the table is updated and the final EIS is issued. The table has been reviewed and found to be correct for the date the information was obtained. In addition, a policy statement has been added to the Wind Energy Development Program that states that the BLM will consult with the USFWS as required by Section 7 of the Endangered Species Act of 1973. The specific consultation requirements will be determined on a project-by-project basis. Through this process, project-specific species lists will be developed and evaluated.

00028-018: A more detailed discussion entitled "Compatibility of a Wind Energy Development Project and Gallinaceous Birds" is presented later in the document (after Section 5.9.3.2.6) that provides a specific discussion regarding gallinaceous birds and wind energy development.

The text has been revised to state that "fewer impacts would be expected, in general, for ...projects located on previously disturbed lands." This text has been further revised to specify previously disturbed lands that have not undergone adequate restoration/reclamation.

It is important to note that, as required by the Wind Energy Development Program proposed policies and BMPs, species- and site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach of these analyses, which will include the identification of important habitats and sensitive species, will be determined on a

project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project- specific stipulations for incorporation into the POD. Regarding sage-grouse species, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into local, site-specific analyses.

00028-019: The document presents approximately eight pages of discussion regarding bird strikes with wind energy facilities and includes relatively detailed discussions of raptor collisions with such facilities. The information presented focuses on the western states and used the best information that was available at the time the Draft PEIS was written. Table 5.9.3.2.3 presents the number of bird species, by order, that have been reported as fatalities at western wind energy sites. The text has been revised to indicate that the results from individual sites are not directly comparable because of differences in study design and sampling methods. Even so, the results do provide a baseline for review as stated in the comment. Much of the available information on bird strikes comes from the "grey" literature, namely government and private sector reports and publications and not from the open peer-reviewed scientific information.

00028-020: The Altamont Pass facility is discussed in this section, and a text box that discusses in detail raptor collisions at the Altamont facility is provided toward the end of this section. No text change has been made to the document in response to your comment.

00028-021: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by- project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. This process will include the identification and implementation of appropriate survey techniques, and it is anticipated that the USFWS will participate in the process.

00028-022: The text has been revised and now references the 1996 report.

00028-023: Additional sources cited in this section include reports dated later than 2001 (e.g., Kerns and Kerlinger 2004) and that include newer facilities (and newer turbine designs) such as the Mountaineer facility in West Virginia. Peer-reviewed information was used in this PEIS (e.g., Osborne et al. 2000). However, most of the available information documenting bird strikes at wind facilities occurs in "grey" literature sources, namely governmental or private sector reports and not the peer-reviewed scientific literature.

The data presented provide a clear indication that bird strikes are an issue at wind energy facilities that result in significant impacts if facilities are inappropriately designed and sited. As required by the Wind Energy

Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. These analyses will focus on identifying siting and design stipulations to minimize environmental impacts. The scope and approach of these site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting, design, and operation stipulations for incorporation into the POD. No text change has been made to the document in response to your comment.

00028-024: The text does not dismiss the Buffalo Ridge data. The text points out that even though the data were only for one field season, they recorded the highest single-day bird fatality for any wind energy facility to date. Text has been added to point out that the mortality estimates are based on survey methods that may or may not be equivalent between individual facilities, and may not accurately estimate actual mortality levels.

00028-025: The references cited for Table 5.9.3-3 include one publication from the peer-reviewed scientific literature (Osborne et al. 2000). The remaining citations represent grey literature reports, some of which were prepared and submitted to state agencies for technical review and acceptance. Grey literature reports include federal and state publications, as well as publications of private sector organizations. Unfortunately, most of the available information to date documenting bird strikes comes from the grey literature. The NREL report cited in the comment is an example of a grey literature report.

00028-026: The text identifies both turbine height and turbine siting as important factors that may affect bird collision rates. The Wind Energy Development Program proposed policies and BMPs identify the requirement to conduct predesign surveys of important habitats and bird and bat use and activity patterns for areas associated with any wind energy project proposed for BLM-administered lands. In addition, the policies and BMPs require the development of monitoring programs to track wildlife interactions, including bird and bat mortalities, for all phases of a wind energy project, including throughout the lifetime of the facility (Section 2.2.3.2.2). The monitoring programs will be required to incorporate adaptive management strategies to ensure that potential adverse impacts of wind energy development are mitigated to the fullest extent possible.

As required by the Wind Energy Development Program proposed policies and BMPs, site-specific studies, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific studies and monitoring programs will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies and, interested stakeholders. Through this process, the BLM will develop project-specific monitoring stipulations for incorporation into the POD.

00028-027: The identification of specific exclusion zones or areas from wind energy development will be determined at the project level as part of site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site- specific analyses, including the identification of exclusion zones, will be conducted for any proposed wind energy project on BLM-administered lands. The scope and approach of any site-specific analyses that would lead to the identification of an exclusion zone will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. In addition, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into local, site-specific analyses and project-specific stipulations. Through this process, the BLM will develop project-specific siting stipulations for incorporation into the POD. The identification of specific exclusion areas or zones is beyond the scope of the PEIS.

00028-028: The identification of specific buffer zones will be developed, if necessary, as project-specific stipulations as part of the site-specific analyses. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of specific buffer areas, will be conducted for any proposed project on BLM-administered lands. The need for and specifications of any buffer zones will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. The specification of buffer zone dimensions is beyond the scope of the PEIS.

00028-029: The text has been changed in Section 5.9.5.6. In addition, a new policy bullet has been added at Section 2.2.3.1 specifying that Section 7 consultations will be conducted. The specific consultation requirements will be determined on a project-by-project basis.

00028-030: Proposed BMPs presented under the Wildlife and Other Ecological Resources heading in Section 2.2.3.2.2, Plan of Development Preparation, incorporate requirements that will minimize or mitigate impacts to wildlife, including sage-grouse and migratory birds and bats. Exclusions of any additional areas from wind energy development, as well as the need for and development of any species-specific surveys (to specifically identify habitats and area use levels) and monitoring studies, will be determined on a site-specific, project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Regarding sage-grouse species, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into local, site-specific analyses. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

00028-031: The PEIS meets the requirements of the CEQ regulations for analysis of alternatives by evaluating a set of alternatives that presents a range of options. The BLM believes that the no action and limited wind energy development alternatives are adequately described and assessed in order to support the decisions regarding the management approach to be adopted for wind energy development on BLM-administered lands.

00028-032: The Interim Wind Energy Policy was provided in Appendix A for reference purposes only and is not the subject of review and comment. Currently, the BLM is complying with all regulatory requirements for the administration of NLCS areas and ACECs. The BLM will issue a new Instruction Memorandum on wind energy development following issuance of the ROD implementing the management program that is selected following completion of the PEIS. At a minimum, whether the proposed action is selected or not, the BLM will need to ensure that wind energy development on BLM-administered lands is conducted in accordance with existing land use plans and in a manner that will minimize or mitigate potential adverse impacts to the greatest extent possible.

00028-033: The Interim Wind Energy Policy was provided in Appendix A for reference purposes only and is not the subject of review and comment. The BLM will issue a new Instruction Memorandum on wind energy development following issuance of the ROD implementing the management program that is selected following completion of the PEIS.

00028-034: The Interim Wind Energy Policy was provided in Appendix A for reference purposes only and is not the subject of review and comment. The BLM will issue a new Instruction Memorandum on wind energy development following issuance of the ROD implementing the management program that is selected following completion of the PEIS. Regarding sage-grouse species, existing BLM guidance on the management of sage grouse and sage- grouse habitat will be incorporated into local, site-specific analyses.

00028-035: The Interim Wind Energy Policy was provided in Appendix A for reference purposes only and is not the subject of review and comment. The BLM will issue a new Instruction Memorandum on wind energy development following issuance of the ROD implementing the management program that is selected following completion of the PEIS.

00028-036: As required by the Wind Energy Development Program proposed policies and BMPs, species-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for species- specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Incorporation of GIS data reflecting prairie grouse and grassland songbird habitat and breeding areas would be appropriate at the site-specific level.

A GIS overlay showing lands to be excluded from development has not been added to the document. This information is presented on the individual BLM Field Office maps in Appendix B.

00028-037: As noted in the comment, the USFWS and other federal, state, and local agencies, and interested stakeholders will have an opportunity to participate in site-specific analyses for each proposed wind energy development project on BLM-administered lands. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Regarding sage-grouse species, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into local, site-specific analyses.

00028-038: As noted in the comment, the USFWS and other federal, state, and local agencies and interested stakeholders will have an opportunity to participate in site-specific analyses for each proposed wind energy development project on BLM-administered lands. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD.

00028-039: The term "feasible" has been removed from the BMPs in this section because of its subjective nature.

00028-040: The language in the BMPs related to wildlife and other ecological resources has been changed, where appropriate, to include the text "avoid (if possible), minimize, or mitigate."

00028-041: The proposed BMPs require that lighting will comply with FAA requirements (see the Health and Safety heading under Section 2.2.3.2.2, Plan of Development Preparation). Additional lighting mitigation measures may be incorporated at a specific site and would be evaluated during the site-specific analyses, with input from other federal, state, and local agencies, and interested stakeholders.

00028-042: Section 3 was intended to provide an overview of the development and operation of a typical wind farm from engineering and logistical perspectives, providing a basis from which to understand potential impacts to the environment. Ancillary, but nevertheless important activities, such as environmental assessment or monitoring, are discussed in other portions of the document, especially Chapter 5. BMPs presented in Chapter 2 address the collection of data on wildlife populations and impacts through baseline surveys as well as through monitoring throughout the wind project's life.

00028-043: Because the PTC has been renewed and because it has a long history of being renewed, it appropriately describes the reasonably foreseeable future. Evaluations of wind energy development in the absence of a PTC are inappropriate for the projection of the reasonably foreseeable development scenario. The BLM may also require financial bonds for site monitoring and testing authorizations.

Document 80001

WindEISArchives

From: windeiswebmaster
Sent: Sunday, September 12, 2004 9:28 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80001

Thank you for your comment, Dennis Young.

The comment tracking number that has been assigned to your comment is 80001. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: September 12, 2004 09:27:53PM CDT

Wind Energy EIS Draft Comment: 80001

First Name: Dennis
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Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
I'm surprised that the federal government may actually allow us to use our own land to help our State.The help that I write of are the jobs that these wind-mills will create and the much needed power, which will provide (by the estimates that I've seen) clean power enough to supply an entire city the size of Long Beach or Fresno.Again, it's very nice of the Bush Admin to help our State in this matter, but don't we have the right to put our resources in use before the year 2025 without federal involvement? 80001-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80001

80001-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80002

WindEISArchives

From: windeiswebmaster
Sent: Monday, September 13, 2004 7:15 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80002

AECI_Facing_up_to_the_True_Cos...

Thank you for your comment, Glenn Schleede.

The comment tracking number that has been assigned to your comment is 80002. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: September 13, 2004 07:14:56AM CDT

Wind Energy EIS Draft Comment: 80002

First Name: Glenn
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Privacy Preference: Don't withhold name or address from public record
Attachment: C:\Documents and Settings\Owner\My Documents\AECI Facing up to the True Costs & Benefits of Wind Energy 062404 Final.pdf

Comment Submitted:
It seems quite clear that DOI, BLM and the drafters of the EIS have been unduly influenced and misled about the true costs and benefits of wind energy by the wind industry, US Department of Energy & the National Renewable Energy "Laboratory."

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Facing up to the True Costs and Benefits of Wind Energy

A necessary step in any attempt to understand the outlook for US energy supply and demand

Comments for

The owners and members of

Associated Electric Cooperative, Incorporated

At their 2004 Annual Meeting in

St. Louis, Missouri

By

Glenn R. Schleede

June 24, 2004

Facing up to the True Costs and Benefits of Wind Energy

A necessary step in any attempt to understand the outlook
for US energy supply and demand

– Contents –

June 24, 2004

Facing up to the True Costs and Benefits of Wind Energy

A necessary step in any attempt to understand the outlook
for US energy supply and demand

Good Morning;

It is a distinct honor and pleasure to have this opportunity to speak to the members and owners of Associated Electric Cooperative, Incorporated.

It is a special honor and privilege for me for two reasons. First, after having spent my military service and college years in Minnesota, I came to regard the Midwest as the "real" America – in contrast to the East and West Coasts. Second, it is a privilege to speak to the members and owners of an organization that places its highest priority on the interest of consumers.

These considerations are important because I have spent most of the past 40 years on the East Coast, with over 30 of those years in the shadow of the Nation's capital – where reality and facts play such a small role in the decisions and actions of our political leaders and other government officials, and where the interests of consumers and taxpayers are not well represented.

I have had the opportunity to watch some 30 years of government "energy policy" initiatives. Except in the case of electricity, policies relying primarily on market forces have been successful. On the other hand, federal and state attempts to dictate the way that the people of America satisfy their energy requirements – through regulations, tax credits and other subsidies --- have generally been both ineffective and detrimental to the interests of consumers and taxpayers.

That is not a partisan statement. During those 30 years, 7 Presidents from both major parties have occupied the White House, and the US House and Senate have been under the control at one time or another of both major parties. Bad policies and unrealistic objectives – such as "energy independence" -- have been pursued by both parties. For example, federal and state policies are now the driving forces behind current attempts to force greater use of wind to produce electricity – the principal subject that I will talk about today.

"Energy" legislation that would repeat and expand upon bad policies of the past is again pending in the US Congress. Politicians and a horde of lobbyists are using the current high oil and natural gas prices as an excuse to pass that legislation. Hopefully, they will fail.

Most of my working career in the federal government and private sector organizations has been focused on energy matters. Since retiring, I use some of my time to analyze and write about government and private sector energy policies, programs, regulations, and projects that I believe are detrimental to the interests of consumers and taxpayers. This activity, including work on wind energy, is entirely self-financed and is not on behalf of any client or other interest.

It is from the perspective of consumers and taxpayers that I will deal with my assigned topic.

Before dealing with the primary topic, that is the role of wind energy, I will spend a few minutes focusing on data about broader energy and electricity markets. After commenting on the costs and benefits of wind energy, I will deal briefly with the subject of mandated "Renewable Portfolio Standards" or RPS – a topic that apparently is of interest to your political leaders in Missouri. By way of preview, I will tell you now that I believe that "Renewable Portfolio Standards" are the most insidious device yet concocted by regulators and other officials to shift costs from "renewable" energy producers to electric customers and hide those costs in monthly electric bills.

1. US Energy Consumption by Energy Source – Recent History and Outlook

It's important to look at data on past and projected energy consumption by energy source because those data help put the existing and potential contribution of wind energy into perspective. Nearly all of the data I will use today comes from the US Energy Information Administration (EIA) which is the one part of the US Department of Energy that strives for objectivity in its analyses and reports.

Figure 1, a graph and table shown on the next page, shows actual US energy consumption by energy source for 1950, 1960, 1970, 1980, 1990 and 2000 and EIA's forecasts for 2010, 2020 and 2025. Several points would be evident if you study the detailed data:

- First, total US energy consumption nearly tripled from 1950 to 2000 – from 34.61 quadrillion Btu to 99.46 Btu. If EIA's forecasts prove to be correct, energy consumption will grow by another 1/3rd from 2000 to 2025.

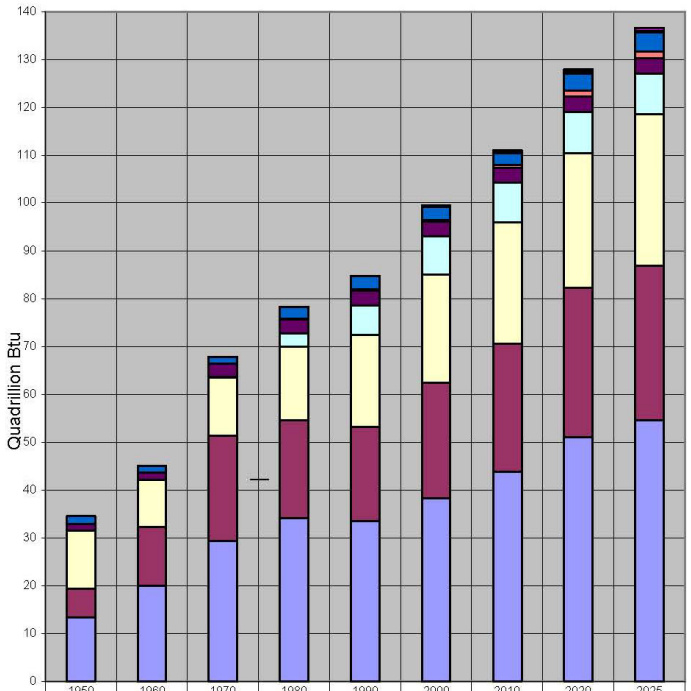
- Second, "traditional" energy sources – that is, petroleum, coal, natural gas, hydropower and, beginning in 1970, nuclear energy have been and will continue to be the sources of energy that supply US energy requirements.

- Third, so-called "renewable" energy sources – wind, solar, geothermal, biomass and ethanol -- have supplied and will continue to supply only a tiny part of US energy requirements. This is true despite federal and state actions costing hundreds of millions of our tax dollars for R&D, tax breaks and other subsidies and despite numerous requirements to encourage or force consumers to use "renewable" energy.

- Fourth, the overwhelming shares of the so-called "renewable" energy sources have been and will continue to be supplied by wood, biomass and trash ("municipal solid waste" or MSW). The "renewables" being pushed hardest by the federal and state governments – wind, solar, geothermal, and ethanol – supplied less than 1% of our energy in 2000 and, even with EIA's somewhat ambitious estimates, would be supplying less than 2% of our energy by 2025.

3

US Energy Consumption by Energy Source: Actual 1950-2000; EIA Forecast 2010-2025



	1950	1960	1970	1980	1990	2000	2010	2020	2025
Wind	0.00	0.00	0.00	0.00	0.03	0.05	0.25	0.45	0.55
Ethanol	0.00	0.00	0.00	0.00	0.00	0.14	0.29	0.33	0.35
Solar	0.00	0.00	0.00	0.00	0.06	0.06	0.07	0.08	0.10
Wood , Biomass, MSW	1.56	1.32	1.43	2.49	2.70	2.79	2.42	3.67	3.90
Geothermal	0.00	0.00	0.01	0.11	0.34	0.30	0.61	1.16	1.37
Conventional Hydropower	1.42	1.62	2.64	2.97	3.05	3.15	3.28	3.24	3.20
Nuclear Power	0.00	0.01	0.24	2.74	6.10	7.87	8.29	8.53	8.53
Coal	12.35	9.83	12.21	15.39	19.18	22.64	25.23	28.30	31.73
Natural Gas	5.97	12.39	21.80	20.39	19.73	24.07	26.82	31.21	32.21
Petroleum	13.32	19.92	29.52	34.20	33.55	38.39	43.86	51.02	54.64

These exceedingly small shares reflect the fact that renewables are costly in economic and environmental terms – as I will discuss in more detail in the case of wind. They are niche technologies and are highly unlikely to ever supply a significant share of US energy needs. Unfortunately, politicians and certain advocacy groups would like us to believe otherwise. Undoubtedly, they will continue feeding false and misleading information to the public and media claiming that "renewables" offer great promise.

The table below shows the percentages of total US energy consumption from "traditional" and "renewable" sources.

US Energy Consumption by Energy Sources		
	"Traditional" Energy Sources: Petroleum, Coal, Natural Gas, Hydro & Nuclear	**"Renewable" Energy Sources: Wind, Solar, Geothermal, Ethanol, Wood, Biomass & MSW**
Actual		
1950	95.5%	4.5%
1960	97.1%	2.9%
1970	97.9%	2.1%
1980	96.7%	3.3%
1990	96.3%	3.7%
2000	96.6%	3.4%
EIA Forecast		
2010	96.1%	3.9%
2020	95.6%	4.4%
2025	95.4%	4.6%
Data Source: US Energy Information Administration		

When viewing the above numbers for renewables, please keep in mind that about half of those energy supplies consist of wood and wood waste. The existing and potential contributions of wind, solar, and geothermal energy are very small.

2. US Electric Generation by Energy Source – Recent History and Outlook

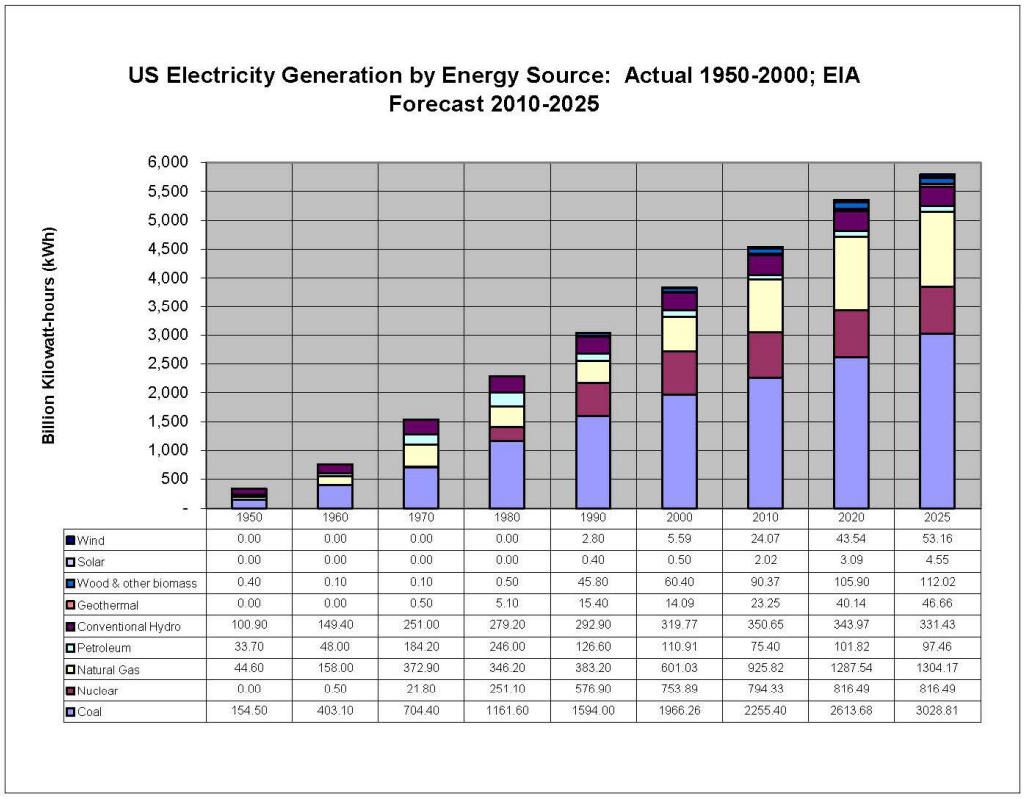
It's also important to look at data on past and projected electric generation by energy source because electric generation is the way that the alleged benefits of wind energy would be captured.

Figure 2, a graph and table shown on the next page, show actual US electricity production by energy source for 1950, 1960, 1970, 1980, 1990 and 2000 and EIA's forecasts for 2010, 2020 and 2025. The numbers are in billions of kilowatt-hours (kWh). Several points would be evident if you could study the detailed data:

- First, there has been tremendous growth in US electricity production and demand, reflecting both economic growth and increased electrification. Electricity production increased 11-fold from 1950 to 2000; i.e., from 334 billion kWh in 1950 to 3,832 billion kWh in 2000. Electricity production more than doubled from 1970 to 2000.

- Second, as in the case of overall US energy consumption, the overwhelming share has been produced by using the traditional energy sources and that will continue to be the case.

- Third, wood, wood waste and other biomass, and trash ("MSW") will be providing more than half of the small shares projected to come from "renewables."



	1950	1960	1970	1980	1990	2000	2010	2020	2025
Wind	0.00	0.00	0.00	0.00	2.80	5.59	24.07	43.54	53.16
Solar	0.00	0.00	0.00	0.00	0.40	0.50	2.02	3.09	4.55
Wood & other biomass	0.40	0.10	0.10	0.50	45.80	60.40	90.37	105.90	112.02
Geothermal	0.00	0.00	0.50	5.10	15.40	14.09	23.25	40.14	46.66
Conventional Hydro	100.90	149.40	251.00	279.20	292.90	319.77	350.65	343.97	331.43
Petroleum	33.70	48.00	184.20	246.00	126.60	110.91	75.40	101.82	97.46
Natural Gas	44.60	158.00	372.90	346.20	383.20	601.03	925.82	1287.54	1304.17
Nuclear	0.00	0.50	21.80	251.10	576.90	753.89	794.33	816.49	816.49
Coal	154.50	403.10	704.40	1161.60	1594.00	1966.26	2255.40	2613.68	3028.81

3. US Achievements in Energy Efficiency and Conservation

It is also important to look at the facts about energy efficiency and conservation since developments in those areas have been critically important in our recent energy history and will be in the future. Three points are particularly important.

a. First, the US has become much more energy efficient during the past 30 years. This can be seen quite clearly in Figure 3 on the next page. That graph compares real (i.e., inflation adjusted) US Gross Domestic Product (GDP) and energy consumption, with both indexed to 1973. As you can see, GDP has increased significantly during the 30-year period from 1973 to 2003 – actually by 139.5%. Energy consumption, however, increased by only 29.7%. Thus, our economy is *much less energy intensive* than in the past.

b. Second, despite claims by our political leaders, government mandates do not deserve the credit for the significant increases in US energy efficiency. Instead, four developments during the past 30 years account for most improvements. Specifically:

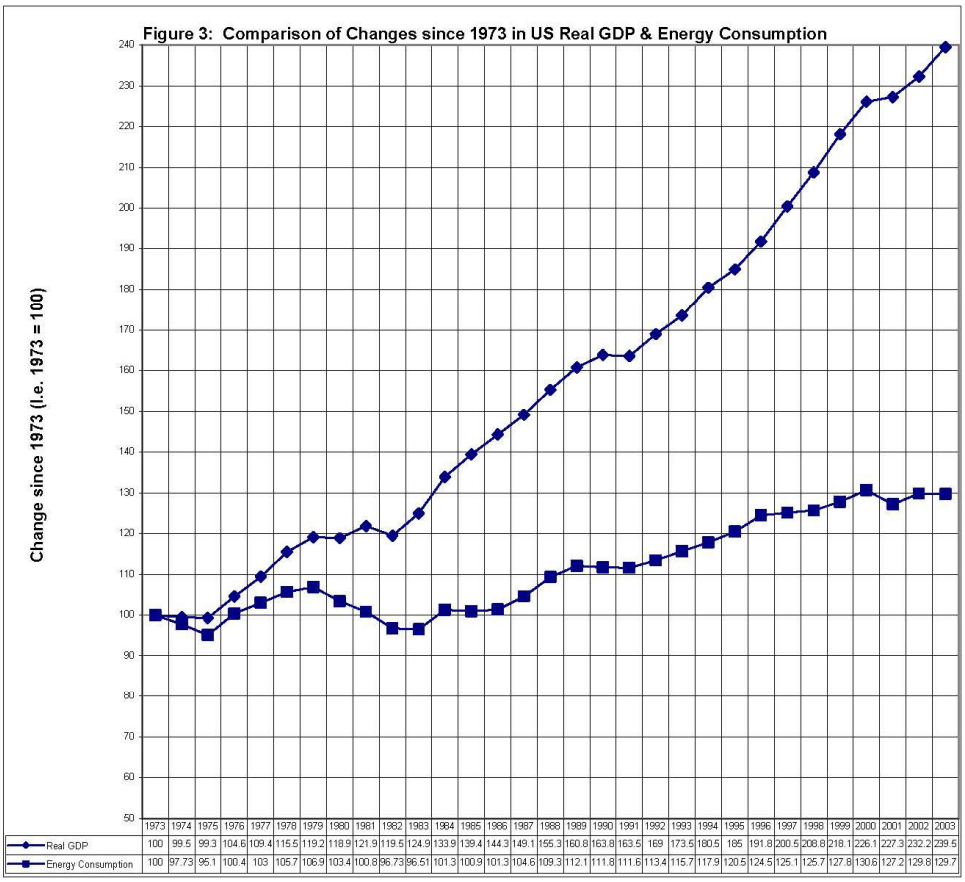
1) **Relatively high prices**, particularly during the 1970s and early 1980s led many individuals and organizations to focus on their energy costs and find ways to reduce those costs *in ways that made sense for them.* For example, they found ways to reduce energy losses, change equipment and processes to reduce energy requirements, and reduce energy-intensive activities. Higher energy costs led to demands for more energy efficient products, which have been finding their way into popular use. Undoubtedly, the relatively high current prices for petroleum products and natural gas will bring about additional efficiency measures.

2) **Improved *energy efficiency has occurred as an unplanned byproduct* of adoption of new technologies.** Examples include computerization, telecommunications and new lighter weight materials. New technologies have *permitted increased productivity and required less energy* than the equipment and activities that were replaced. For example, computers using small amounts of electricity have replaced multiples of electric typewriters, adding machines, calculators, and cash registers. Also, information and data moving electronically has replaced documents that would have required energy to produce paper, electricity to run presses, and motor fuel to move the documents. Lighter materials have meant that the total weight of goods and things (e.g., automobiles) moving from one place to another requires less energy than in the past.

3) **The make up of the US economy has changed significantly, resulting in a higher proportion of less energy-intensive manufacturing and services.** Some of the more energy intensive activities have moved to other countries. In addition, the new activities that have been added to US economic activity tend to be less energy intensive than in the past. For example, an increasing share of the nation's economic activity is accounted for by "intellectual property-based" activities (e.g., software) that are less energy intensive.

4) **Technological advancements in spin-offs from defense-related R&D have contributed to US energy efficiency**. Perhaps the most obvious example is the fact that Department of Defense (DOD) sponsored work on aircraft engines and advanced materials has contributed directly to the increased efficiency in gas-turbine based electric generating units.

US Department of Energy (DOE) officials, various advocacy groups and federal and state political leaders and regulators would like to have us believe that government-mandated energy efficiency standards – e.g., for appliances – have been the driving force in improved US energy efficiency. However, the facts demonstrate that government-mandated efficiency standards for home appliances save *very little energy*. For example, DOE has claimed that its new efficiency standards for clothes washers issued in January 2001 would save "5.52 Quads of energy over 27 years (2004-2030)."[1]



That figure sounds impressive. However, based on EIA's latest forecast of US energy consumption[2] the nation will be using about 3,330 Quads of energy during that period. Thus, DOE's 5.52 Quad estimate equals less than 17/100 of 1% of US energy consumption during *the entire 27-year period*, a truly trivial reduction – particularly when taking into account the fact that DOE typically overstates the potential energy saving benefits of its appliance efficiency standards.

Such small savings are quite typical, despite the fact that DOE efficiency standards impose hundreds of millions of dollars in additional costs on America's consumers – costs that many consumers will never recover through energy savings.

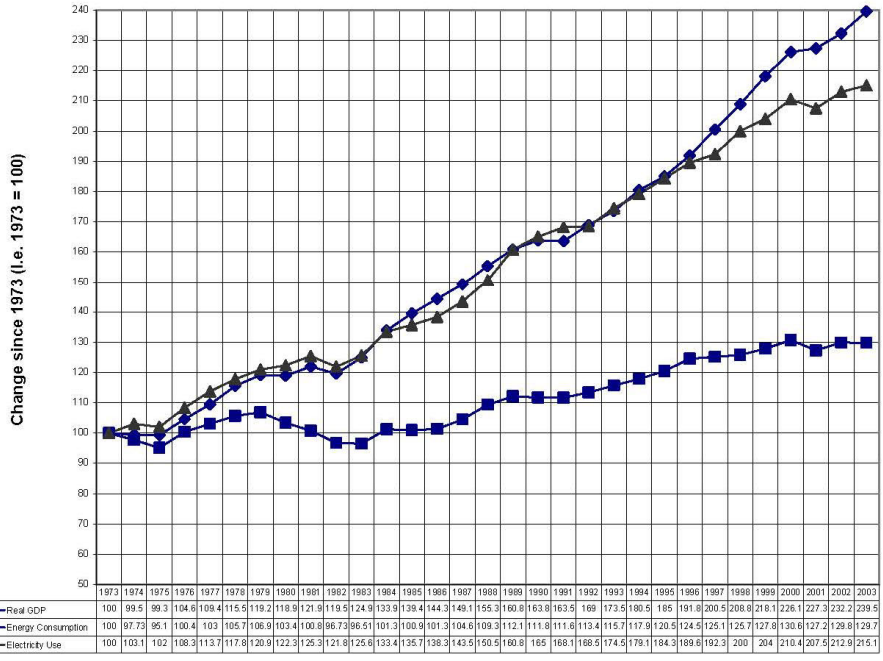
c. The third and final point about energy efficiency is that the United States is not the "energy wastrel" that many would like to have us believe. This is illustrated by the fact that

the US accounts for 29% of the world's Gross Domestic Product (GDP) but it accounts for only 24% of the world's energy consumption.[3]

4. New Energy Supplies will be Required to Support Continuing Economic Growth

Despite improvements in energy efficiency, additional energy supplies will be required, particularly electricity, if our economy is to continue growing. Figure 4, below, is the same graph shown earlier on the relationship between US GDP and energy consumption, except that a line depicting electricity use has been added.

Figure 4: Comparison of Changes since 1973 in US Real GDP, Energy Consumption & Electricity Use



	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Real GDP	100	99.5	99.3	104.6	109.4	115.5	119.2	118.9	121.9	119.5	124.9	133.9	139.4	144.3	149.1	155.3	160.8	163.8	163.5	169	173.5	180.5	185	191.8	200.5	208.8	218.1	226.1	227.3	232.2	239.5
Energy Consumption	100	97.73	95.1	100.4	103	105.7	106.9	103.4	100.8	96.73	96.51	101.3	100.9	101.3	104.6	109.3	112.1	111.8	111.6	113.4	115.7	117.9	120.5	124.5	125.1	125.7	127.8	130.6	127.2	129.8	129.7
Electricity Use	100	103.1	102	108.3	113.7	117.8	120.9	122.3	125.3	121.8	125.6	133.4	135.7	138.3	143.5	150.5	160.8	165	168.1	168.5	174.5	179.1	184.3	189.6	192.3	200	204	210.4	207.5	212.9	215.1

As you can see, growth in electricity demand paralleled growth in GDP for many years but, due to improved energy efficiency, electricity demand has been growing more slowly than GDP since 1996. Still, electricity demand is continuing to grow significantly. EIA projects growth nationally of only 1.8% per year.[4] That seems to be low – at least when compared to Associated's member sales which appear to be growing about 2.9% per year on average.

5. The True Cost of Electricity from Wind is Much Greater than the Benefits

Now let's turn to the subject of wind energy. The productive use of energy from wind certainly is not new. For decades, windmills have been used effectively to grind grain, pump water, and charge batteries to store electricity in areas not served by electric distribution lines.

The new factors are the attempts by governments to force the use of this niche technology to produce significant amounts of electricity commercially.

a. Wind Advocates' False and Misleading Claims. I won't spend a lot on the claimed virtues of wind energy because you undoubtedly have seen and heard those claims in the media and from other sources. The wind industry, with substantial help from the US Department of Energy, DOE's National Renewable Energy "Laboratory" (NREL), and other wind energy advocates – using false and misleading information -- has been highly successful in publicizing its claims. In summary, they would have us believe that:

- Wind energy can make a significant contribution toward supplying US energy requirements.
- Wind energy is environmentally benign.
- Electricity produced from wind would permit offsetting large amounts of emissions that would otherwise be produced by generating plants fueled with coal, natural gas, or oil.
- Electricity produced from wind costs only slightly more than electricity produced by traditional energy sources.
- "Wind farms" can make a significant contribution to rural economic development.
- Greater US reliance on electricity from wind would help reduce dependence on imported oil.
- Wind energy is not getting its "fair" share of taxpayer and consumer-financed subsidies.

Such claims have led federal and state political leaders and regulators to provide massive subsidies for wind energy and requirements that force increased use of electricity generated by wind and other "renewable" energy sources.

In fact, officials of DOE, NREL, the wind industry, and various wind advocacy groups have misled the public, media, Congress, and state government officials in their efforts to force expensive, poor quality electricity from "wind energy" on to the people of America. They have:

- Greatly *overstated* the environmental, energy and economic *benefits* of "wind energy," and
- Greatly *underestimated the true cost of wind energy, as well as the adverse environmental, ecological, scenic, and property value impacts.*

b. Ten Truths about Wind Energy. However, in recent months the truths about "wind energy" are emerging and citizen opposition to "wind farms" is growing in various parts of the US and in other countries, including the UK, Germany, Spain, Denmark, Italy, and Australia. I will summarize for you this morning the information that is emerging that runs counter to the DOE and wind industry claims.

10

There are at least 10 major reasons why construction of so-called "wind farms" are detrimental to the interests of citizens, consumers and taxpayers and why current efforts to extend or expand federal and state subsidies for wind energy or to mandate use of wind energy should be opposed.

1) **Tax avoidance – not environmental and energy benefits – has become the prime motivation for building "wind farms."** Perhaps federal and state government officials have not yet recognized how overly generous they have been to "wind farm" owners, or that their largess merely shifts huge amounts of cost from "wind farm" owners to ordinary taxpayers and electric customers.

   The enormity of the tax avoidance benefits of "wind farms" can be illustrated by a project planned in Iowa by MidAmerican Energy, an electric utility owned by Warren Buffet's famous company, Berkshire Hathaway. The proposed "wind farm" would consist of 180 to 200 wind turbines, each with a capacity of 1.5 to 1.65 megawatts (MW) and total capacity of 310 MW. (The rated capacity of the project is about the same as Associated's 303 MW Thomas Hill unit #2 but it would be spread over hundreds of acres, it would produce less than a third of the electricity, and it would produce the electricity only when the wind is blowing within the right speed range.)

   MidAmerican Energy estimates that the project would cost $323 million, not counting necessary additions to transmission capacity.

   "Wind farm" owners enjoy two very generous federal tax breaks:
   - Five-year double declining balance accelerated depreciation (5-Yr., 200%DB), and
   - Production Tax Credit of $0.018 for each kWh of electricity produced during the first 10 years of project operation.

   Since Iowa conforms its state corporate income tax to the federal system, the 5-yr, 200% DB depreciation could also be deducted from otherwise taxable income in Iowa, thus reducing corporate tax liability in that state.

   a) **Accelerated Depreciation.** The following below shows the tax avoidance benefits at the federal and state (Iowa) level due to a "normal" application of 5-Yr. 200% accelerated depreciation for the owner of a $323 million "wind farm."

      If this project were placed in service before January 1, 2005, it would qualify for a "bonus" depreciation deduction of 50% of its cost in the first tax year for federal corporate income tax purposes. This means that the full first year depreciation for property qualifying for 5-Yr. 200% DB treatment would be able to deduct from otherwise taxable income a total of 60% of the cost in the first tax year, 16% in the second tax year, 9.6% in the third year and the remaining 14.4% in the ensuing three tax years.

Accelerated Depreciation Benefits for a $323 million capital investment in a "wind farm"

Tax year	Depreciation %	Deduction from Federal & State taxable income	Reduction in Corporate Income Tax Liability	
			Federal - assuming 35% marginal tax rate	State (Iowa) – assuming 12% marginal tax rate
1st	20%	$64,600,000	$22,610,000	$7,752,000
2nd	32%	$103,360,000	$36,176,000	$12,403,200
3rd	19.2%	$62,016,000	$21,705,000	$7,441,920
4th	11.52%	$37,209,000	$13,023,360	$4,465,152
5th	11.52%	$37,209,000	$13,023,360	$4,465,152
6th	5.76%	$18,604,800	$6,511,680	$2,232,576
Total	100%	$323,000,000	$113,050,000	$38,760,000

b) Wind Production Tax Credit. The second very generous federal tax break for wind energy is the wind "Production Tax Credit" which allows a "wind farm" owner to deduct from federal income tax liability $0.018 per kWh of electricity produced commercially during the first 10-years of the project life. This tax credit expired at the end of 2003 but efforts are underway in the US Congress to restore the credit, perhaps retroactively. Unfortunately for ordinary taxpayers, the efforts to restore the credit probably will be successful.

If MidAmerican Energy's proposed 310 MW "wind farm" achieved a 30% capacity factor, it would produce 814,660,000 kWh of electricity each year (i.e., 310,000 kW x 8760 hours per year x .30 capacity factor). Production of that amount of electricity would provide a deduction from federal tax liability of $14,664,240 per year for 10 years, or a total of $140,664,240.

c) State tax breaks. The State of Iowa also permits local governments to exempt "wind farms" from 70% to 100% of the property taxes that would normally be paid.

Tax breaks used by "wind farm" owners mean that the tax burden they escape is shifted to ordinary taxpayers. When considering the magnitude of these tax breaks, it's useful to keep in mind that, according to Mr. Buffett, MidAmerican Energy's total tax payments (federal, state and local) totaled $100 million in 2002 and $251 million in 2003.[5] The proposed "wind farm" would significantly reduce MidAmerican's tax liability.

Revenue from electricity sales. In addition to these enormous tax benefits, the owner of a "wind farm" would receive revenue from the sale of the electricity that is produced. If the "wind farm" produced at a 30% capacity factor and the owner were able to sell the electricity for $0.03 per kWh, the annual revenue would be $24,449,400 (i.e., 814,680,000 kWh x $0.03).

In Iowa, there is a virtually guaranteed market for electricity produced from "renewable" sources due to the State's "Renewable Set Asides" requirement applicable to investor-owned utilities and "Mandatory Green Power Option" applicable to all utilities. Under the latter requirement, utilities must provide their customers the "opportunity" to purchase the electricity produced from renewables at a premium price.

2) Huge windmills – often taller than the US Capitol -- produce very little electricity. Due to exceedingly generous tax breaks and other federal and state subsidies, there are

more than 20,000 windmills scattered across thousands of acres of land in 30 states. Over 15,000 windmills were built in California during the 1980s due to a generous federal investment tax credit. Many of those windmills have been abandoned.

About 88% of the 6,370 megawatts (MW) the currently operable wind turbine capacity is located in six states: California, Texas, Minnesota, Iowa, Washington and Oregon.

If those thousands of windmills average a generous 25% capacity factor, the total amount of electricity produced annually would be 13,950,300,000 kilowatt-hours.[6] That sounds like a lot of electricity. However, that amount of electricity would be:

- Equal to 36/100 of 1% of the 3,831,000,000,000 kWh of electricity produced in the US during 2002.

- Much less (13.5%) than the electricity produced during 2003 by Associated's 1,200 MW New Madrid and 1,153 MW Thomas Hill coal-fired generating stations (which stations produced 16,121,059,000 kWh).

- Less than would be produced annually by four 500 MW base load natural gas fired combined-cycle generating units operating at an 80% capacity factor (14,016,000,000 kWh). Such units would be comparable to Associated's Chouteau and St Francis units. Those units occupy only a few acres and can be located near load centers, reducing line losses and holding down transmission costs.

Note also that, even with the generous tax breaks and subsidies, the US Energy Information Administration (EIA) doesn't expect wind to supply even 1% of US electricity by 2025! EIA's ambitious estimate of less than 1% contrasts with DOE's totally unrealistic "goal" of obtaining 5% of US electricity from wind by 2020.

3) **Electricity from wind turbines has less real value than electricity from reliable generating units, and they detract from electric system reliability.** Wind turbines produce electricity only when the wind is blowing within the right speed range. Today's models may begin producing some electricity at wind speeds of about 8 miles per hour (MPH), reach rated capacity around 33 MPH, and cut out around 56 MPH. Because their output is intermittent, volatile and largely unpredictable, the electricity they produce has less value than electricity from reliable ("dispatchable") generating units.

Electricity grids must be kept in balance (supply & demand, voltage, frequency), so one or more reliable, dispatchable generating units must be immediately available at all times to "back up" the unreliable wind generation. The reliable, backup units must ramp up and down to balance the output from the wind turbines. Wind turbines detract from grid reliability and would be of no value in restoring an electric grid when there is a blackout. Wind turbines have virtually no "capacity" value.

4) **The true cost of electricity from wind energy is much higher than wind advocates admit.** Wind energy advocates like to ignore key elements of the true cost of electricity from wind, including:
   - The cost of tax breaks and subsidies which, as indicated above, shift tax burden and costs from "wind farm" owners to ordinary taxpayers and electric customers.
   - The cost of providing backup power to balance the intermittent and volatile output from wind turbines.
   - The full, true cost of transmitting electricity from "wind farms" to electric customers. "Wind farms" are highly inefficient users of transmission capacity. Capacity must be available to accommodate the total rated output but, because the output is intermittent and volatile, that transmission capacity is used only part time. The wind industry seeks to avoid these costs by shifting them to electric customers.
   - The extra burden on grid management.

5) **Claims of environmental benefits of wind energy are exaggerated.** The wind industry likes to claim that electricity from wind offsets emissions that would be produced by fossil-fueled generating units. However, they typically overstate the potential emission offset, ignore the fact that backup generating units must be immediately available and running at less than their peak efficiency or in spinning reserve mode. The backup units continue to emit while in these modes. Also, the generation that may be offset may not be powered by fossil fuels.

6) **"Wind farms" have significant adverse impacts on environmental, ecological, scenic and property values and create potential hazards to health and safety.** Citizens in various states (and other countries) where "wind farms" have been constructed have become painfully aware that – in addition to the high true cost of the electricity -- "wind farms" impair environmental, ecological, scenic and property values. Among the adverse impacts are noise, bird kills, interference with bird migration paths and animal habitat, destruction of scenic vistas and ecological rarities (such as the Flint Hills and Tallgrass Prairie in Kansas), aircraft warning lights, blade "flicker," spoiling the lives of neighbors and lowering the value of properties located near the huge structures.

7) **"Wind farms" produce few local economic benefits and these are overwhelmed by the higher costs imposed on electric customers through their monthly bills.** DOE, the National Renewable Energy Laboratory (NREL) and the wind industry have falsely claimed that "wind farms" provide significant economic benefits in the areas and states where they are constructed.[7] They often claim benefits from the capital investment, jobs, tax revenues, lease payments to landowners, and "other" economic activities. Sometimes they claim increased tourist traffic.

   In fact, there are few economic benefits and these are overwhelmed by the higher true cost to electric customers and taxpayers of the electricity produced by the "wind farms":

   - The lion's share of the capital investment goes for turbines, blades, towers, electronics and related equipment which are produced in other states and, often, other countries. Little of the money for equipment and supplies would be spent locally.

- Most of the jobs during construction (which lasts only a few months) are filled by imported workers. For example, only 20 of 200 construction period jobs were filled by local workers in the case of the Top of Iowa "Wind Farm" built in 2001. Only 7 permanent jobs resulted.

- Tax revenues are often small due to generous federal and state tax breaks. Imported workers probably pay income tax in other states.

- Income from "wind farm" lease payments to landowners would have local economic benefit only if that income is spent or invested locally – which is not likely if the landowners are absentee or the income is invested or spent elsewhere.

- Increased tourist traffic, if any, from those wanting to see the huge machines is likely to be temporary because they would have only "curiosity value." The money that would be spent or invested locally by those who stay away because of the scenic impairment and other adverse impacts on environmental, ecological and property values could easily exceed the income from temporary visitor interest.

- There probably will be an increase in demand locally for sand and gravel for the huge concrete bases for the towers and, perhaps, a few other materials and supplies. Some local businesses may see temporary increases in business during construction (e.g., restaurants).

These minimal economic benefits will be much more than offset by:

- First and foremost, the increase in electric customers' monthly bills – because electricity produced from wind is more expensive -- will be many times the economic benefit. If the electricity from MidAmerican Energy's proposed "wind farm" (identified earlier) were to cost only $0.015 per kWh more than electricity from other sources, the extra cost borne by electric customers would be $12,220,200 per year. (Keep in mind that higher costs for electricity mean that less money is available to consumers to spend for food, clothing, shelter, education, medical expenses and other needs, thus lowering economic activity.)

- The cost of repairing roads damaged by the construction traffic (unless paid by the "wind farm" owner) and the additional cost of government services (e.g., police, fire protection) due to the existence of the "wind farm."

- Other potential losses of economic activity; e.g., less tourism, less interest in moving to the area if it is one dependent on attracting people for primary or second homes, and the related negative economic impacts.

In fact:

- It many cases, it would be cheaper for electric customers to take up a collection and pay landowners not to allow wind turbines on their property!

- In states such as Iowa where most large "wind farms" are owned by out-of-state companies, there would be a net outflow of wealth (dollars) from the state because of the "wind farm." Because of the high true costs of electricity from wind, the outflow may even be greater per kWh than for electricity produced from imported energy sources.[8]

8) **Various other subsidies shift large amounts of cost from "wind farm" owners to ordinary taxpayers and electric customers.** The wind industry benefits from many other subsidies not mentioned above. These include:

   - DOE funding (now totaling several hundred millions of dollars) for wind energy R&D.

   - Guaranteed markets for electricity (even though the prices are above market) as a result of the insidious "renewable portfolio standards" that are imposed in several states.

   - Additional markets due to mandated purchases of "green electricity" by federal and state government agencies at above market prices – with the costs offset from the agencies' other programs. For example, forced purchases by the military services mean less money available for training, weapons and other equipment.

   - State programs requiring or encouraging electric utilities to offer "green" electricity at premium prices, seldom attract enough "volunteers" to pay the utilities' costs of buying the "green" electricity and administering the program. (The cost not recovered from customers paying premium prices is spread to all other customers.)

9) **The big "winners" are "wind farm" owners and a few landowners who lease their land.** Electric customers and taxpayers are the big "losers." First, as demonstrated above, "wind farm" owners benefit enormously from the generous tax breaks and other subsidies that shift tax burden ordinary taxpayers. "Wind farm" owners also benefit from the revenue from the sale of electricity while shifting costs (e.g., backup generation and transmission costs) to electric customers.

   Secondly, a few landowners who lease their land may be "winners" but their neighbors are the "losers." For example, landowners who lease land at the rate of $5,000 per MW of wind turbine capacity would derive income of $500,000 per year. However, if that "wind farm" achieved a 30% capacity factor and the electricity cost consumers only an extra $0.015 per kWh, the extra cost to electric customers would $3,942,000 per year[9] or nearly 8 times the income received by the few landowners. That is why it would be cheaper for the electric customers to pay the landowners to NOT allow wind turbines to be built on their land!

To repeat, the big "losers" when "wind farms" are built are the electric customers who pay the higher true cost of electricity produced by the "wind farms" and ordinary taxpayers who absorb the tax burden escaped by the owners.

10) **Some in the wind industry and their advocates in DOE may claim that "wind energy" deserves the huge tax breaks and other subsidies because other energy sources have received even larger government-imposed benefits.** Ideally, subsidies for all energy sources would be reduced significantly, but the wind argument is fundamentally flawed because it does not take into account either the existing or potential contribution of wind energy in supplying US energy requirements.

My preliminary estimates indicated that tax breaks and subsidies for wind energy from the first few items in the above list will easily exceed $300 million in 2002 and may be higher in the years ahead.

The wind industry's claims that it does not get its fair share of government subsidies should be considered in light of the small contribution that wind is expected to contribute in supplying US energy requirements. This small contribution (despite the enormous growth in subsidies) can be seen in the following table that is based on the Energy Information Administration's (EIA) Annual Energy Outlook 2004.

US Energy Consumption by Energy Source: 2000 Actual and EIA Forecast for 2025				
	Actual 2000		EIA Forecast for 2025	
Energy Source	Quadrillion Btu	% of Total	Quadrillion Btu	% of Total
Traditional Sources				
Petroleum products	38.39	38.60%	54.64	40.01%
Natural Gas	24.07	24.20%	32.21	23.58%
Coal	22.64	22.76%	31.73	21.14%
Nuclear Power	7.87	7.91%	8.53	6.25%
Conventional Hydropower	2.84	2.86%	3.17	2.32%
Other	0.31	0.31%	0.03	0.02%
Sub-Total – Traditional	96.12	96.64%	130.31	95.41%
Non-Hydro Renewables				
Geothermal	0.30	0.30%	1.37	1.00%
Wood	0.41	0.41%	0.41	0.30%
Other Biomass	2.07	2.08%	3.09	2.26%
Municipal Solid Waste	0.31	0.31%	0.40	0.29%
Solar Thermal, electric & hot water	0.06	0.06%	0.09	0.07%
Solar Photovoltaic	0.00	0.00%	0.01	0.01%
Ethanol	0.14	0.14%	0.35	0.26%
Wind	0.05	0.05%	0.55	0.40%
Sub Total – Non-Hydro renew.	3.34	3.36%	6.27	4.59%
Total	99.46	100%	136.58	100%

As the table shows, fossil energy sources (petroleum, natural gas and coal, combined) are expected to supply 84.73% of US energy requirements in 2025 – or 212 times the 40/100 of 1% expected from wind. If wind subsidies totaled $300,000,000 in 2002, the

industry's "fair share" argument would suggest that subsidies for fossil energy sources should be at least $63,600,000,000! Clearly, the wind industry's claim is without merit.

Some wind energy advocates have claimed that wind energy could help reduce US dependence on imported oil. That claim is false because very little electricity is produced by oil-fired generating units (less than 3%) and that share is decreasing steadily. Older oil-fired units are being replaced with units using other energy sources (usually natural gas). Oil-fired turbines are used only when required to satisfy peak demand and intermittent wind turbines cannot be counted on to supply electricity during peak periods.

c. **Despite facts, it's hard to reverse bad government policies and programs.** Clearly, wind energy advocates in the US Department of Energy (DOE), DOE's National Renewable Energy "Laboratory" (NREL) and the wind industry have been successful in spreading their claims. Many in governments, the media and the public have believed those claims and now speak favorably about "wind energy" but without ever having tested their accuracy.

As "wind farms" have spread, citizens' groups in the US and other countries have begun evaluating, challenging and exposing false and misleading claims made by the advocates. However, citizens' groups that challenge government wind energy policies face an uphill battle. Strong constituencies always coalesce around and fight to continue and expand government policies, programs and regulations that provide hundreds of millions of dollars in generous tax breaks and other subsidies. The wind industry and its supporters – with so much taxpayer and electric customer money available to them – can easily afford political contributions and other lobbying efforts to achieve their objectives.

Also, the wind industry has ready access to and support from DOE officials who control the flow of tax dollars for renewable energy programs, as well as NREL and other DOE contractor employees who – using taxpayer dollars -- aid the wind industry's lobbying and public relations efforts. These officials and employees actively participate in the development and distribution of biased "studies," "analyses," and "reports" that overstate the benefits and understate the true costs of wind energy.[10] Their actions suggest that their loyalty is to the interests of the wind industry, not those of taxpayers and consumers.

Ideally, citizens would have an avenue for redress via the US Congress, but that avenue is effectively closed off by (a) the dominance of the DOE-NREL-wind industry lobbying and PR efforts, and (b) the fact that members of Congress and their staffs are much more responsive to special interests than to the interests of ordinary taxpayers and consumers.

6. Renewable Portfolio Standards – An Insidious Device to Shift Costs to Consumers

Fortunately, the leading "energy" legislation pending in the US Congress does not provide for nationwide "Renewable Portfolio Standards" (RPS). As you probably know, a "Renewable Portfolio Standard" or RPS would set some minimum amount or percentage of electricity that a distribution company would have to produce or purchase and make available to its customers. The "standard" would have to be met even though electricity produced from "renewable" sources was substantially more costly than electricity form "traditional" sources.

Renewable Portfolio Standards have been adopted in several states, including Iowa, and are being considered actively by other states, including Missouri.

Such standards benefit wind and other "renewable" electricity producers at the expense of electric customers. I mentioned earlier that (a) Renewable Portfolio Standards are one of the many subsidies being provided for wind energy and (b) that I believe Renewable Portfolio Standards are one of the most insidious ways yet developed to shift costs from renewable developers to ordinary electric customers – and to hide those costs in monthly electric bills.

It's important to note that most advocates of RPS do NOT consider hydropower as an acceptable "renewable" energy source. Instead, the standard would have to be met with electricity produced from geothermal, solar, wind or certain biomass sources.

Many utilities, usually in order to comply with statutes or regulations, offer their customers the option of paying a premium price for electricity that is (allegedly) produced from one of the accepted "renewable" energy sources.

However, relatively few customers sign up for these programs. On average, less than 1% of the electric customers have signed up to pay the premium prices. The revenue that is received from the few customers who sign up generally is not sufficient to cover the higher cost of the electricity and the cost of administering the program. Since the utility subject to an RPS must recover its costs, the portion of those costs *not* paid by volunteers is likely to be spread over all other electric customers and collected through monthly electric bills – often without the customers' specific knowledge.

The practical result for producers of electricity from "renewables" is that they have a government-created "market" for their expensive products. RPS are, in effect, a device to "tax" electric customers for the benefit of producers of high cost electricity from "renewables." That's why I consider RPS as an insidious device.

If you agree, I hope you will work to convince your federal and state legislators to avoid establishing either a national or state RPS.

7. Conclusions

In summary, I believe the facts support the following conclusions concerning our national energy outlook and the role of wind energy:

- The US has been, is now, and will almost certainly continue for decades to be heavily dependent on coal, petroleum, natural gas, hydropower and nuclear energy to meet our energy requirements.

- Despite the hundreds of millions of tax dollars spent on R&D and the other generous subsidies, there is no serious possibility that non-hydro "renewable" energy sources will make a significant contribution toward supplying US energy requirements.

- Improvements in energy efficiency and reductions in energy intensity have enabled the US to continue economic growth while holding down energy demand and energy costs. However, those improvements should not be attributed to government-mandated standards, which have imposed hundreds of millions of dollars in additional costs on the nation's consumers.

- The wind industry, DOE and its national laboratories, and other wind energy advocates have misled the public, media, Congress and state legislators and regulators with their claims about the benefits of wind energy. In fact, they have greatly overstated the benefits and understated the true costs.

- Federal and state government actions designed to force greater reliance on wind and other non-hydro renewable energy sources are:

    - Distorting capital investment by steering capital to projects that have little merit.
    - Producing significant transfers of wealth from taxpayers and electric customers to owners of "wind farms" and other renewable energy production facilities.

    These effects are particularly true in the case of the generous federal and state tax breaks and "Renewable Portfolio Standards."

- The people of America are not being well served by federal and state government officials who:
    - Fail to understand the facts about the nation's energy situation and outlook,
    - Continue pursuing energy policies that are costly and ineffective, and
    - Cater to special interest groups at the expense of consumers and taxpayers.

Thank you for your attention. I would be pleased to answer any questions you have about my comments.

Endnotes

[1] *Federal Register*, Volume 66, pages 3316ff, January 12, 2001. DOE Technical Support Document.
[2] US Energy Information Administration, *Annual Energy Outlook 2004*, Table A2 and Supplemental Table 2.
[3] US Energy Information Administration, *International Energy Outlook 2004*, Table A3, p. 166.
[4] US Energy Information Administration, *Annual Energy Outlook 2004*, Table A8.
[5] Mr. Buffett's February 27, 2004, Chairman's Annual Letter to Shareholders, Berkshire Hathaway, p. 14.
[6] That is, total capacity of 6,370,000 kW of rated capacity x 8760 hours per year x .25 capacity factor.
[7] The National Renewable Energy Laboratory (NREL) recently released an economic model, called JEDI, that allegedly would permit calculating local economic impacts of a "wind farm." Analysis of the model revealed that it is deficient in many ways and grossly overstates local economic benefits and understates economic costs.
[8] There is a further risk that state and local government officials need to consider. It is quite common for owners of "wind farms" to place the title in single asset limited liability companies (LLCs). Because of the huge front end

loading of tax benefits, there could be a big incentive for "wind farm" owners to sell or abandon wind facilities if performance deteriorates or maintenance, repair and replacement costs escalate. As occurred in California (where hundreds of windmills were built in response to big tax incentives in the 1980s), localities could be faced with the problem of deteriorating and abandoned windmills after the tax benefits for "wind farms" have been captured by the original owners.

[9] That is, 100,000 kW capacity x 8760 hours per year x .30 capacity factor x $0.015 per kWh = $3,942,000.

[10] For example, NREL recently released an economic "model" (labeled JEDI -- Jobs and Economic Development Impact or WIM -- Wind Impact Model) that allegedly permits calculating local and/or state economic benefits that flow from construction and operation of a "wind farm." Analysis demonstrates that the model relies on assumptions that produce overestimates of economic benefits and fails to consider many costs resulting from "wind farms." This is but one example of NREL and DOE's Office of Energy Efficiency and Renewable Energy (DOE-EERE) documents that overstate benefits and underestimate costs of wind energy.

Response for Document 80002

80002-001: The commentor suggests that the analysis undertaken to estimate the economic impacts of wind energy development is deficient because (1) the impacts of these developments on individual utility generation and transmission systems are not explicitly considered in the analysis, and (2) the models used in the analysis are flawed.

As is stated in the Executive Summary (page ES-1) and in Chapter 1 of the PEIS, the purpose of the PEIS is "to assess the environmental, social, and economic impacts of wind energy development on BLM-administered land." A cost-benefit analysis would likely have considered a range of factors relevant to the development of wind energy compared with other forms of electricity generation. These factors would include impacts on individual utility generation and transmission systems, specifically the impacts on generation capacity and reliability considerations, air quality, and ratepayer and taxpayer impacts. Although the analysis undertaken for the PEIS used a wind development scenario that takes into account some of these factors, in particular capital costs, fossil fuel prices, and transmission systems issues, the analysis is limited specifically to those environmental and economic impacts that result from wind energy developments on BLM-administered land. The analysis of impacts on utility systems, and environmental and economic impacts that occur beyond BLM-administered land is, therefore, beyond the scope of the analysis undertaken for the PEIS.

The amount of predicted wind capacity in each state was calculated by the National Renewable Energy Laboratory (NREL) by using the Wind Industry (WinDs) Model, which uses the best available data and modeling methodology for this purpose. The calculations are based on a maximum market capacity for wind development subject to environmental and other planning constraints on BLM-administered lands. Data generated by NREL in the WinDs Model were used as a basis for estimating the impacts of wind development over the time period 2005 to 2025. The WinDs data show the timing of maximum potential wind development for each of the 11 states with BLM-administered land, given a series of assumptions relating to location, capital costs, fossil fuel prices, and transmission systems issues. A large proportion of the data used in the model comes from federal government sources, in particular the U.S. Department of Energy's Annual Energy Outlook, which forecasts fossil energy prices over the time period used in the PEIS. A full description of the WinDs model appears in Appendix B of the PEIS.

The purpose of the modeling efforts in this PEIS is to provide a general framework of possible development over the next 20 years, in order to assess the impacts of implementing a Wind Energy Development Program for BLM-administered lands. The BLM recognizes that many factors can affect the accuracy of the projections, and, as discussed in Appendix B, a variety of

factors will determine actual development levels. However, the maximum potential development scenario (MPDS) and WinDS models employed in the PEIS are adequate for forecasting potential development levels over such a large geographic area and long, projected time frame. Greater accuracy in these forecasts would not likely result in changes to the requirements of the Wind Energy Development Program; that is, the proposed policies and BMPs would not be changed at this time. The program requires that BLM employ adaptive management strategies to the oversight of wind energy development on BLM-administered lands. The BLM will monitor the level of wind energy development into the future as well as the effectiveness of its policies and BMPs. If necessary, adjustments to the programmatic requirements will be made.

Although the Jobs and Economic Development Impact (JEDI) Model developed by NREL (2004) can be used for local and state level analyses of wind projects, it was not used to estimate these impacts in the PEIS. As discussed in Section 13.1, representative data were taken from the JEDI model and other sources to support the PEIS economic impact calculations. Specifically, data describing the breakdown of specific cost elements for a generic wind project were taken from the JEDI model. Beyond the use of these cost data, the estimation of impacts of wind development for each of the years and states was undertaken independently of the JEDI model.

Document 80003

WindEISArchives

From: windeiswebmaster
Sent: Monday, September 13, 2004 2:52 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80003

BLM_Comment_800
03.doc (25 KB)

Thank you for your comment, Rick Benas.

The comment tracking number that has been assigned to your comment is 80003. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: September 13, 2004 02:52:00PM CDT

Wind Energy EIS Draft Comment: 80003

First Name: Rick
Middle Initial: C
Last Name: Benas
Organization: The Saratoga Associates
Address: 443 Broadway
City: Saratoga Springs
State: NY
Zip: 12866
Country: USA
Privacy Preference: Don't withhold name or address from public record
Attachment: S:\50019\Benas.rcb\BLM Comment.doc

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Comment:

The Saratoga Associates (TSA) thanks the BLM for the opportunity to comment on the Draft Programmatic EIS facilitating wind energy development. TSA would like to share a visual migration strategy developed in New York State that we believe will facilitate wind energy development in sensitive areas such as public lands administered by BLM.

The strategy is called "Enforceable Sustainability" (See article in North American Windpower Sept. and Oct. issues of this year) and is derived from the New York State Department of Environmental Conservation's (NYSDEC) Program Policy "Assessing and Mitigating Visual Impacts". (The NYSDEC Visual Policy is available on NYSDEC's website).

In order to assert that visual impacts have been sufficiently minimized to the extent practicable it is essential that each and every visual mitigation strategy should be employed and those that are not applicable should be addressed by stating why the strategy does not apply. The NYSDEC Policy has a universal list of known mitigation strategies. One strategy that BLM does not address is aesthetic offsets.

Aesthetic offsets were first conceptualized and introduced in New York State. This occurred in 1982 in the Marcy-South Electric Transmission Line Administrative Law Proceeding (PSC Case 70126). They were created in direct response to address visual and aesthetic impacts from an overhead 345kV electric transmission line incapable of being fully mitigated. Such transmission facilities have visual and aesthetic characteristics similar to wind turbine arrays.

An aesthetic offset is defined as a correction of an existing aesthetic problem [eyesore] within the project viewshed *not required under any existing legal authority*. Another example of a legitimate offset is to clean up a messy and unkempt area, also within the project-affected viewshed that would otherwise not occur because of funding limitations. These types of aesthetic problems (there are others) are offset candidates. A decline in the landscape quality associated with a proposed project can, at least partially, be "offset" by the correction. The Policy further states that offsets should be employed in sensitive locations, where significant impacts from the proposal are unavoidable or mitigation of other types would be uneconomic, and the mitigation used is only partially effective. This is the case with wind turbine arrays. 80003-1

Offsets are direct aesthetic corrections within the project-affected viewshed that would not otherwise occur. Offsets are not the same as other compensatory mechanisms. Compensatory mechanisms, such as parkland and wetland creation and acquisition and other niceties, are not true offsets, although they may also be very valuable. True aesthetic offsets must be viewed in exactly the same way as air quality offsets (see 6 NYCRR Part 231 or Federal equivalent) for a further understanding of offsets.

By bundling decommissioning and offsets, and making them enforceable the public is assured that its treasured places and public lands will ultimately be restored and left in an *improved* condition.

The public, particularly the splintered segment of the environmental community, understands the long-standing American tradition of respecting the greatest good for the greatest number *in the long run*. In addition, to be sustainable, decommissioning should include the provision for maximum recycling and reuse of the project remnants. The public may then more fully embrace

wind energy, a proven leader in sustainable energy and accept the demanding presence of the wind farm on public lands at least in the short run.

80003-1 (cont.)

Response for Document 80003

80003-001: Thank you for your comment. We appreciate your input and participation in the public review process. Aesthetic offsets have been incorporated as a possible mitigation strategy for the BLM to consider during site-specific evaluations.

Document 80004

WindEISArchives

From: windeiswebmaster
Sent: Monday, September 13, 2004 5:08 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80004

Thank you for your comment, barb sachau.

The comment tracking number that has been assigned to your comment is 80004. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: September 13, 2004 05:08:15PM CDT

Wind Energy EIS Draft Comment: 80004

First Name: barb
Last Name: sachau
Address: 15 elm st
City: florham park
State: NJ
Zip: 07932
Country: USA
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
turbines kill birds. i oppose and object to any more installations of wind turbines to kill birds - i am absolutely, vehemently opposed. minimizing kills is clearly not good enough. We need a less harmful way of energy production. I also oppose blm giving the american public "choices" of their choice this smacks of saddam hussein. americans can well make their own choices of their own free will - they do not need to be forcefed by blm, the agency that kills wild horses.

dead birds stay dead. i do not want wind turbines.
During 2003 bats migrated in northern appalachia. 400 died at FPL Energy Mountaineer wind energy center on backbone mountain in west virginia. the site was only inspected weekly so the kill was probably much larger than that.

In Altamont Pass in San Francisco 7000 towers killed 22000 birds including 400 to 800 golden eagles. environmental groups that once favored wind power now oppose it.

80004-1

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80004

80004-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80005

WindEISArchives

From: windeiswebmaster
Sent: Monday, September 13, 2004 11:59 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80005

Thank you for your comment, David Freeman.

The comment tracking number that has been assigned to your comment is 80005. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: September 13, 2004 11:58:51PM CDT

Wind Energy EIS Draft Comment: 80005

First Name: David
Middle Initial: w
Last Name: Freeman
Address: 706 Muir avenue
Address 2: Rock Springs Wyoming
City: Rock Springs Wyoming
State: WY
Zip: 82901
Country: USA
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
I am in favor of developing wind energy resources in wyoming. I see no reason not to develope it, and solar power as well. Thanks. Dave Freeman

80005-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80005

80005-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80006

WindEISArchives

From: windeiswebmaster
Sent: Tuesday, September 14, 2004 11:23 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80006

Thank you for your comment, Edith and Thomas Welty.

The comment tracking number that has been assigned to your comment is 80006. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: September 14, 2004 11:22:51AM CDT

Wind Energy EIS Draft Comment: 80006

First Name: Edith and Thomas
Middle Initial: R
Last Name: Welty
Address: 5990 East Jeremy Lane
City: Flagstaff
State: AZ
Zip: 86004
Country: USA
Email: twelty@earthlink.net
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
Yes! It is a good idea to use BLM land for wind energy. I support all your efforts. 80006-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80006

80006-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80007

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Wednesday, September 15, 2004 2:40 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80007

Thank you for your comment, Timothy Goodrich.

The comment tracking number that has been assigned to your comment is 80007. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: September 15, 2004 02:40:05PM CDT

Wind Energy EIS Draft Comment: 80007

First Name: Timothy
Middle Initial: G
Last Name: Goodrich
Address: 1786 Avenida Alta Mira
City: Oceanside
State: CA
Zip: 92056
Country: USA
Email: tggoodrich@cox.net
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
In reference to the Draft EIS proposal: I am in favor of any measure that would help the propogation of clean, renewable wind energy in the United States as long as it proves to be safe in the regards of animals in thier migratory patterns and other movements. 80007-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80007

80007-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80008

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, September 16, 2004 3:18 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80008

Radnor_revisited_8 0008.doc (37...

Thank you for your comment, Sue Sliwinski.

The comment tracking number that has been assigned to your comment is 80008. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: September 16, 2004 03:18:24PM CDT

Wind Energy EIS Draft Comment: 80008

First Name: Sue
Middle Initial: m
Last Name: Sliwinski
Organization: Sardinia preservation Group
Address: 10820 allen rd.
City: east concord
State: NY
Zip: 14055
Country: USA
Privacy Preference: Don't withhold name or address from public record
Attachment: C:\Documents and Settings\Computer\My Documents\sues\Radnor revisited.doc

Comment Submitted:
Today's commercial wind energy is not beneficial enough to justify it's intrusion into our most natural places. It does not allow fossil fuel plants to stop or even reduce their function significantly, so they continue to spew in spite of the monster turbines. Wind developers are very aggressive and I'm not surprised that you have many applications already. EXPECT MANY MORE! Where will you draw the line? As for noise, your website simply quotes industry rhetoric. The newer turbines have NOT been improved, and noise continues to be a huge impact, particularly since developers insist on building too close to people's homes. You should do your own research instead of relying on industry propaganda.
If the wind industry really made a true difference, it's intrusion would be tolerated. But it doesn't. In Europe where development has existed for a number of years, there is swelling opposition to commercial wind, to the point that new political parties are forming to fight it's advancement. Wind power is the only renewable energy that promotes itself as "being ready and available NOW", as compared with solar and other sources, so goverments are relying heavily on it to meet their green targets...much too heavily. In the US, I'm sure that many projects will have to be built before the majority starts to realize what folly it is, and it would be a shame if our most pristine locations are already ruined by that time. It would be wise for you to take a 'wait and see' approach. Give it 5 years, and then take this poll again. You will notice a big difference between then and now.
Please see attachment that shows the little benefit wind has compared with it's huge negative impact. The document compares the simple use of energy efficient lightbulbs with the output of giant wind turbines. Which do you think is 'greener'?

80008-1

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

EMPAInc.*

Investment in Wind yields negligible Environmental Benefits

A February 26, 2003, news story distributed by PRNewswire states, "Radnor Township announced today that it will purchase a large portion of its electricity from wind energy, making it the nation's leading wind energy purchaser among municipalities."

The story also indicates that the purchase involves 1,400,000 kilowatt hours (kWh) per year for 3 years, with the electricity coming from a wind plant near Mount Storm in West Virginia.

Action has negative environmental consequences

The Township officials' action was no doubt well intentioned but analysis of the transaction described in the story shows that they:

- Incorrectly assume the action has a favorable environmental impact.
- Do not understand the actual costs and benefits of electricity from commercial wind plants.
- Do not recognize that the tiny, if any, environmental benefit of their action is overwhelmed by the adverse environmental, ecological, scenic and property value impact in West Virginia where wind plants are being constructed to produce the electricity.
- Could have taken other action resulting in greater benefit, without the environmental costs.

Radnor's Planned Purchase not 'Significant'

80008-2

Though the purchase is referred to as 'significant', it is not. The amount of electricity involved – 1,400,000 kWh per year -- may sound like a lot but it is equal to just 1/1000 of 1% of the 136,778,000,000 kWh of electricity sold by electric utilities in Pennsylvania during 2001.

Adverse Environmental Impact of Wind Plants in West Virginia

The FPL Energy-owned wind plant that would, in theory, produce the electricity that Radnor plans to purchase is but one of several planned for scenic West Virginia. Another proposal in the area would result in 200 (350-400 ft.) wind turbines along 14 miles of picturesque high mountains near Canaan Valley National Wildlife Refuge, Canaan Valley State Park, Blackwater Falls State Park, and the Monongahela National Forest, which includes Dolly Sods and Dolly Sods Wilderness Area. (Famous places in Monongahela National Forest nearby are Bear Rocks, Stack Rocks, Blackbird Knob, Red Creek Campground, and the Allegheny Front Bird Observatory.)

True costs and benefits of electricity from commercial wind plants

The story reveals that Radnor officials were misled and don't understand that commercial wind energy is not an environmentally benign source of electricity. The officials are probably not aware of certain facts such as the following:

Energy Market & Policy Analysis, Inc., PO Box 3875, Reston, VA 20195-1875, Phone: 703 709-2213
Email: EMPAInc@aol.com

1. **Electricity produced from wind detracts from electric system stability.** Wind turbines produce electricity only when the wind is blowing within certain speed ranges. Their output is intermittent, highly variable, and largely unpredictable and uncontrollable. They detract from – rather than add to – electric system stability. Because electric systems must be constantly kept in balance (supply-demand, frequency, voltage, transmission line load), reliable or "dispatchable" generating units, powered generally by traditional energy sources, must be immediately available to "back up" the unreliable output from wind plants.

2. **Promoters of wind energy routinely overstate environmental benefits.** Wind promoters incorrectly advocate that each kilowatt-hour (kWh) of electricity produced by a wind turbine displaces the same amount of fuel-use and emissions associated with a kWh of electricity produced by a fossil-fuel generating unit. However, the reliable generating units that serve in the "backup" role for the unreliable output of wind turbines must be running at near full capacity, or in "spinning reserve" mode, even when the turbines are generating electricity. While operating in these modes, the fossil-fueled units are producing close to the same amount of emissions as they would in generating modes. Therefore, the contribution of wind turbines to emission reduction will be tiny, at best, and perhaps non-existent. In addition to the incorrect assumption by kWh-per-kWh offsets, wind energy advocates often use outdated information about emissions when making their claims, not taking into account the difference that newer, cleaner burning fossil fueled plants make.

3. **Promoters routinely ignore wind development environmental damage.** Electricity from wind is not environmentally benign. Damage caused by wind plants are becoming increasingly clear, which explains the growing opposition to them in the US and Europe. Wind plants adversely affect a wide variety of environmental, ecological, and scenic values. Concerns include bird kills, interference with migration patterns, and noise and "flicker" at nearby residences, often affecting the occupant's health. Local governments that are responsible for safety must be aware of common problems such as fires, falling ice, and blade disintegration caused by mechanical failures and lightning. 80008-2 (cont.)

   The scenic impact of wind plants is significant, and as valued natural landscapes disappear, more concern is apparent. Governments are recognizing that protective measures are needed. An Oregon official who, after recently passing a wind facility along the Washington-Oregon border, was quoted in a Washington paper as saying: "How is this different than allowing illuminated advertising billboards in our most beautiful places? "

4. **The huge machines produce very little electricity.** If FPL Energy's 66-megawatt wind plant on West Virginia's Backbone Mountain, with its 44 wind turbines spread across over 4,000 acres of land, achieves an annual 30% capacity factor, it will produce 173,448,000 kWh of electricity each year (i.e., 66,000 kW x 8760 hours x .30). That sounds like a lot of electricity but, in fact, it is equal to:

   a. 13/100 of 1% of the 136,778,000,000 kWh of electricity sold by electric utilities in Pennsylvania during 2001.

   b. 19/100 of 1% of the 92,783,000,000 kWh of electricity produced in West Virginia during 2000.

5. **The primary driving force for the construction of wind plants is the windfall profits accruing to their owners as a result of federal and state tax shelters and other credits– not because of benefits to the environment.** Wind plants provide few, if any, environmental benefits and few net economic benefits to the areas where they are located.

A company proposing a new 300 megawatt wind plant in West Virginia costing $300,000,000 would be able to:

a. Shelter $132,000,000 from federal income tax liability in the tax year when the project went into service, an additional $67,200,000 in the second year, $40,320,000 in the third year, and the remaining $60,480,000 in the next 3 years because of generous accelerated depreciation allowed for wind plants. Assuming a marginal tax rate of 35%, this could reduce the company's federal tax liability by $46,200,000 in the first year, $23,530,000 in the second year, $14,112,000 in the third year and $21,168,000 in the next 3 years.

b. Deduct an additional $14,191,200 per year for 10 years from its federal tax liability because of federal Production Tax Credits of $0.018 per kWh for all electricity produced.

c. Escape significant West Virginia corporate income tax liability because the federal accelerated depreciation reduces taxable income. The tax that could be avoided could amount to 9% (the WV corporate tax rate) of the amount of the federal depreciation deduction; i.e., $11,880,000 in the first year, $6,048,000 in the second year, $3,628,800 in the third year, and $5,443,200 in the next three years.

d. Avoid approximately 90% of the normal liability for the West Virginia's Business & Occupation Tax and for the West Virginia Property Tax that provides funds for County and School functions -- because of special tax breaks passed by the West Virginia Legislature. (This benefit would be worth $2.5 to $3 million per year in avoided taxes.)

80008-2 (cont.)

The above federal and state tax breaks add up to $77,423,460 in the first year, $48, 911,460 in the second year and a total of $325,434,600 for the first 10 years. The tax breaks for wind plant owners shift tax burdens to remaining taxpayers, further degrading supposed local economic benefits.

The value of the tax breaks to the wind plant owner could easily exceed the owner's income from the sale of electricity, particularly in the early years of the project. That income would be approximately $23,652,000 per year if the wind plant achieved a 30% capacity factor and the electricity were sold for $0.03 per kWh (i.e., 300,000 kW x 8760 hrs. x .30 capacity factor x $0.03 per kWh sale price would = $23,652,000).

Radnor could more effectively reduce environmental impact of it's electric generation

Radnor is a wealthy Township. According to the Town's web site, the average home sale price in 2000 was $382,269. Quite likely, many residents there can afford environmental improvement measures without exporting adverse environmental impacts onto others. However, no one needs to be wealthy to be more environmentally sensitive.

Census data shows that Radnor has about 10,000 households. If each household substituted two 27-watt energy efficient light bulbs for two 100-watt incandescent bulbs that are used an average of 4 hours per day, the people of Radnor Township would avoid the use of 2,131,600 kWh of electricity each year*, approximately **50% more** than the 1,400,000 kWh wind power purchase!

* 2 bulbs x 73 watts x 4 hours would save 584 watt-hours per day. 584 watt-hours x 365 days = 213,160 watt-hours per year per household. 10,000 households x 213,160 watt-hours = 2,131,600,000 watt-hours or 2,131,600 kWh.

Reduced Electric bills for Radnor residents

At $5 per bulb, 20,000 bulbs would cost $100,000. But, assuming an average rate of $0.13 per kWh, Radnor residents would reduce their electric bills by $277,108 annually. So in addition to reducing the environmental impact associated with generating the unneeded 2,131,600 kWh, the cost to electric consumers would also be reduced. (That might explain the purchase participation of Exelon, the parent company of the local utility that serves Radnor Township.)

Environmental Symbolism over Substance

Radnor Township's decision to purchase 1,400,000 kWh of electricity from wind energy is a clear case of symbolism over substance. Contrary to the claim in the press release, the Commissioners should not receive acclaim for [their] "visionary wind purchase", because the attempt to polish their environmental image ignores the adverse environmental, ecological, scenic and property value impacts on the West Virginia residents where the giant wind turbines are located. Others involved in the scheme include:

- FPL Energy, the current owner of the wind plant on Backbone Mountain in West Virginia, now called the "Mountaineer Wind Energy Center."
- The Exelon Power Team that has contracted for the purchase of electricity from the FPL Energy wind plant.
- Washington Gas Energy Services, Community Energy, Inc. and the Energy Cooperative, the companies marketing the electricity.
- Radnor Township Environmental Advisory Committee, and the Clean Air Council of Pennsylvania who are participating in or encouraging environmental symbolism.
- The collection of organizations in the Washington, DC, area that have announced similar purchases during the past few weeks of what is purported to be electricity produced from the FPL Energy owned wind plant in West Virginia. These include:

1. Montgomery County, Maryland
2. Catholic University, American University, and the World Bank- District of Columbia

80008-2 (cont.)

The U.S. Department of Energy sponsored a conference at which Radnor's symbolic purchase was announced. The overall cost of that conference to taxpayers and participants exceeded $100,000, which could have paid for the 20,000 energy efficient light bulbs that would have allowed Radnor Township to realize a greater savings in electricity use than the amount of the token wind energy purchase. Not only would that have meant less consumption, equating to less generation, resulting in less emissions and less cost, it would also have NOT supported an inappropriate and unnecessary power plant in another state, that is robbing local residents of their natural environment and their quality of life.

* * *

Responses for Document 80008

80008-001: Thank you for your comment. We appreciate your input and participation in the public review process.

80008-002: As is stated in the Executive Summary (page ES-1) and in Chapter 1 of the PEIS, the purpose of the PEIS is "to assess the environmental, social, and economic impacts of wind energy development on BLM-administered land." The analysis undertaken for the PEIS included a wide range of economic and environmental factors relevant to the assessment of impacts of wind projects on BLM-administered land. The PEIS also used a wind development scenario that takes into account capital costs, fossil fuel prices, and transmission systems issues, as the basis for the calculation of environmental and economic impacts. Other factors that may be included in a broader analysis of wind energy compared with other forms of electricity generation, including impacts on individual utility generation and transmission systems, the impact of conservation measures, and the impact on ratepayers and taxpayers, were not included in the PEIS analysis. The majority of these impacts would likely be taken into account as part of the initial decision to proceed with specific wind development projects and are, therefore, beyond the scope of the analysis undertaken for the PEIS.

Document 80009

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, September 16, 2004 7:40 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80009

Thank you for your comment, Luis Pacheco.

The comment tracking number that has been assigned to your comment is 80009. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: September 16, 2004 07:39:36PM CDT

Wind Energy EIS Draft Comment: 80009

First Name: Luis
Middle Initial: R
Last Name: Pacheco
Address: #####
City: #####
State: ##
Zip: #####
Country: USA
Email: #####
Privacy Preference: Withhold address only from public record

Comment Submitted:
How canI be part of the wind energy program..Im the owner of 80 acres in #####, ##### County, i will like to make the 80 acres a wind field of energy..with the help of our federal gov. I don't have the money to do it my self. Thanks Luis. 80009-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80009

80009-001: Your comment addresses issues that are beyond the scope of the PEIS, the mission and responsibilities of the BLM, and/or the defined programmatic scope of the proposed Wind Energy Development Program. We appreciate your input and participation in the public review process.

Document 80010

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Monday, September 20, 2004 11:58 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80010

Thank you for your comment, Marty Malone.

The comment tracking number that has been assigned to your comment is 80010. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: September 20, 2004 11:57:33AM CDT

Wind Energy EIS Draft Comment: 80010

First Name: Marty
Last Name: Malone
State: ##
Zip: #####
Country: USA
Privacy Preference: Withhold address only from public record

Comment Submitted:
I am in favor of developing wind energy resources on public land. 80010-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80010

80010-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80012

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, October 01, 2004 6:53 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80012

WavegenTech_800 12.pdf (193 KB)...

Thank you for your comment, Paul Caetano.

The comment tracking number that has been assigned to your comment is 80012. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: October 1, 2004 06:52:34AM CDT

Wind Energy EIS Draft Comment: 80012

First Name: Paul
Middle Initial: J
Last Name: Caetano
Address: 4667 N. Safford Ave
City: Fresno
State: CA
Zip: 93704-2920
Country: USA
Email: pcaetano@pacbell.net
Privacy Preference: Don't withhold name or address from public record
Attachment: C:\Documents and Settings\AntiMusick\My Documents\WavegenTech.pdf

Comment Submitted:

Wind energy is ok, but do we really want to see a bunch of prop turbines dotting the landscape like trees? The reports say they kill many birds. Well how about focusing on Wave Power, Wave Energy is untapped here in the United States, this is what we should be doing don't let Europe pass us in this technology. Back In 2000 when California had the energy crisis I wondered if anyone knew about Wave Power, it is simple, have you ever seen a "marine geyser" or Hawaii's ! "blowholes". Wave generators works on the principle of a piston, the waves go up and down in a man made chamber near the ocean, a hole on top lets the air in and out with the rhythm of the waves all you need to a turbine generator to harness the energy. Take a look at the wavegen.com pages and see what they have been doing in Scotland for some years now. 80012-1 80012-2

http://www.wavegen.com
http://www.wavegen.co.uk

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Realities of Wave Technology

Tom Heath BSc,PhD,M.I.Mech.E C.Eng – Wavegen

Synopsis

The opportunities offered by wave energy are discussed together with the available resource. The technical challenges are highlighted with particular reference to Wavegen's LIMPET plant on the island of Islay. Areas of application of wave energy technology are discussed.

From where do waves come?

Figure 1

Viewed from Space the earth is a beautiful place with white clouds covering the blue of the sea and the greens and yellow of the land. The whole planet is warmed to a greater or lesser degree by the sun whose nuclear furnace has supplied will continue to supply all the energy ever used by humanity. Through the effects of cloud cover and through the differential heat absorbtion by land and water with differing surface conditions, through the influence of the rotating earth and the effects of day and night different parts of the atmosphere warm to differing degrees creating pressure variations across the globe and the general rotation of the atmosphere. These temperature differences cause density variations which influenced by gravity and the spinning globe cause winds. As the wind drags across the surface of the ocean they drag the water surface with it creating ripples on still water. As the wind continues to blow the ripples become wavelets, the wavelets become waves and if the fetch is long enough, the waves develop into the great ocean swells beloved of surfers. Once formed ocean waves can travel great distances with minimal loss of energy until they break on some distant shore. We thus see that wave energy is simply a derived form of solar power which is constantly renewed by the sun and the engine of the atmosphere.

Wave Energy resource

Just as electrical power is not stored in transmission lines but flows from the generator to the user, so wave energy is not static but flows in the direction of wave propagation. If the energy flowing past a particular point in the ocean or arriving at a shoreline is not captured there then it is lost. Fortunately for the wave energy industry if one wave is lost there will be another one along soon bearing more energy. Because the energy is flowing we can consider the amount of

Figure 2

power in kW contained in each linear metre of wave front. Figure 2 shows values of annual average power flux in kW/m at different points across the globe. The quoted values are for deep water sites and hide one of the inescapable realities of wave energy; that a single point value of annual wave power hides the wide variation between the differing power available in different seasons of the year. Off the West coast of Scotland the winter availability may be four times the summer average. In our part of the world this can be considered an advantage because our energy demand in the cold season is so much higher than that in the summer months. This is not necessarily true worldwide. The Atlantic seaboard of the British Isles has one of the best wave energy climates on the planet with 60-70kW/m in deep water off the Western Isles falling to 15-20kW at the shoreline as the effects of bottom friction and wave breaking take their toll. With the land mass of Scotland offering shelter to the south west the available power falls as we move east along the northern coast of Scotland but is still a remarkably attractive 25-50kW/m (dependent on water depth) by the time we reach the waters of Orcadia. The reality is that the power is there, the challenge is to harness it.

The Challenge for Wave Power

For more than two centuries inventors have been filing patents for systems to capture power from the waves and yet we still do not have a wide application of wave energy devices as power generators. So what is the problem? Actually there is no conceptual problem. We can extract power using articulated rafts, nodding ducks, compressible floating bags, tethered buoys, bottom standing oscillating water columns, over-spilling systems, submerged pressure chambers etc etc. Similarly there are no insurmountable technical problems. Whilst there is much engineering difficulty the wave energy community has solutions to just about every aspect of the technology. The reality is that the only long term problem is making the technology work at a cost of power which a consumer is willing to pay. In the long term fossil fuel generation will become more expensive and wave generated power will fall in cost, but until that time the development of wave power is hampered by the need to introduce a fledgling technology into a commercial

market dominated by subsidised low cost fossil fuel and nuclear generation. Twenty years ago the wind industry suffered similar problems but largely through the far sighted long term support to manufacturers offered by the Danish government that nation was able to develop an industry which with the premiums offered for green power can now compete on a commercial footing. The wave energy industry is now in a similar stage of development to the wind industry in the 1980's with privately funded prototype devices under development with public support and some public money. There will be failures on the way, that is the nature of technical development, but with sustained public support to create conditions where new energy sources can be introduced to the market there is every expectation that wave power will mature to make a major contribution to our energy needs.

The Technical Challenge

The technical challenge in Wave energy is driven by the commercial challenge. Notwithstanding political considerations the success of wave energy in relation to other energy supply technologies will ultimately be determined by the price at which it can deliver power to the market. The cost of producing wave generated electricity is comprised primarily of the capital expenditure in building and installing the device and connecting to the electricity grid. Capital expenditure typically accounts for more than 90% of the cost of producing wave power. This is in marked contrast to fossil fuel plant where the input fuel is a high proportion of cost. A successful wave energy device will therefore have a minimum capital expenditure and a maximum electrical output. This rather obvious fact creates a dilemma for the designer of wave energy plant. The device structure has to survive the worst that the sea can throw at it; but only just. Looking at it simplistically if we over-design a wave energy machine by a factor of two it will cost twice as much and the price of power will double. We will then have a very reliable wave power device that no-one will want to buy. We thus have to go through a development stage where we build prototype units which, as far as we can tell with the available information, will survive fabled storms and which may not be economic generators but will give us the information on loads and performance to enable the next design to be closer to the limit. At Wavegen we have just gone through this exercise in the construction of our LIMPET device on Islay.

Figure 3

The concrete collector Figure 3, we are assured by the construction engineers, contains a higher density of steel reinforcement that a nuclear bunker. It has also survived the worst storms on Islay in living memory (according to the locals). All the signs are that the extreme service loads estimated prior to the construction may be a factor of 20 higher than those actually occurring so that we now have the opportunity to apply this knowledge to make major reductions in the cost of our next shoreline device.

The long term future of bulk wave energy generation lies in exploiting the offshore resource and as engineers we have to produce optimised designs for:

- The wave energy collector
- Installation
- The power conversion system
- The moorings
- The power transmission system
- Generation controls
- Access and maintenance
- Recovery and decommissioning

As a general rule proponents of wave energy are trying to do everything that engineers have for years been trying to avoid. We are looking to place our structures permanently in areas of high wave activity so that whilst a super tanker might seek shelter we will seek the storm. Whilst a Cruise liner might fit stabilisers for passenger comport we are more often than not relying on a high response amplitude to some form of motion in order to extract power. Whilst ship and offshore jackets are designed to shed wave forces we are, at least in small to moderate waves, trying to interact with them. It is not surprising therefore that in pushing the design envelope of marine structures we are having to develop and extend our analytic tools. These tools then need testing and calibrating against field data; which takes us back to prototype devices and testing.

There is a debate within the wave energy industry as to how to best to develop a wave energy device. There are many schools of thought. Some advocate that everything can be learnt in wave tanks and that there is no need to go to sea until all problems are solved to a high degree of confidence. Others prefer a progressive increase in scale from small tank models, to larger models which can be tested in sheltered waters and thence to the full size. Others believe that the time cost of the progressive approach is unacceptable and that if a device is worthwhile the best way to develop is to build the first unit at the full scale so that real data become immediately available and the route to bulk generation is thereby shortened. There is no doubt that this is could be true but it is equally true that the risk of failure increases with the latter approach. There is also a debate within the industry as to whether research into shoreline generation has any merit or whether all our efforts should be focussed offshore.

Figure 4

With our LIMPET device Figure 4 Wavegen have a vested interest in this debate. We are certainly in agreement that the long term future for wave power lies offshore and are developing a device for offshore application. We also believe that, with our colleagues from the Queens University of Belfast, we have learnt a great deal in the construction and operation of the shoreline plant which will help in the design, construction and operation of the offshore unit. Such areas include:

- OWC performance
- Turbine Technology
- Turbo-generation Control
- Plant safety systems
- Grid Integration
- Data logging and performance monitoring.

We are looking at a class of floating device based on oscillating water column (OWC) technology using a turbine power take off. In this respect we benefit directly from the experience we have gained in operating the Islay plant. In running the unit in all weathers and sea states we have been able to amass operational data which would not have been possible on an dynamic floating structure. The calibration of the turbine for example required a duct flows to be measured at many positions in the duct over a long time period. This was possible on the fixed platform of LIMPET but could not have been done offshore. As such we have knowledge of turbine performance outwith ideal laboratory conditions and are able to more accurately predict and improve performance. Similarly in operating proprietary equipment in the marine environment but on land we have learnt what is likely to work and what is not so that for us LIMPET has proved to be an invaluable stepping stone from the coast line to offshore generation.

Applications of Wave Power

The long term goal for the wave energy industry is to be bulk suppliers of power feeding national grids from offshore wave farms. This will happen in the fullness of time. Bulk electricity generation is not however the only application of wave power. In concert with solar power, wave powered buoys are already used for powering marine buoys. They have also been proposed as pumps for low pressure transmission of water, for producers of high pressure water for desalination and as sea calming devices for coastal protection. Whilst focussing on the offshore potential of wave energy we should not lose sight of the potential of LIMPET type devices. Wavegen are performing feasibility studies for a number of commercial applications of LIMPET derivatives. These range from grid connected generators to OWC systems built as part of coastal protection schemes.

The Realities

The realities of wave energy are thus:

- There is an extremely large supply of power available.
- The technology already exists for the extraction of this power
- The technical challenges are solvable.
- The problems lie in solving the problems at a cost that is acceptable to the market.

Responses for Document 80012

80012-001: Thank you for your comment. We appreciate your input and participation in the public review process.

80012-002: Your comment addresses issues that are beyond the scope of the PEIS, the mission and responsibilities of the BLM, and/or the defined programmatic scope of the proposed Wind Energy Development Program. We appreciate your input and participation in the public review process.

Document 80014

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Saturday, October 02, 2004 3:33 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80014

Thank you for your comment, Vicki Patton.

The comment tracking number that has been assigned to your comment is 80014. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: October 2, 2004 03:32:43PM CDT

Wind Energy EIS Draft Comment: 80014

First Name: Vicki
Middle Initial: L
Last Name: Patton
Privacy Preference: Withhold address only from public record

Comment Submitted:
I believe that we should learn from history. Germany has covered their most scenic areas with thousands of industrial wind turbines and has discovered that the energy is unreliable and that the turbines do not significantly produce the energy that was anticipated. Please do not cover our great nation with wind turbines. Wind energy sounds good. Until the energy produced by wind generators can be stored, then there will be no significant tribution to our energy needs. Do not start cluttering up America! 80014-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80014

80014-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80015

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Monday, October 04, 2004 8:13 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80015

Wind_Turbines_&_birds_80015.pd...

Thank you for your comment, #####.

The comment tracking number that has been assigned to your comment is 80015. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: October 4, 2004 08:12:47AM CDT

Wind Energy EIS Draft Comment: 80015

First Name: #####
Middle Initial: #
Last Name: #####
Address: #####
Address 2: #####
City: #####
State: ##
Zip: #####
Country: USA
Privacy Preference: Withhold name and address from public record
Attachment: /Macintosh HD/Desktop Folder/Wind Turbines & birds.pdf

Comment Submitted:
A resounding NO, NO, NO to Wind Turbines. These are inefficient, hideous looking, destructive steel and concrete bird and bat killing hulks. They need a tremendous footprint to create an insignificant amount of unreliable energy.

Generations to come will be left with nothing in terms of beautiful open spaces.

There are much better sources of renewable energy. Use the funding to clean up outdated energy plants. Start a conservation campaign.

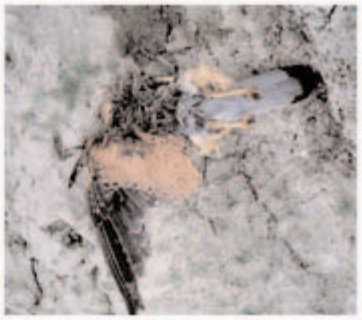
80015-1

I absolutely resent our public lands being used for these hideous wind turbines. I do not my tax dollars used in this way.

They are a band-aid to our energy problems. Don't do to our country what has happened in Denmark and what is beginnning to happen all over the world. Please see attached for a look at what these so-called environmentally friendly turbines do.

Thank you for the opportunity to express my views.

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.



Response for Document 80015

80015-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80016

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Wednesday, October 13, 2004 2:21 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80016

Thank you for your comment, #####.

The comment tracking number that has been assigned to your comment is 80016. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: October 13, 2004 02:21:11PM CDT

Wind Energy EIS Draft Comment: 80016

First Name: #####
Middle Initial: #
Last Name: #####
Organization: #####
Address: #####
City: #####
Email: #####
Privacy Preference: Withhold name and address from public record

Comment Submitted:
I am the vice president of a small nature conservation organization in the south of France and we are definitely agaisnt wind power for two main reasons : there is an average of 15 birds killed per turbine per year and a larger number of bats wherever it is a bat area. It is an average counting the areas where there are bird migration and area without. The second reason is that there is an absolute need of other reliable energy source to back up the wind turbines during the 50 % days of year when they do not supply energy because of low wind or too high wind. 80016-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80016

80016-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80017

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Monday, October 18, 2004 8:08 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80017

Thank you for your comment, Chuck Lassen.

The comment tracking number that has been assigned to your comment is 80017. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: October 18, 2004 08:07:37AM CDT

Wind Energy EIS Draft Comment: 80017

First Name: Chuck
Middle Initial: W
Last Name: Lassen
Email: #####
Privacy Preference: Withhold address only from public record

Comment Submitted:
During the late 70's I observed the fiasco that took place in Western Colorado, when the big push to produce energy from the Oil Shale reserves was taking place.
Our Government allowed the Oil and Gas conglomerates along with their cronies, large construction contractors to work on a cost plus basis to justify the production of oil from oil shale. The outcome was exactly what the original premise consisted of: To expensive to produce this type of energy.
What we saw was, dirt being moved from one large pile to another 2 miles away for 2 months, then move it back to the original pile, over and over for at least a 1 1/2 years of the project. With a cost plus contract! Thereby, justifying the original premise that oil shale production was too expensive.
What ever you do, keep those who have ulterior motives out of the process. Keep the smaller organizations that have been working in the industry involved and once the price per KW is established, help these smaller organizations acquire the financing to develop the industry.
Keep a watchful eye on the Power producers who have put a substantial amount of finances into Natural Gas turbines recently, so that they do NOT force the Wind Turbine industry out by giving them pittance for their production.
Like, oil shale, Wind Energy is not rocket science and has been used much longer than petroleum. It should not take a long period of time to decide how or why to let this happen, as the only question will come from those who have positions for their type of industry, which will most likely come from the petroleum producers. We already know what they can do to the cost of production.

80017-1

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80017

80017-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80018

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, October 29, 2004 10:10 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80018

Thank you for your comment, Marilynn Thurtle.

The comment tracking number that has been assigned to your comment is 80018. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: October 29, 2004 10:09:22AM CDT

Wind Energy EIS Draft Comment: 80018

First Name: Marilynn
Middle Initial: A
Last Name: Thurtle
Address: 1132 Sport of Kings Ave
City: Henderson
State: NV
Zip: 89015
Country: USA
Email: my4turtles@aol.com
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
I believe that we need to do everything possible to seek alternative energy supplies. We should be aware of the environmental impacts, but the big picture is the need for energy.

I hope that the Proposed Action will be accepted and implemented. We should look to subsidizing private companies that actively use and perfect these systems. The government should not foot the bill completely. EACH state should be required to do a certain amount as well. 80018-1

Here in Nevada, we can seek to use solar energy as well. In other states with less usable sunshine, they may have to rely on wind more.

Please do what is neccessary to make changes that will help OUR nations children have a better future--more affordable future, as well as a cleaner environment!

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80018

80018-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80019

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, October 29, 2004 11:00 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80019

BagOWind_80019.doc (20 KB)

Thank you for your comment, Ken Taylor.

The comment tracking number that has been assigned to your comment is 80019. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: October 29, 2004 11:00:20AM CDT

Wind Energy EIS Draft Comment: 80019

First Name: Ken
Last Name: Taylor
Address: PO Box 4722
City: Carson City
State: NV
Zip: 89702
Country: USA
Privacy Preference: Don't withhold name or address from public record
Attachment: C:\Documents and Settings\Ken Taylor\Desktop\BagOWind.doc

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

October 29, 2004

To Whom It May Concern:

I want you to stop wasting my tax dollars. Wind energy is not viable. It is a pipe dream that the so-called environmentalists have suckered you into.

Give the money back and put it into a realistic alternative, such as nuclear, hydro, or hydrogen-cell power generation. This fuzzy-wuzzy-feel-good "science" is absurd. Wind power (and solar power) may be appropriate for rural, "off-the-grid" power generation, but it will **NEVER** account for a significant part of our energy production.

800019-1

How much have you spent so far? How much do you plan to spend? How many scientists do you employ? Why can't you see what is obvious to most experts who have objectively analyzed this energy source?

Why is it that government can get away with a "project" like this – if a private-sector company were proposing such a ridiculous program, they would be out of business in a "New York minute".

Please **STOP NOW!**

Sincerely,

Ken Taylor
PO Box 4722
Carson City, NV 89702

Response for Document 80019

80019-001: Thank you for your comment. We appreciate your input and your participation in the public review process. Wind power producers are currently operating and are not going out of business. Wind power is a viable part of the national energy mix, and development of wind power is required by the National Energy Policy.

Document 80020

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, October 29, 2004 12:27 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80020

Thank you for your comment, Merritt Yochum.

The comment tracking number that has been assigned to your comment is 80020. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: October 29, 2004 12:26:36PM CDT

Wind Energy EIS Draft Comment: 80020

First Name: Merritt
Middle Initial: K
Last Name: Yochum
Address: 4837 East Nye Lane
City: Carson City
State: NV
Zip: 89706
Country: USA
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
Wind power and Solar power will never be competitive with nuclear power. The plan to subsidise so called renewable energy is more political than pratical. Subsidies do not lower costs, they are always merely tax loopholes and a means of welth redistribution. When added up the costs to the public at large is always increased.Nuclear power has proven to be by far the most eficient and safest non poluting power source ever developed. Go nuclear, stop the pie in the sky nonsense and give us a break. 80020-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80020

80020-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80021

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, October 29, 2004 9:36 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80021

Thank you for your comment, #####.

The comment tracking number that has been assigned to your comment is 80021. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: October 29, 2004 09:36:16PM CDT

Wind Energy EIS Draft Comment: 80021

First Name: #####
Middle Initial: #
Last Name: #####
Address: #####
City: #####
State: ##
Zip: #####
Country: USA
Email: #####
Privacy Preference: Withhold name and address from public record

Comment Submitted:
The Carson Valley is noted to be a very windy place. I believe there are other area also around Reno and Washoe Valley that are also windy areas. I would have thought the wind energy would have been set up already. Its about time we think of other means of energy. Also I would think we could be using more solar energy. The sun shine so much here in Nevada that I would think people would use solar panels,etc. more than they do. Maybe the price should be lower so more people would use them. 80021-1

#####

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

December 10, 2004

Comments on the Bureau of Land Management's
Draft Programmatic Environmental Impact Statement (DPEIS) on Wind Energy
Development on BLM-Administered Lands in the Western United States

In summary, there are serious problems with the draft Programmatic Environmental Impact statement (PEIS). The comments that follow are focused primarily on the portions of the draft that deal with the economics of wind energy development.[1] The data and conclusions reflected in those parts of the draft are invalid because:

- Major elements of the true costs of producing and delivering electricity from wind energy have not been taken into account.
- The "economic model" underlying the economic analysis is defective.

It is important that Department of the Interior (DOI) and Bureau of Land Management (BLM) officials recognize that much of the information relied on by those drafting the statement has come from organizations that promote wind energy development.[2] This information is often biased and should not be relied on as a basis for BLM decisions.

The net effect of the deficiencies is that the draft PEIS grossly overstates the potential benefits of wind energy while grossly understating the true costs. In fact, it is far from clear that the PEIS justifies *any* development of wind energy on BLM-administered lands. Any conclusions in that regard will have to await correction of the fundamental deficiencies in the economic analysis.

DOI and BLM officials should also be aware that much of the information distributed during the past decade by the wind industry and other supporters of wind energy development is biased. However, as development of wind energy has occurred in US and other countries, problems with its development and facts about its true costs have begun to emerge. 80021-1 (cont.)

Even a casual review of the literature about wind energy from around the world reveals information about problems caused and costs incurred when wind energy is developed. There does not appear to be any valid reason why those who have developed the draft PEIS should ignore the problems and the true costs and chose to rely on only the literature, economic models, and data that are favorable to wind energy development.

Clearly, DOI and BLM officials have a responsibility to act in the public interest, and not limit their consideration to information favorable to the development of wind energy. In particular, DOI and BLM officials should note that the draft PEIS largely ignores the interests of electricity customers and taxpayers who would bear the burden of higher cost of electricity from wind energy and taxpayers who would bear the burden paying for the tax breaks, other subsidies and other economic benefits achieved by "wind farm" developers and owners.

In addition to the primary focus on the economic deficiencies of the draft PEIS, the detailed comments that follow also mention one key safety problem that has been ignored and identify an omission in the sections on decommissioning. Further, DOI and BLM officials should be aware

that the two studies cited as justification for the draft PEIS conclusion that property values are not adversely affected by wind energy development have been publicly discredited because of deficiencies in methodology, assumptions and factors considered.

Before proceeding, BLM needs to do a complete and objective economic analysis, avoid reliance on biased information from wind energy advocates, and take into account the full, true environmental, energy and economic costs of wind energy development.

Detailed comments

A. Economic Analysis Deficient. The PEIS Executive Summary (page ES-1) states, in part, that "The objectives of the draft PEIS are to (1) assess the environmental, *social, and economic* impacts associated with wind energy development on BLM-administered land....." (Emphasis added). This certainly is a valid and necessary objective but it has not been pursued adequately in the PEIS. Critical deficiencies, as detailed below, include:

- Failure to consider key elements of cost that would be borne by the public (particularly electric customers and taxpayers),
- Reliance on "economic models" that are demonstrably flawed, including economic models developed by or for DOE's National Renewable Energy Laboratory (NREL).[3]

The JEDI or Wind Industry Model developed for and distributed by NREL for use in calculating state or local economic impacts, which model is referred to in the draft PEIS is demonstrably deficient in that it grossly overstates economic benefits and understates some economic costs and ignores other real economic costs. Attachment #1 to these comments is a paper describing and demonstrating deficiencies and errors in that model. That paper should be considered an integral part of these comments on the BLM's draft PEIS

80021-1 (cont.)

BLM has an obligation to represent the public interest, not the interests of the wind industry or other wind energy supporters.

1. The concept of the *economic cost* of electricity from wind energy reflected in the PEIS is incomplete. The wind industry and its supporters (including DOE[4] and NREL) typically ignore large elements of the full, true costs of electricity from wind energy and, unfortunately, this basic error has been perpetuated in BLM's draft PEIS. Only during the past year or two has the truth about the full, true costs of wind energy begun to emerge in public discussions.

The true cost of electricity from wind energy borne by the public is NOT the price claimed by wind energy supporters OR that charged by "wind farm" owners. Key elements of the full, cost that are typically omitted (and not considered adequately in BLM's document) include the following:

a. Real costs ultimately borne by electric customers not considered in BLM PEIS, but which show up in monthly electric bills.

1) Backup power costs. Wind turbines produce electricity only when the wind is blowing in the right speed range.[5] Their output is intermittent, highly volatile

from minute to minute, and largely unpredictable (except in the very short term). Because of these limitations, reliable ("dispatchable") generating units must be kept immediately available to keep the grid in balance (supply-demand, voltage, frequency). These back up units must be running in automatic generation control (AGC) mode, at less than full or optimum capacity, or in spinning reserve mode.

Providing this backup power involves costs and those costs (in whole or part) are properly attributed to the cost of wind energy. Also, recognize that ramping generating unit output up and down tends to add to unit wear and tear cost on those backup units

2) Costs of providing reliable generating capacity. Because wind turbines cannot be counted on to be available when needed to satisfy electricity customer demand (that is, they have little, if any, "capacity value"), sufficient reliable generating capacity must be built and maintained to assure that adequate capacity is always available. This, too, involves costs for building and maintaining that capacity even if it is not fully utilized. Those costs must be recovered in some way and are almost certain to end up in monthly electric bills. Wind generating capacity does not replace the need for reliable generating capacity.

3) Higher cost of providing transmission capacity for electricity from wind turbines. Transmission costs are inherently higher for electricity from wind turbines for at least three reasons:
   - The first reason is due to the intermittence of wind generation. In practice, enough transmission capacity must be available to handle the full rated output of a "wind farm." However, that full capacity is not used efficiently and effectively because of the intermittent availability of the electricity output
   - The second reason is that windmills, because of their large size, noise and other factors, tend to be found acceptable in areas that are remote from populated areas. The practical effect is that electricity from wind is likely to have to travel over longer distances and, therefore, "line losses" tend to be higher than for generating units that are located near load centers.
   - The third reason is that areas where siting of windmills may be acceptable tend to be in areas where adequate transmission capacity is less likely to be available. At least two states (Minnesota and Texas, as well as other countries such as Denmark and Germany) have found it necessary to add expensive transmission capacity to serve "wind farms." Such costs are appropriately counted as part of the full, true cost of electricity from wind. In any case, these costs end up in electric customers' monthly bills even if this is not clearly admitted by the wind industry, regulators, or advocacy groups.

80021-1
(cont.)

4) Grid management costs to maintain reliability. Because of intermittence, volatility and unpredictability, "wind farms" tend to detract from grid reliability and, therefore, require greater care to assure integration into electric grids. This is an additional cost factor.

5) Mandated "Renewable Portfolio Standards" (RPS) add to consumer costs. RPS requirements specify minimum shares of electricity that must come from "renewables" have been adopted by some states and applied to government buildings and activities in other states. Electricity from wind is inherently more costly than alternative existing sources of electricity. These costs are passed on to consumers. The fact that RPS create artificial, high cost markets also helps push up customers' costs.

6) "Green energy" programs mandated or encourage for electric utilities also add to electric customer costs. Typically, these programs provide that electric customers are to be given the option of purchasing "green" electricity – i.e., electricity produced from certain renewable energy sources – if they are willing to pay a premium price for that electricity.

   To the extent that customers volunteer to pay premium prices, there should be no objection. However, nationally less than 1% of the customers of 100+ electric utilities offering such programs "volunteer" to pay the premium prices. The premium revenue collected by the utilities is not enough to cover the utilities' costs of buying the high cost renewable-generated electricity and the cost of administering the programs. The result is that the costs that are not recovered through premium payments are passed on to all the utilities' customers, adding to their monthly bills. 80021-1 (cont.)

b. Real costs borne by ordinary taxpayers that have not been taken into account in BLM's draft PEIS "economic analysis." Wind energy is now one of the most heavily subsidized sources of electricity in the US *when considered in light of its existing and potential contribution toward supplying US electricity requirements.*

The tax breaks and other subsidies currently available for commercial-scale wind energy have led to a situation where the principle motivation for building "wind farms" is tax avoidance – not their environmental, energy or economic benefits. BLM should not be encouraging misallocation of resources. The federal, state and local tax breaks and other subsidies which run in the hundreds of millions annually include:

1) Federal five-year double-declining balance accelerated depreciation (MACRS[6]) which permits "wind farm" owners to deduct 20% of the capital cost[7] of a "wind farm" from otherwise taxable income in the 1st tax year, another 32% in the 2nd tax year, and the remainder over the succeeding four tax years.[8]

2) A ten-year, $0.018 per kilowatt-hour (kWh) Production Tax Credit which permits the owners of "wind farms" or their parent companies to deduct additional millions of dollars each year from their tax liability.

3) In states that conform their corporate income tax system to the federal system, the five-year double declining balance accelerated depreciation also serves to reduce "wind farm" owners' income that would otherwise be subject to state corporate income tax. *This loss of revenue has not been taken into account in the BLM draft PEIS.*

4) Dozens of state and local government tax breaks, enacted in response to wind industry lobbyists, including (depending on the state) state production tax credits, reductions in or exemptions from business and occupation taxes, sales and use taxes, and state and local property taxes. In some states, some of the taxes have been eliminated and in others have been reduced substantially. *These losses of revenue have not been taken into account in the BLM draft PEIS.*

5) Direct DOE subsidies (via contracts, grants and subcontracts) for wind energy R&D and for wind promotional activities carried out by DOE "national laboratories," trade associations and numerous "non-government organizations" that have been created to promote expensive "renewable" energy. These, too, are a real economic cost and money involved almost certainly could have been used more effectively elsewhere, particularly if left in the private economy.

6) Similar state subsidies (e.g., in California), some of which are paid from appropriated funds and some provided from funds collected via consumers' monthly electricity bills and often labeled as "public benefit funds." These also are a real economic cost.

80021-1 (cont.)

2. **The "economic analysis" in BLM's PEIS has another fundamental deficiency**. The higher true costs of electricity from wind energy – including the hidden costs for electric customers and taxpayers described above -- that less money is available for other uses and is, therefore, a net "drag" on those sectors of the local, state or national economy where those incremental funds would otherwise be spent or devoted to savings.

   For example, the higher true cost of wind energy borne by electric customers and taxpayers means that less money is available for other uses including, for residential customers, spending on food, clothing, shelter, medical expenses, education, and other purposes (e.g., spending in local hardware stores, dry cleaners and other retail establishments). Also, less money is available for savings.

B. **Claims of costs per kWh of electricity from wind generation distributed by the US Department of Energy (DOE) and DOE's NREL are not valid or reliable.** DOE, NREL, the wind industry and other wind advocates often distribute information purporting to show the costs per kWh of past, current and potential future wind turbine generation.

Apart from all the real costs that are excluded from the DOE and NREL calculations, it must be recognized that the DOE[9] and NREL numbers are not valid or reliable.

The principle reason the numbers are invalid, unreliable and, really, quite meaningless is that they are based on three assumptions that have no basis in fact; specifically:

- That the useful life of the wind turbines is known. Often it is assumed that the useful life will be 20 or 30 years. Keep in mind that "wind farms" require very large capital cost compared to other generating sources. In fact, there is no long-term experience with the large (1+ MW) turbines now being installed to predict their life expectancy. If those turbines turn out to have a useful life of 10 years rather than 20, the actual costs per kWh of the electricity they produce over the 10 years would be nearly double the cost estimates based on a 20 year useful life assumption.
- Actual costs of operating, maintaining, repairing and replacing wind turbines over their useful life is unknown for the same reason noted above; i.e., no long term experience. Some "wind farms" have experienced many unexpected turbine failure problems.[10]
- Actual performance – in terms of kWh output -- over their useful life is unknown, again, because there is no long term experience with today's turbines and blades. It is known that performance of wind turbines deteriorates over time for a variety of reasons, including blade fouling.

C. BLM's PEIS does not adequately reflect the fact that electricity from wind turbines has less value than electricity from reliable generating sources and detracts from, rather than adds to, electric system reliability. As pointed out above electricity form wind turbines is available only when the wind is blowing in the right speed range – with the result that the electricity produced is intermittent, volatile and largely unpredictable.[11] 80021-1 (cont.)

Because of these limitations, wind turbines have little, if any, "capacity value" as that term is used in the electric industry and the *electricity has less real value than electricity from reliable generating units that can be called upon whenever needed to supply electricity users demands*.

Those responsible for assuring the reliability of electric systems and grids must assure that *reliable ("dispatchable") generating capacity is available at all times to satisfy electricity demands and keep control areas and grids in balance.* The practical effect of the limitations of wind energy is that reliable generating capacity must be built and available for use *even if wind turbines are built and are available at some times (when the wind is blowing at the right speed) and the reliable capacity is not fully utilized. The cost of building and maintaining the reliable capacity – which may not be used at full capacity or peak efficiency -- is also borne by electric customers, in addition to the high costs of the electricity from wind.*

D. Overestimation of emission reduction impacts. BLM's PEIS overestimates the potential reduction in emissions from fossil-fueled electric generation. For example, the draft PEIS does not reflect adequately the fact that emissions are produced when dispatchable fossil-fueled generating units continue to produce emissions when they are run in "spinning

reserve" mode or run at less than peak efficiency to "back up" intermittent, volatile, unpredictable output from wind turbines. BLM should not assume that each kilowatt-hour of electricity produced by a wind turbine offsets emissions associated with an equal number of kWh produced by a fossil-fueled generating unit. Furthermore, no emissions are offset if the electricity displaced by a wind turbine (if any) would have been produced by a hydropower generating unit. Also, any emissions that are avoided are far different if the electricity would have been produced by, for example, an efficient gas-fired combined cycle generating unit rather than an old coal-fired generating unit that does not yet meet new source performance standards.

E. **"Studies" relied on by BLM's draft PEIS to claim that property values are not adversely affected are invalid.** The draft PEIS cites two studies to justify its conclusion that property values are not adversely affected by construction of windmills in the area. Both studies funded and were prepared by organizations known to be advocates of wind energy development and both have been publicly discredited because of basic deficiencies in their methodology, assumptions and data. The fact that they have been discredited is no secret and should have been know to those developing the draft PEIS. Any assertion that the value of property, particularly residential property, near "wind farms" is not adversely affected in quite absurd.

F. **Those preparing the draft PEIS seem to have carefully ignored the growing literature that challenges the claims of the wind industry and other wind energy supporters, such as DOE-EERE, NREL, and NWCC and has largely ignored the interests of electric customers and taxpayers.** These comments from the introductory summary of these comments are repeated here so that they will not be overlooked when BLM officials undertake a more complete analysis that covers all the true costs and benefits of wind energy development.

80021-1
(cont.)

G. **BLM's PEIS fails to consider a key decommissioning risk.** While the draft PEIS discusses some decommissioning issues, it does not deal adequately with a key economic risk associated with decommissioning. That risk is whether a financially viable and responsible owner will be available to carry out decommissioning and restoration responsibilities.

In particular, BLM officials need to be aware that:

1. **Most "wind farms" in the US are "owned" by Limited Liability Companies (LLCs),** many of which have only a single physical asset (i.e., the "wind farm") and, perhaps, a contract for the sale of some or all of the electricity for some period of time. When it comes time for decommissioning and restoration of lands affected the LLC or whoever owns the "wind farm" at the time may not have the financial resources to pay the costs involved and may resort to bankruptcy or other measures to escape liability.

2. **The tax incentives and other subsidies available from federal, state and local governments[12] are heavily "front-end" loaded, creating strong financial incentives for "wind farm" owners to sell or abandon the facilities once the value tax benefits**

and subsidies have been captured and/or when maintenance, repair and replacement costs begin to climb as facilities age. Note, for example, that the tax avoidance value of federal and state accelerated depreciation is fully captured in the first 6 tax years from start of operation, and the production tax credits are captured in the first 10 years.

3. **Assuring that money will be available to pay for decommissioning and restoration probably can be achieved only through cash bonds posted in advance of construction starts AND held by an independent third party.** Surety bonds probably will not provide adequate protection, particularly if periodic premium payments are required. Funds held in some sort of "trust" by the "wind farm" owner would not be secure because such funds would be part of the assets of the "wind farm" owner that would be available to all creditors in the event of bankruptcy.

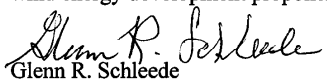
In summary, BLM regulations should require that full cash bonds, held by an independent third party, be posted before a permit is granted for a wind energy facility on BLM-administered lands.

H. **BLM's PEIS fails to consider at least one key public safety risk.** The draft PEIS does not deal with the need for safety standards for the components, construction and operation of wind turbines in cold climates. This problem has been faced in European countries but continues to be neglected in the Untied States. BLM rules should address this issue before additional wind turbines are permitted on BLM-administered lands. 80021-1 (cont.)

One final comment: The draft PEIS reflects an underlying presumption that wind energy is environmentally and economically advantageous. This probably reflects the fact that key participants in the preparation of the draft are avid wind energy supporters or, perhaps, reflects the political decisions inherent in the current Administration's "Energy Plan." When preparing an EIS, BLM has an obligation to rise above both personal views and political objectives and strive for objectivity.

* * *

These comments are submitted in my role as a citizen, consumer and taxpayer and are not on behalf of any client or other interest. Nevertheless, BLM has a public interest responsibility to take them fully into account as it has in the case of the interests of the wind industry and other wind energy development proponents.



Glenn R. Schleede
18220 Turnberry Drive
Round Hill, VA 20141-2574

Attachment #1: Errors and Excess in the NREL's JEDI-WIM Model that Provides Estimates of The State or Local Economic Impact of "Wind Farms"

Endnotes:

[1] Sections 2-31; 4.10 and subsections 1-7; 5-13 and its subsections; Subsection 6.1.1, 6.1.3, 6.2.1, 6.2.3, 6.3, 6.4.1.13, and Appendix B.

[2] Much of the data relied upon by those drafting the statement does not meet the basic standards established by the Data Quality Act and OMB regulations implementing that Act. Use of any such data is unwarranted.

[3] It is critically important that BLM officials recognize that NREL cannot be relied on for objective analysis and information about the costs and benefits of wind energy. Undoubtedly, some at NREL carry on research and development activities that follow scientific methods and engineering principles. However, much of what NREL does "in-house" or under subcontracts – particularly that relating to wind energy -- is more akin to the activities of a trade association. That is, it collects and distributes information that is favorable to wind energy and ignores information that is unfavorable to wind energy. Would BLM be comfortable with basing its findings about oil on information from the American Petroleum Institute, or on coal from the National Mining Association?

[4] Particularly DOE's Office of Energy Efficiency and Renewable Energy – DOE-EERE.

[5] Today's turbines begin producing some electricity when wind is about 6 MPH, achieve rated capacity when wind speed is about 33 MPH, and cut out around 56 MPH to avoid equipment damage or destruction.

[6] MACRS = Modified Accelerated Cost Recovery System.

[7] Whether financed with debt or equity.

[8] During the period ending December 31, 2004, "wind farm" owners have been able to deduct 60% of capital costs in the first tax year, 16% in the second tax year and the remainder over the succeeding 4 tax years – because of a "bonus" depreciation provision which apparently has not been extended.

[9] For example, DOE's publication, "Windpowering America," graph on page 4. <http://www.eere.energy.gov/windandhydro/windpoweringamerica/pdfs/wpa/35873_21century.pdf>

[10] Iowa Department of Natural Resources, "Top of Iowa Wind Farm Case Study." http://www.state.ia.us/dnr/energy/MAIN/PROGRAMS/WIND/documents/topofiaWindFarmCaseStudy.pdf

[11] Except, potentially, during a few hours before the electricity is actually produced and wind conditions can be predicted with some accuracy. These are well known facts and are widely acknowledged in the literature and demonstrated repeatedly.

[12] Described earlier in these comments.

80021-1 (cont.)

Response for Document 80021

80021-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80022

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Saturday, October 30, 2004 10:58 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80022

Thank you for your comment, Phillip Harper.

The comment tracking number that has been assigned to your comment is 80022. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: October 30, 2004 10:57:45AM CDT

Wind Energy EIS Draft Comment: 80022

First Name: Phillip
Last Name: Harper
Address: #####
City: #####
State: ##
Zip: #####
Country: USA
Privacy Preference: Withhold address only from public record

Comment Submitted:
We encorage agressive searches for alternative engery

80022-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80022

80022-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80023

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Monday, November 01, 2004 10:57 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80023

Thank you for your comment, #####.

The comment tracking number that has been assigned to your comment is 80023. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: November 1, 2004 10:56:38AM CDT

Wind Energy EIS Draft Comment: 80023

First Name: #####
Middle Initial: #
Last Name: #####
Address: #####
City: #####
State: ##
Zip: #####
Country: USA
Email: #####
Privacy Preference: Withhold name and address from public record

Comment Submitted:
No windmills! They desecrate the natural beauty of the land for little return. It's just another Ponzi scheme. 80023-1

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80023

80023-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80024

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Wednesday, November 03, 2004 11:07 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80024

Wind_Energy_DPEIS_OCTA_80024.d...

Thank you for your comment, David Welch.

The comment tracking number that has been assigned to your comment is 80024. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: November 3, 2004 11:06:54AM CDT

Wind Energy EIS Draft Comment: 80024

First Name: David
Middle Initial: J
Last Name: Welch
Organization: Oregon-=California Trails Association
Address: 102 Chinook Lane
City: Steilacoom
State: WA
Zip: 98388
Country: USA
Privacy Preference: Don't withhold name or address from public record
Attachment: D:\My Documents\OCTA NTPO\Year 2004\Wind Energy DPEIS OCTA.doc

Comment Submitted:
Please see attachment.

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

November 3, 2004

Oregon-California Trails Association (OCTA)
David J. Welch
National Preservation Officer
102 Chinook Lane
Steilacoom, WA 98388

Subject: Comments on Draft Programmatic EIS on Wind Energy Development

OCTA's mission is the preservation, appreciation and enjoyment of the Oregon and California National Historic Trails (NHT). While most of the physical remains of these trails have been lost, significant segments remain in some western states. We are concerned that these segments and their settings not be impacted further.

First, we appreciate that an effort has been undertaken to provide national guidance for the wind energy development. We encourage consistency across state borders and between the various field offices of the BLM. However, it is important that factors unique to a particular locality still receive adequate consideration.

Our comments on the document itself are threefold. First, while there is reference to protection of the National Historic Trails themselves, there is no apparent consideration of their setting. The setting is a primary consideration for visitors to the trails who wish to sense the experience of the up to 500,000 emigrants who traveled these trails about 150 years ago. Some states provide "no surface disturbance" protection out to 0.25 miles on each side of the trail, but this alone does not protect the setting. Clearly, wind energy generators have high potential for impacting the setting. We are especially concerned about the area in the Sweetwater Valley in Wyoming which is shown as having high wind energy potential. The trails and setting in this area are relatively pristine. 80024-1

Second, there are many historic trail resources that are not designated NHTs. In fact almost all alternate routes and cut-offs of the main trails are deemed eligible for the National Register and thus are subject to Section 106 processes, although they are not NHTs. Also, these segments may or may not be listed in the National Register. The DPEIS should identify historic resources in this class and direct that Section 106 processes be applied on a case-by-case basis.

Third, the Best Management Practices (BMPs) presented in the DPEIS for cultural resources are inferior to those presented in many BLM documents dealing with the development of other types of energy in Wyoming. For example, the BMPs in the EIS for the Pinedale Anticline Gas Field development provide much more detail on what mitigation should be implemented when there is an adverse effect.

Thank you for the opportunity to comment on the DPEIS.

Response for Document 80024

80024-001: As stated in the 1st bullet under Section 2.2.3.1, Proposed Policies, the proposed Wind Energy Development Program will exclude wind energy development from a number of locations on BLM-administered lands. Many of the excluded areas (e.g., areas that are part of the National Landscape Conservation System) are considered to be visually sensitive areas. Section 4.9 states that any historic property within the Area of Potential Effect will be evaluated for eligibility for listing on the *National Register of Historic Places*. If a property, such as a historic trail, meets eligibility criteria then any impacts to the resource, including impacts to its setting and visual impacts, are taken into consideration as required by the NHPA.

By including National Historic Trails within its NLCS, the BLM has recognized these trails as national treasures. The BLM accepts the responsibility to protect and preserve the value of these trails. This will be accomplished by protecting trail corridors associated with National Historic Trails, and segments of the trails, to the degree necessary to ensure that the values for which each trail was established remain intact. A BMP has been added to Section 2.2.3.2.2, Plan of Development Preparation, under the cultural/historic resources heading, specifying that when any ROW application includes remnants of a National Historic Trail, is located within the viewshed of a National Historic Trail's designated centerline, or includes or is within the viewshed of a trail eligible for listing on the *National Register of Historic Places*, the operator shall evaluate the potential visual impacts to the trail associated with the proposed project and identify appropriate mitigation measures for inclusion as stipulations in the POD.

As stated in Section 2.2.3.2, additional guidance and BMPs are available from other BLM program-specific projects. As required by the Wind Energy Development Program proposed policies (Section 2.2.3.1), mitigation measures identified in or required by these existing guidance documents would be considered and applied, as appropriate.

Document 80025

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Saturday, November 06, 2004 2:27 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80025

Thank you for your comment, Paula Davis.

The comment tracking number that has been assigned to your comment is 80025. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: November 6, 2004 02:26:31PM CDT

Wind Energy EIS Draft Comment: 80025

First Name: Paula
Last Name: Davis
Address: 1935 E 3200 N
City: Logan
State: UT
Zip: 84341
Country: USA
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
I have been a purchaser of Utah's "Blue Sky polution-free wind energy" for the past 3 years. And, living in Utah, I have driven through Wyoming several times and have seen the wind turbines. I am writing to commend you on your proposal to affect our nation's energy requirements through such a clean, renewable resource.

Unlike oil and gas drilling, this source of energy is not a "hit or miss" operation where drilling can occur, no oil/gas is found, and the mess and pollution created by the drilling companies remains despite the lack of increase in energy sources. Although wind is intermittent, it is not expendable as is oil. It is also one of the most desirable environmental alternatives given the increasing release of pollutants into our atmosphere by the existing coal-burning, and/or gas-burning vehicles and plants in our country. 80025-1

Personally, my family will continue to do what we can at this 'micro' level by buying blocks of wind energy, purchasing hybrid vehicles, recycling what we can, etc. However, it gives citizens, like me, hope when government organizations such as the BLM are also pursuing clean energy alternatives.

Thank you,
Paula Davis

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80025

80025-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80026

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, November 12, 2004 5:24 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80026

wind_energy_deve_
PA_80026.doc ...

Thank you for your comment, Lee Kreutzer.

The comment tracking number that has been assigned to your comment is 80026. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: November 12, 2004 05:23:14PM CDT

Wind Energy EIS Draft Comment: 80026

First Name: Lee
Middle Initial: A
Last Name: Kreutzer
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Attachment: U:\misc compliance\fy05\wind energy deve PA.doc

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

November 12, 2004

Comments on draft BLM Wind Energy DEIS

From: National Trails – Salt Lake City
National Park Service

I write on behalf of the National Trails System-Salt Lake City office of the National Park Service to offer the following comments concerning the Bureau of Land Management's draft Wind Energy Development Programmatic Environmental Impact Statement.

We are pleased to see that (per p. 2-6, 4-39) the BLM will not issue right-of-way grants for wind energy development on National Historic and Scenic Trails. However, it is not clear whether this stipulation precludes only development on actual trail ruts or corridors, or whether protection is extended to trail settings, as well. Some national historic trail segments transect high-potential wind energy development areas, as identified in the document's appendices. Wind development projects have the potential to impact the Oregon, California, Pony Express, Mormon Pioneer, Old Spanish, Camino Real de Tierra Adentro, and Santa Fe National Historic Trails, and possibly the Long Walk Trail, which is now under study for eligibility. Some of those landscapes retain their historic character, appearing much as they did in the times of Lewis and Clark, Jim Bridger, Brigham Young, the Pony Express, Chief Joseph, Chief Washakie, Geronimo, Hoskinini, and Sitting Bull. The nation's historic trails – even remote segments-- are visited by thousands of American families, schoolchildren, college classes, church groups, historians, re-enactors, and trails buffs each year. Historic trail setting, unimpeded by the presence of intrusive energy development, is integral to their trail experience. Therefore, we ask that this programmatic EIS specifically provide for exclusion of high-quality, minimally developed trail corridor settings from wind energy development. Trail corridor settings eligible for such protection should be identified *a priori* in resource management plans, in consultation with BLM trails partners and the public, and not on a case-by-case basis (per in Section 106 compliance) as wind energy proposals are developed and submitted. 80026-1

The draft EIS would be enhanced by providing a map depicting all specified areas – National Trails, Wilderness Areas, Wilderness Study Areas, National Monuments, state parks, etc. -- that would be excluded from wind energy development under this plan. 80026-2

In several locations (e.g., page 2-14), the draft states that the BLM "should consult with Indian Tribal governments early in the planning process to identify issues regarding the proposed wind energy development…" Some readers might erroneously infer that the BLM would consult only once during the project planning phase. We suggest the statement be clarified to read, "The BLM should *initiate consultation* with Indian Tribal governments early in the planning process…" 80026-3

The draft indicates that archeological survey should be undertaken within areas of potential effect following a records search, "depending on the extent of existing information" turned up by the search. The amount of time passed since the last cultural resources survey of an area also should be considered when determining whether to survey, as resources can be destroyed, impaired, or buried by natural processes and human activity through the years. Undiscovered sites likewise can be exposed by such processes, and existing resources may be better understood as the result of more recent research and theory development. Determinations of National Register eligibility might be revised in either direction for properties that have been impacted or studied further. We suggest that if an area of potential effect has not been systematically surveyed for cultural resources in the past 10 years, then archeological survey and site condition and significance re-evaluation should be considered regardless of the "extent" of older and perhaps outdated information. 80026-4

On page 4-53, the draft document states that more than 9,000 cultural resources have been documented on western BLM lands, and only 317 of those are National Register eligible. That only 3.5% of documented sites on western BLM lands are eligible seems surprising. We wonder whether all 9,000 of those sites actually have been evaluated for eligibility, or whether the majority remains unevaluated, as often is the case for NPS-managed sites.

Further, the document states that 12,778 historic properties on *all* western lands "have been reported to the NPS." This statement is confusing and inadvertently misleading. As of 2004, NPS units within the Colorado Plateau Cluster – Utah, southern Wyoming, western Colorado, and parts of Arizona and New Mexico – have nearly 23,000 sites documented in *their* Archeological Site Management Inventory System (ASMIS) *databases alone*. Of these, 1,912 have been determined eligible, 662 are ineligible, 556 are Register-listed, eight are administratively listed, two have been nominated, and the remaining properties are either unevaluated (3,932) or no eligibility information at all is reported for them in the ASMIS database (15,865). Moreover, the NPS ASMIS database does not routinely include site data from non-NPS lands, nor is ASMIS accessible for public queries via the Internet. 80026-5

It appears that your numbers were obtained from the National Register Information System (NRIS), via Park Net. The NRIS database is incomplete, as it includes only those data that have been reported to it for National Register purposes. Typically, an agency makes a determination of eligibility or ineligibility (DOE) for each site documented on its lands, and then the DOE is independently reviewed by the SHPO/THPO. In the vast majority of cases, at least within the NPS (and probably within other agencies, as well), the DOE process ends there, and neither the site nor its eligibility status is reported to the National Register. Those data are recorded only in the agency's database, and perhaps, but not necessarily, in a SHPO database. In some cases – for instance, where the agency and SHPO/THPO disagree on a DOE, or when the agency wants to pursue the lengthy and costly nomination and listing process -- site eligibility is reviewed at the National Register level. Those properties are entered in the NRIS database. The NRIS, then, is

highly incomplete in comparison to an agency's own archeological database. It probably does not even provide a statistically representative sample of the agencies' comprehensive data.

If your document is relying solely on NRIS site data, then it is significantly underestimating the numbers of known, eligible historic properties managed by the BLM and other agencies on western lands. This error has important implications, since eligible sites are to be treated as if they are, in fact, National Register-listed (p. 4-51). Underestimating the number of eligible sites downplays both the potential impacts of wind energy development on significant cultural resources *and* the potential quantity and complexity of compliance issues facing wind energy development proposals on western public lands.

80026-5 (cont.)

We ask that the problematic section of text beginning on page 4-53 be revisited. Please clarify whether your 317 eligible sites have DOEs with SHPO/THPO concurrence, or whether they actually are Register-listed sites. How many sites have been evaluated and determined ineligible? How many sites have been documented but not evaluated for eligibility at all, and would have to be field evaluated as part of a Section 106 compliance action? Also, please obtain more accurate agency data from at least the BLM, NPS, and USFS and use them in lieu of NRIS figures in this discussion.

We thank you for this opportunity to review and comment on your draft EIS. We hope our remarks may be useful in helping the BLM continue to protect historic resources while accommodating wind energy development projects in the western United States.

Lee Kreutzer
Cultural Resources Specialist

National Trails-Salt Lake City
National Park Service
424 South State St., Suite 200
PO Box 45155
Salt Lake City, UT 84145-0155

Responses for Document 80026

80026-001: By including National Historic Trails within its NLCS, the BLM has recognized these trails as national treasures. The BLM accepts the responsibility to protect and preserve the value of these trails. This will be accomplished by protecting trail corridors associated with National Historic Trails, and segments of the trails, to the degree necessary to ensure that the values for which each trail was established remain intact. A BMP has been added to Section 2.2.3.2.2, Plan of Development Preparation, under the cultural/historic resources heading, specifying that when any ROW application includes remnants of a National Historic Trail, is located within the viewshed of a National Historic Trail's designated centerline, or includes or is within the viewshed of a trail eligible for listing on the *National Register of Historic Places*, the operator shall evaluate the potential visual impacts to the trail associated with the proposed project and identify appropriate mitigation measures for inclusion as stipulations in the POD.

80026-002: The maps included in the PEIS are appropriate for the programmatic level of analyses required to develop and evaluate a Wind Energy Development Program. Given the size of the 11-state study area and the scale of the maps presented in the PEIS, it is not feasible to evaluate wind energy resources, the status or condition of BLM lands, or other spatial attributes at a more local level. Furthermore, such an evaluation would not enhance or improve upon the effectiveness of the Wind Energy Development Program. As required by the program's proposed policies and BMPs, detailed analyses of specific parcels of BLM-administered land will be conducted at the site-specific level on a project-by-project basis.

80026-003: Thank you for your comment. The text has been changed at Section 2.2.3.2.2 and at Section 5.12.5 to reflect your suggestions.

80026-004: BLM Manual 8110, *Identifying and Evaluating Cultural Resources*, establishes guidelines for gathering cultural resource information, including review and evaluation of existing survey data (BLM 2004). The text has been revised in Section 2.2.3.2.2, Plan of Development Preparation, under the Cultural/Historic resources heading, to specify that the "extent and reliability" of existing information shall be evaluated.

80026-005: The text acknowledges that the number of sites found in the western United States is likely much higher than that reported on the National Register Information System (NRIS). Ultimately, this will be an issue to be addressed at a site-specific level. For the purpose of the PEIS, the numbers provided are considered sufficient to demonstrate that cultural resources are present on BLM-administered land. The altering of these numbers will not affect the overall findings of the PEIS.

Document 80027

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Sunday, November 14, 2004 12:35 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80027

Thank you for your comment, #####.

The comment tracking number that has been assigned to your comment is 80027. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: November 14, 2004 12:35:07AM CDT

Wind Energy EIS Draft Comment: 80027

First Name: #####
Last Name: #####
City: #####
State: ##
Zip: #####
Country: USA
Email: #####
Privacy Preference: Withhold name and address from public record

Comment Submitted:
Comments to the draft Wind Energy EIS
By: #####
#####, ##
I request confidentiality, so please withhold my name from public view.

Summary: I am not in favor of your proposed action. It appears that a decision on the proposed action was already reached prior to starting the DPEIS. Of the proposals, I would favor the Limited Development Alternative, although my first choice would be no development at all. Your draft EIS although covering a wide range of environmental issues, favors industry and not the environment and the public. I do not want to see wind farms spread across miles and miles of BLM land. Wind Farm construction equals habitat and wildlife destruction. A limited development approach that constructs a wind farm in a certain area that needs the power and then monitors the effects on wildlife makes the most sense. Let us pursue the least amount of wind energy development, not the greatest amount. In my opinion, this is totally the wrong strategy of maximizing wind farm development. It is too early with Wind Farms to determine what the eventual effect might be on wildlife including the use of habitat by wildlife in the impacted area. Any project should not be and preferably not in view at all. This may be difficult due to the height of this equipment, but installation should be where the equipment is not easily seen. These units are ugly and very intrusive and it would be a unique person that would rather look at a wind turbine then the natural scenery. Any final report needs to define areas where no wind farm development would be allowed based on critical habitat, wildlife concerns, and locations where this equipment would alter the view. Of course, there will be only a limited area where industry will want to construct wind farms and that is close to a transmission system, (i.e., the lowest cost). These areas may not be favorable from an environmental and wildlife habitat standpoint. I also feel that a no new roads policy on public land should be instated and be part of this report. 80027-1 80027-2

Each area or state has its own special requirements in terms of habitat, environment, wildlife, etc and I am very pleased that this is part of the report. It is a critical point that before any development a study and report of that specific area be performed to make sure any special requirements are covered and that if any species or any critical habitat would be effected to a great degree the project canceled or relocated. Special studies and environmental reports for all projects would give the public a chance to 80027-3

comment on each proposal; this is the only way to proceed. No net loss of habitat has to be the rule for every project. Destruction of habitat is one of the main reasons for declining wildlife populations. For Wyoming, impact on grouse is just one of many serious concerns. No project can be approved where it affects any bird, animal, plant on the endangered and threatened list and cannot have any impact on species designated with sensitive and special status.

80027-3 (cont.)

The primary responsibility of the BLM should be to conserve and enhance habitat to help maintain wildlife populations so that future generations can enjoy and walk among the wild things. If you keep with the policy you are pursuing now, there will not be any wild things left.

Articles in newspapers have stated that there are 9 wind projects either pending or already approved in Wyoming, mostly on federal lands. Your report does not list these pending/approved projects. Will these projects be subjected to this EIS when final?

80027-4

Some of the existing wind farms on private land have made a bad name for wind farms. Environmental regulations have been side stepped and other issues ignored such as habitat and wildlife concerns. Environmental regulations should be consistent whether on federal land, state land or private land. Wind turbines have been unnecessarily located on the skyline and in view of cities and peoples homes (Uinta County WY wind farm that photos are in your report). In general, environmental stewardship has been severely lacking. Approval of the Uinta County wind farm project seemed to be based solely on increasing county property tax revenue and providing income to landholders. Turbines in the Arlington, WY project were located back from the edge of the plateau which supposedly reduced bird deaths (unsure of how this was quantified), but in Uinta County the turbines are located right on top of ridges. Ultraviolet reflective paint was also used on the blades at the Arlington project to increase visibility to birds. I do not know if special paint was used on the turbines installed in Uinta County, they just appear an intrusive white color to me.

Examples of what occurs: The Uinta County WY Wind Farm Project used 42 miles of mostly new dirt roads and 42 miles of above ground power lines over an area of approximately 45 square miles. The project area was classified by the WY Department of Environmental Quality as winter/year long range for Bear River divide moose, Uinta mule deer herd and Carter Lease antelope herd. The area also provides nesting and brood rearing for sage grouse. The Bear River Divide is also a migration corridor for raptors and other migratory birds and several species of bats are known to inhabit this area. All of these species have shown to be impacted by wind power development. These type of projects impact huge areas, a lot (maybe most) of which would end up being unusable by wildlife. The community had almost no input into this project, but I am pleased your report addresses public involvement. Several public hearings were reported to be held, but the hearings were not well advertised so no one attended. In fact, the Uinta County Planner did not even realize what the visual impact to the community would be until the wind turbines were being constructed (call him and ask, his name is Ken Klinker). I live in this area and I had no idea of the project until I saw an article in the local paper, construction started a few weeks later.

80027-5

Recommendations to the Uinta County Wind Farm developers:

1) WY Game and Fish Commissions mitigation policy defined this area as “high” mitigation category meaning the habitat is important to sustain animal populations and directed the WY Game and Fish Department to recommend no net loss of habitat function – This was not done by the project developers.

2) Sage Grouse, which is a threatened species and petitioned as an endangered species, are present in this area and the project reduced habitat for these birds. – The project developers went ahead with construction, but construction was started after breeding/brood rearing season (August). However, in the future, will sage grouse inhabit much of this 45 sq mile area? Will sage grouse totally disappear from this area?

3) Of course, raptors, song birds, bats are affected through direct mortality with wind turbines and all these are present in this area. There is no mitigation plan.

4) Development of an annual wildlife monitoring plan was recommended as a condition for the permit, but as far as I am aware, this is not being done. Also recommended was mortality surveys of raptors, song birds and bats, I doubt this is being done, but I am not sure, as no information is published. A process for addressing mitigation of possible impacts should be determined. – to my knowledge, this is not in place.

5) Power lines to be designed to minimize electrocution of birds and a design that would prevent the power poles from being used as hunting perches for raptors – To my knowledge, this was done.
6) One corner of the wind farm area is located in a wildlife migration route – Construction of wind turbines in this migration area proceeded. The project developers in general were not concerned about wildlife and in fact, an attorney representing the project stated he was sure that there would be no impact on wildlife; all studies would indicate otherwise.
7) Many of the turbines were located (unnecessarily) in plain view of the community of Evanston, and on the skyline. Wind turbines are located on top of ridges where it would seem to maximize bird and bat deaths.

80027-5 (cont.)

Bird/bat mortality - How many birds/bats is it all right to kill? I would say none. I will attempt to find out more about the statement in your Environmental concerns summary "several large wind facilities have operated for years with only minor impacts on these animals", specifically, how are the numbers are determined. Depending on how the numbers were derived could indicate a very different conclusion. Is it based on mortality numbers alone, meaning there are a lot less birds in the wind farm area, the rest are already dead, or most the birds have already left that area for different habitat and therefore the kill numbers are less. Year after year, birds, bats, etc are killed; it is not a one time issue. Activity in a development area by its nature will reduce the amount of wildlife using habitat in the immediate effected area. As a part of a project, mitigation measures regarding bird and bat issues have to be in place prior to start of any project, not after construction. If allowed to be after, mitigation measures will never happen and destruction of birds and bats will be continue and not reported and nothing done about it.

80027-6

The report states that the proposed action would result in the lowest potential cost to the industry, again favoring the industry. It does not matter to me how much the project costs the industry or a specific company. Any project needs to be constructed in a proper manner. To develop an EIS that would result in the greatest amount of development at the lowest potential cost to companies is certainly the wrong approach. These projects have to done correctly and if not economical then scrapped. Economic benefits to an area are not that great after wind farm construction, so this matter is of no importance to me.

80027-7

What usually happens with these projects is we have this nice study (EIS) then companies are granted a permit and proceed with no regard to what the report states and proceed to destroy the environment and wildlife. There has to be someone from BLM or a public official to monitor development every step of the way to ensure compliance with the EIS. The capability to impose huge fines in the range from millions to tens of millions depending upon the infraction needs to be part of any project approval. Also, the capability to shut a project down needs to be in place if a company violates the permit conditions.

80027-8

Wind projects should be done at a local level to supply demand for the immediate area, that way the consumers/public can make a decision on how to meet the power demand after reviewing the alternatives. The local area would directly benefit from the project and the consumers would have a choice. The Uinta County WY Wind Farm does not provide power to the immediate community; it is sold in short term markets, for the most part in states other than WY.

80027-9

Note: On page 2-28 you refer to the Arlington WY project having generating capacity of 1300 MW, please confirm this is correct. WY statewide currently has a maximum capacity of 284 megawatts; I believe the Arlington project has a maximum capacity of 130 megawatts.

80027-10

There is also the issue of how to market the power from a wind farm, and this is more of a concern to companies investing in these projects. An example is the Uinta County WY project with only one long term contract for less than 20% of the maximum output executed so far, one year into the project. The operating companies are charging more for "renewable" power and unless the price is competitive with other sources, very few people will be willing to buy. Instead of saving the consumer money, power companies want to charge more. Consumers do not want to subsidize company's renewable power projects, unless ultimately it saves the consumer money. They market this as "green" power, but of course fail to mention that they just destroyed habitat over a huge area and have negatively affected numerous wildlife species. Power generation with no emissions while impacting huge tracts of land is not an acceptable trade off.

80027-11

Property value impacts can be debated and your report refers to two studies where there seemed to be no negative impact on property values. These studies in my opinion reach a strange conclusion given that most people think the wind turbines are ugly and destroy the view. I would not purchase a property in the view shed of a wind farm, so all those properties to me would be worthless. I suggest you remove reference to these studies from the final report as it adds no value to the EIS. 80027-12

Consider addressing the below in the EIS:
Alternatives: Before any extensive wind farm projects are implemented, the alternatives for supplying power should be considered and I believe there are better alternatives. It also seems to me that wind power in general may be the wrong approach taking a long-term outlook. In general, wind power is intermittent power, so other sources of energy are still required. Companies, with government tax credits, should be spending money on research and construction of other sources of renewable energy such as biomass, solar, and nuclear and spend money improving efficiency and improving transmission systems. The alternatives would be much less destructive in terms of habitat and biomass or solar facilities could be located where they cannot be easily viewed. Companies, state and federal governments should be promoting consumers and companies to limit consumption and to increase efficiency. For example, Utah Power spends $20 million a year on efficiency improvements. If wind farms are not going to provide a long term solution then why destroy habitat and impact vast tracts of land without looking at the alternatives and a long term perspective. If the efficiency could be improved, along with alternative renewable power, the need for large numbers of wind farms to generate power disappears. The largest untapped clean energy resource is energy efficiency and energy efficiency would be a net savings to the economy that some predict could be in the tens of billions of dollars. I am convinced that with other technologies, the future demand for power can be solved and this could occur without impacting huge tracts of land with wind farms. 80027-13

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Responses for Document 80027

80027-001: Thank you for your comment. We appreciate your input and participation in the public review process.

80027-002: Your comment addresses issues that are beyond the scope of the PEIS, the mission and responsibilities of the BLM, and/or the defined programmatic scope of the proposed Wind Energy Development Program. We appreciate your input and participation in the public review process.

80027-003: Thank you for your comment. We appreciate your input and participation in the public review process.

As required by the Wind Energy Development Program proposed policies and BMPs, species- and site-specific analyses will be conducted for any proposed project on BLM-administered lands. The purpose of these analyses is, in part, to identify the presence and status of ecological resources in the proposed project area, and identify important habitats and areas that may not be appropriate for wind energy development. The scope and approach for these projects will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project- specific siting, design, mitigation, monitoring, and operation stipulations for incorporation into the POD. Regarding sage-grouse species, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into local, site-specific analyses and development of the project stipulations. These stipulations will help in the avoidance, minimization, and/or mitigation of potential impacts of the proposed wind energy project on ecological resources of the area.

In addition, adaptive management strategies and monitoring programs will be required for all wind energy development sites (see Section 2.2.3.1, Proposed Policies, last bullet, and Section 2.2.3.2.2, Plan of Development Preparation, General, 7th bullet). The application of adaptive management strategies will ensure that programmatic policies and BMPs (including those addressing ecological impacts) will be revised as new data regarding the impacts of wind power projects become available. The source for a significant portion of the new data is likely to be the required site-specific monitoring programs that will evaluate environmental conditions at a site through all phases of development. A key requirement for the site-specific monitoring programs is the requirement that monitoring observations and additional identified mitigation measures be incorporated into standard operating procedures and project-specific BMPs.

No text change has been made to the document in response to your comment.

80027-004: Notwithstanding the newspaper articles that may have been published, there is only one wind energy project on BLM-administered lands in Wyoming — the

Wyoming Wind Project located in Arlington. While the BLM has received applications for site monitoring and testing, there are no applications for commercial development projects on BLM-administered land in Wyoming. All projects on BLM-administered lands will be subject to the requirements of the proposed Wind Energy Development Program, including requirements for site-specific NEPA analyses.

80027-005: As summarized in Section 2.6.2, without the proposed action, wind energy development might be more focused on state, Tribal, or private lands. Development on nonfederal lands could be subject to less federal oversight and less stringent mitigation. The proposed action provides an approach for ensuring the minimization of environmental impacts to the greatest extent possible.

80027-006: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The purpose of these analyses is to characterize the ecological resources that are present in the area of a proposed project and to identify habitats and other features that are important to the use or distribution of ecological resources. With regard to monitoring, the policies and BMPs require the development of a monitoring program that applies to construction and postconstruction phases of a proposed wind energy project. The scope and approach of the site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting, design, operation, mitigation, and monitoring stipulations for incorporation into the POD.

80027-007: As stated in Chapter 1, the National Energy Policy recommends that the Department of the Interior work with other federal agencies to increase renewable energy production on public lands. If the BLM's Wind Energy Development Program establishes requirements that render wind energy development on BLM-administered lands uneconomic, the National Energy Policy recommendation will not be accomplished. The BLM's program ensures that potential adverse impacts will be minimized to the greatest extent possible while simultaneously increasing the amount of wind energy development on BLM-administered lands over the next 20 years.

80027-008: The BLM is committed to full implementation of the Wind Energy Development Program proposed policies and BMPs. These include monitoring and implementation of adaptive management strategies to ensure that the potential adverse impacts are mitigated to the fullest extent possible (Section 2.2.3.1, Proposed Policies, and Section 2.2.3.2, Proposed BMPs). In addition, the BLM will require financial bonds for all projects to ensure compliance with the terms and conditions of the ROW authorization and the requirements of applicable regulatory requirements. The amount of the required

bond will be determined during the ROW authorization process on the basis of site-specific and project-specific factors. The BLM may also require financial bonds for site monitoring and testing authorizations. A requirement regarding the establishment of bonds has been added to the proposed policies (see Section 2.2.3.1). Operators will be required to comply with the terms and conditions of the ROW authorization. The POD, containing project-specific stipulations (including required mitigation measures), will be appended to the ROW agreement. Failure to comply could result in termination of the ROW authorization.

80027-009: Your comment addresses issues that are beyond the scope of the PEIS, the mission and responsibilities of the BLM, and/or the defined programmatic scope of the proposed Wind Energy Development Program. We appreciate your input and participation in the public review process.

80027-010: The text has been revised or clarified in response to your comment.

80027-011: Thank you for your comment. We appreciate your input and participation in the public review process.

80027-012: Two studies that deal specifically with the impact of wind developments on property values had been undertaken by the time the PEIS was prepared, both showing that no negative impacts occur. One study was published by ECONorthwest (2002) and the other was published by Sterzinger et al. (2003). Both studies provide a comprehensive analysis of the problem, one through a survey of county property assessors, and the other through the analysis of housing sale prices. Although additional studies may provide more insight on the impact of wind developments on property values, numerous studies that consider the impact of energy (power generation and transmission) and waste (nuclear and hazardous waste and landfills) facilities on property values are also useful in this context. The majority of these studies contend that while proximity to potentially objectionable facilities can create significant opposition in local communities, the overall economic impact of these facilities is not negative. Often opposition does not translate into economic impact, either on property values or on the local economy, or any negative impact that does occur is often offset by economic benefits of a particular facility in the local community in terms of employment, income, and local tax revenues. Positive impacts of this nature, in turn, benefit local property values by making the local community a more desirable place to live and work.

80027-013: The alternatives considered in the PEIS concern the development of wind energy production on BLM administered lands, not choices among various sources of power. Consideration of alternative sources of renewable energy is beyond the scope of the PEIS. We appreciate your input and participation in the public review process.

Document 80028

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Sunday, November 14, 2004 6:28 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80028

Thank you for your comment, Michael Kenedy.

The comment tracking number that has been assigned to your comment is 80028. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: November 14, 2004 06:28:21PM CDT

Wind Energy EIS Draft Comment: 80028

First Name: Michael
Middle Initial: F
Last Name: Kenedy
Address: 4251 Capitol View
City: Carson City
State: NV
Zip: 89701
Country: USA
Email: michaelkenedy@sbcglobal.net
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
Dear Friends:
What a wonderful idea! We have a lot of wind here in western Nevada. Getting away from polluting energy sources and reducing our dependence on foreign oil is all good. Should you ever want to test or offer governmnet grants I have 1 acre and a spot in my backyard for a windmill.Thanks! 80028-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80028

80028-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80029

Nevada Wind, LLC
3404 Calle Del Torre
Las Vegas, Nevada 89102
(702) 876-7677 – (702) 367-8101 Fax

November 19, 2004

BLM Wind Energy Programmatic EIS
Argonne National Laboratory, EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

We have reviewed the draft programmatic EIS for Wind Energy Development and offer the following comments for your consideration:

Section ES4 addresses alternatives. We believe that the alternative "limited wind energy development" should not be the preferred option, since it will stifle renewable energy development. However, should this option be selected please note under the section "limited wind energy development alternative," we believe that development should be limited to locations where development currently exists or where monitoring activities are currently underway or applied for through a BLM right of way for project or anemometer locations at the time that the EIS is finalized, not when the EIS started. The list included in the document is also inaccurate as several Nevada Wind and Ely Wind right of ways that have been issued and other applications are being processed. Specific projects should not be listed in the document. Only the conditions as identified in this paragraph should be included. This should also be reflected in Section 6.3 Impacts of the Limited Wind Energy Development Alternative where specific sites are listed. That list is also incorrect and incomplete. 80029-1

We support the proposed action that would implement the Wind Energy Development Program, since it ensures a consistent policy. However, we also believe that the policy should apply to agencies and entities that prevent sites from being used for wind energy development. Those entities should be required to pay "rent" for the acreage that would have been used by a wind developer, but were denied based upon the needs of a governmental agency. In addition, these entities should be required to pay other fees to the BLM, such as cost recovery fees and energy fees that are equal to what the BLM would have received from the energy developer. The BLM should not be denied financial benefit because it cannot issue a right of way to a wind developer. In this case, when the BLM designates land as undevelopable for renewable energy projects, it should calculate what it would have received in rent, cost recovery, energy fees, etc. and charge that entity for lost revenue. This would also apply to the State in the form of lost taxes. This has been done before with the State receiving "taxes in lieu of" for various land withdrawals. An example would be the Nevada Test Site where the State and County is receiving money in lieu of taxes for allowing the NTS to utilize land that could have been used for other purposes which 80029-2

would have generated a tax income stream. The same would apply for various local governments. 80029-2 (cont.)

It is important to understand that the footprint for monitoring activities is minimal versus the disturbance for the completed wind farm. This was clearly delineated in the EIS. We support categorical exclusions for wind monitoring activities. The reduced cost recovery expense for exploration on sites identified with categorical exclusions encourages developers to work with the BLM to satisfy concerns of wildlife groups and others. The writers of the EIS showed that they have a good understanding as to what is needed for monitoring activities and what is involved in developing and constructing wind farms. These two activities should not be combined. Exploration is costly for the developer with no return until a go/no-go decision for development is reached. Typically less than 25% of the sites explored result in an actual development project.

Most energy developers would be pleased to work directly with the BLM to identify sites that have energy development potential. The BLM should be encouraged to participate with the wind developers in finding suitable sites that are not sensitive to BLM's mission. 80029-3

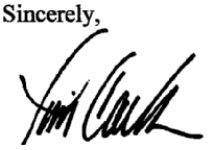
Wind energy development creates jobs in mostly rural communities. These are generally communities where these high paying jobs are needed. The economic development benefits to these communities as a result of job creation would be enhanced by renewable energy projects. An additional benefit would be no harm to the environment as a result of the economic development benefit.

We, as developers, confirm that wind development is compatible with a wide variety of land uses and we are looking forward to having an opportunity to explore potential partnerships for use of transmission and other services to maximize land use while still making the land available for recreational, grazing and other activities.

There is quite a bit of reference in the document to areas that would not be considered for wind energy development. However, these areas are not specifically identified. It is our understanding that an EIS process such as this mandates that all information is put out to the public. By omitting the maps that show areas not to be considered for development, the writer is violating the EIS process. In order to ensure that all wind energy development projects are treated fairly and consistently, and part of the public process, a map showing the areas where development would not be approved should be included. This would save time, energy, effort and expense on the part of wind energy developers and provide a clear, concise direction for the BLM in working with wind developers. It would also support the fact that this is a public document and a means for public input. 80029-4

We look forward to working with the BLM in the establishment of this comprehensive PEIS to enable us to have a greater understanding as to what is expected of us, who we need to work with, and the assurance that all projects will be handled consistently.

Sincerely,



Tim Carlson
Managing Partner
Nevada Wind, LLC.

Responses for Document 80029

80029-001: The limited wind energy development alternative considers additional wind energy development on BLM- administered land in areas where it currently exists, will be under review, or approved for development at the time the ROD for the PEIS is established. When the Draft PEIS was prepared, it was determined that only six locations were likely to meet these criteria by the time the ROD will be published (anticipated in July 2005). Although applications for additional ROW authorizations for both site monitoring and testing and commercial development may have been submitted to the BLM or may be under consideration by developers, the scope of the limited wind energy development alternative will not be expanded. Including additional projects would not substantively alter the conclusions of the PEIS regarding the alternatives.

80029-002: Your comment addresses issues that are beyond the scope of the PEIS, the mission and responsibilities of the BLM, and/or the defined programmatic scope of the proposed Wind Energy Development Program. We appreciate your input and participation in the public review process.

80029-003: Thank you for your comment. We appreciate your input and participation in the public review process.

80029-004: The maps included in the PEIS are appropriate for the programmatic level of analyses required to develop and evaluate a Wind Energy Development Program. The maps provided in Appendix B for each Field Office show the lands that will be excluded from the wind energy development to the extent they were identified in the MPDS. Given the size of the 11-state study area and the scale of the maps presented in the PEIS, it is not feasible to evaluate wind energy resources, the status or condition of BLM lands, or other spatial attributes at a more detailed level. Furthermore, such an evaluation would not enhance or improve upon the effectiveness of the Wind Energy Development Program. As required by the program's proposed policies and BMPs, detailed analyses of specific parcels of BLM-administered land will be conducted at the site-specific level on a project-by-project basis.

Document 80030

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Wednesday, November 24, 2004 3:05 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80030

Thank you for your comment, Ursula Powers-Sindlinger.

The comment tracking number that has been assigned to your comment is 80030. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: November 24, 2004 03:05:09PM CDT

Wind Energy EIS Draft Comment: 80030

First Name: Ursula
Middle Initial: K
Last Name: Powers-Sindlinger
Organization: Te-Moak Housing Authority
Address: 504 Sunset Street
City: Elko
State: NV
Zip: 89801
Country: USA
Email: nvgrantwriter@frontiernet.net
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
I consider this a very good idea but whenever applicable, I suggest that Indian tribes be involved in these projects, especially if the public land is located within a tribe's ancestral lands such as public lands located within the ancestral/treaty area of the Western Shoshone tribes. 80030-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80030

80030-001: Please see Sections 2.2.3.2.2 and 5.12.5 for descriptions of how the BLM will address your suggestion for involving affected Indian Tribes through government-to-government consultation.

Document 80031

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, November 25, 2004 10:02 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80031

Thank you for your comment, John Powers.

The comment tracking number that has been assigned to your comment is 80031. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: November 25, 2004 10:02:16AM CDT

Wind Energy EIS Draft Comment: 80031

First Name: John
Middle Initial: S
Last Name: Powers
Address: 10 Massachusetts Ave
Address 2: P O Box 338
City: Hyannisport
State: MA
Zip: 02647
Country: USA
Email: johnspowers@hotmail.com
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
Wind Power is todays answer to a cleaner energy. Public health and safety have been getting poor advice, the consequences of dependence of nuclear and fossil fuels.

At a time when Pilgrim Nuclear Plant wants a 20 year extension.
Nuclear waste can't be solved.

Our dependence on gasoline + oil has limits. Initially people are against change, but I believe wind and solar both clean energy will surpass.

Nantucket Sound has the best sustained wind speeds, 17-19, considered "outstanding" on the East Coast.

80031-1

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80031

80031-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80032*

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Wednesday, December 01, 2004 1:15 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80032

Wind_memo_80032
.doc (51 KB)

Thank you for your comment, Erik Brown.

The comment tracking number that has been assigned to your comment is 80032. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 1, 2004 01:15:15PM CDT

Wind Energy EIS Draft Comment: 80032

First Name: Erik
Middle Initial: S
Last Name: Brown
Organization: Humboldt State University
Address: 2460 Wyatt Lane
City: Arcata
State: CA
Zip: 95521
Country: USA
Email: erikb1972@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment: U:\ENGR410\Wind_memo.doc

Comment Submitted:
See attached memo

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

* The comment numbers for this document appear to be out of sequence. However, some of the comments are repeated, and, therefore, were assigned the same number.

MEMORANDUM

TO: U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FROM: ERIK BROWN, ENVIRONMENTAL RESOURCES ENGINEERING STUDENT, HUMBOLDT STATE UNIVERSITY, CA

SUBJECT: COMMENTS ON "WIND ENERGY DEVELOPMENT PROGRAMMATIC DRAFT EIS"

DATE: 1/10/2005

SUMMARY

The BLM has determined that the establishment of a Wind Energy Development Program would be a major federal action as defined by the National Environmental Policy Act of 1969 (NEPA). Thus, the BLM has prepared this draft programmatic environmental impact statement (PEIS). Upon reviewing the Draft PEIS, the following comments were developed:

- Requirements for hydro-geologic studies should be included in the proposed mitigations section 80032-1
- Discharge of wastewater is mentioned as a potential water quality issue but is not mentioned in the proposed mitigations section 80032-2
- Use of sky cranes as part of the Transportation Considerations Section 3.5 should be considered to reduce the need for road construction/modification, especially if roads are to be temporary 80032-3
- A provision for lightning protection specific to wind turbines should be included in the Overview Section 3 80032-4
- Use of recycled materials whenever possible should be included in the proposed BMPs 80032-5
- The language of the mitigation measures needs to be stronger, e.g. "should" should be changed to "shall" 80032-6
- No discussion on what may happen if mitigation measures are unsuccessful is provided 80032-7

BACKGROUND

As part of the National Energy Policy, in May 2001, the President's National Energy Policy Development Group (NEPDG) recommended to the President that the Departments of the

Interior, Energy, Agriculture, and Defense work together to increase renewable energy production (NEPDG 2001). In response to National Energy Policy Group recommendations, the BLM has also begun efforts to evaluate wind energy potential on public lands, and to establish wind energy policy. Toward that end, the BLM issued an Interim Wind Energy Development Policy (BLM 2002) that establishes requirements for processing applications for testing and monitoring wind energy sites and developing commercial wind energy development projects.

The BLM has determined that the establishment of a Wind Energy Development Program would be a major federal action as defined by the National Environmental Policy Act of 1969 (NEPA). Thus, the BLM has prepared this draft programmatic environmental impact statement (PEIS). The objectives of the PEIS are to (1) assess the environmental, social, and economic impacts associated with wind energy development on BLM-administered land, and (2) evaluate a number of alternatives to address the question of whether the proposed action presents the best management approach for the BLM to adopt, in terms of mitigating potential impacts and facilitating wind energy development (BLM 2004). The objectives of this memo are to:

1. Evaluate the Draft PEIS with respect to format and content (specifically technical content)

2. Develop comments from the results of the evaluation and ultimately, submit those comments to the lead agency

GENERAL CRITIQUE OF THE DPEIS

The DPEIS follows suggested formats from the DOE's Recommendations, and appears to be written with the intent of NEPA in mind. The preparers and stakeholders were clearly identified in the DEIS. The BLM estimates that as many as 5,000 people participated in the scoping process by attending public meetings, providing comments, requesting information, or visiting the Wind Energy Development PEIS Web site, so the public was involved. However, there was not a wide range of alternatives provided. Basically, either the wind development happens or there is no action. The level of development would have to be decided specifically for each site. The impacts and mitigations for this project are discussed thoroughly. However, the language of the mitigations section does not appear to be restrictive enough. In general, the Draft PEIS is well organized, easy to follow and written in a way that the general public can understand it.

80032-8

80032-9

TECHNICAL CRITIQUE

The Geologic Resources Section 5.1 of the DPEIS states the following:

"Geological hazards that could affect the construction and operation of a wind energy development site include landslides, rock falls, earthquakes, and volcanic activities. Earthquakes and volcanic activities happen in areas under specific geologic conditions and are determined by the local geology. Site construction activities can destabilize slopes if they are not conducted properly. Slope failures can occur naturally or be enhanced by slope modifications that change the local groundwater regimes and slope angles. In regions that have active earthquakes or volcanoes, heavy precipitation, or where geologic hazards are common, slope stability is sensitive to minor changes of landscape because of human intervention. Also, the water quality downslope of a failed slope can be adversely affected."

In addition the Water Resources Section 5.3 states:

"A wind energy project can impact surface water and groundwater in several different ways, including the use of water resources, changes in water quality, alteration of the natural flow system, and the alteration of interactions between the groundwater and surface water."

The following is one of the mitigation measures to address the potential impacts:

"Operators should identify unstable slopes and local factors that can induce slope instability (such as groundwater conditions, precipitation, earthquake activities, slope angles, and dip angles of geologic strata). Operators also should avoid creating excessive slopes during excavation and blasting operations. Special construction techniques should be used where applicable in areas of steep slopes, erodible soil, and stream channel/wash crossings."

I feel that the language in the mitigation measure is not strong enough. Changing the "should" in the first sentence to "shall" would be more effective. Ideally, a requirement for a complete hydro-geologic assessment of each proposed site prior to the planning phase would be a better mitigation. These issues are addressed in sections 4.1 and 4.3 but should be re-iterated in the proposed mitigations section.

80032-1 (cont.)

The Water Quality Section 5.3.2.2 mentions discharge of wastewater or sanitary water at the proposed sites. However, this issue is not addressed in the proposed mitigations section. Will some of these sites have a wastewater discharge? What would be the source of the wastewater? Will wastewater be treated on site and if so what will the minimum treatment levels be?

80032-2 (cont.)

Section 3.1.2.1 of the DPEIS notes that it is possible that local roads might require fortification of bridges and removal of obstructions to accommodate overweight or oversized shipments, particularly the turbine components. Moreover, the wind energy development project access road

80032-3 (cont.)

must be constructed to accommodate such shipments. One of the mitigation measures in Section 5.6.5. reads:

"A comprehensive transportation plan should be developed, particularly for the transport of turbine components, main assembly cranes, and other large pieces of equipment. The plan should consider specific object sizes, weights, origin, destination, and unique handling requirements and should evaluate alternative transportation approaches (e.g., barge or rail). In addition, the process to be used to comply with unique state requirements and to obtain all necessary permits should be clearly identified."

Again the language of the mitigation does not appear strong enough (should vs. shall). The mitigation measure does however, mention alternative transportation approaches. It would be interesting to see if the possibility of a sky crane (helicopter) for delivery from a staging area to the project site and to aid in installation would be feasible. Access roads would still need to be constructed, but not to the higher and more costly standards required to support the large heavy equipment. Also, avoiding the fortification of bridges and other existing road modifications would reduce possible erosion/runoff impacts and may prove more economical. Helicopters have been used in remote logging applications and installation of high-voltage towers where vehicle access is limited. The tradeoff of course would be the increase in noise impacts at roughly 80-100 decibels and potential safety issues (AEE 2004).

80032-3 (cont.)

Upon further review of the DPEIS, I noticed that the language for the majority of the mitigating measures, although consistent, is not strong enough. The term "should" is used when "shall" would seem to ensure compliance with the mitigating measures. For example, a mitigating measure for the Hazardous Materials and Waste Management Impact Section 5.7 states:

"The BLM should be provided with a comprehensive listing of the hazardous materials that would be used, stored, transported, or disposed of during activities associated with site monitoring and testing, construction, operation, and decommissioning of a wind energy project."

The provision of a Hazardous Materials List should be mandatory. The manner in which the mitigating measure is written allows the contractor to think that skipping this step is not important, and there is no implication that there would be any repercussions for not complying with the mitigating measure. Also, there are no discussions in the DPEIS of what might happen if mitigations are unsuccessful.

80032-6 (cont.)

Studies have been performed in regard to lightning protection for wind turbine systems (McNiff 2001). Section 3.3 Health and Safety Aspects of Wind Energy Projects, lists lightning storms as part of an emergency procedure plan but there is no mention of construction methods for physical

80032-4 (cont.)

protection. Is there a plan to incorporate BMPs for lightning protection, specifically for wind turbines, into the EIS? 80032-4 (cont.)

Implementation of a large scale Wind Energy Development over a region of 11 western states would require a great deal of raw materials and resources for the components of the turbines. Will there be a requirement or incentive to use recycled materials whenever possible in the BMPs? 80032-3 (cont.)

CONCLUSION

The BLM has determined that the establishment of a Wind Energy Development Program would be a major federal action as defined by the National Environmental Policy Act of 1969 (NEPA). Thus, the BLM has prepared this draft programmatic environmental impact statement (PEIS). Upon reviewing the Draft PEIS, the following comments were developed:

- Requirements for Hydro-geologic studies should be included in the proposed mitigations section
- Discharge of wastewater is mentioned as a potential water quality issue but is not mentioned in the proposed mitigations section
- Use of sky cranes as part of the Transportation Considerations Section 3.5 should be considered to reduce the need for road construction/modification, especially if roads are to be temporary
- A provision for lightning protection specific to wind turbines should be included in the Overview Section 3
- Use of recycled materials whenever possible should be included in the proposed BMPs
- The language of the mitigation measures needs to be stronger, e.g. "should" should be changed to "shall"
- No discussion on what may happen if mitigation measures are unsuccessful is provided

REFERENCES

U.S. Department of the Interior Bureau of Land Management. *Draft Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United State, DES 044.* September 2004.

McNiff, Brian. *Wind Turbine Lightning Protection Project.* National Renewable Energy Laboratory. Golden Colorado, 1999-2001.

Office of Environment and Energy (AEE). www.aee.faa.gov/noise/AC_36-1H.htm

Responses for Document 80032

80032-001: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses, including any hydro-geological assessment, will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders.

80032-002: The 2nd bullet under the Hazardous Materials and Waste Management heading of Section 2.2.3.2.2, Plan of Development Preparation, requires operators to develop a waste management plan identifying waste streams and waste-specific management and disposal requirements. This proposed BMP has been rewritten to clarify that the waste streams to be addressed in this plan include wastewater.

80032-003: The purpose of Chapter 3 is to describe a reasonable wind energy development scenario in order to assist in the assessment of impacts and the development of BMPs. The proponent would be responsible for compliance with applicable road construction and transportation standards or for proposing the use of helicopters as a more cost- effective, alternate means of transportation.

As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

80032-004: Although not specifically addressed in the PEIS, it is the BLM's understanding that wind turbine manufacturers are well aware of the potential for lightning strikes and will have incorporated lightning protection into their wind turbine designs. Nonetheless, the 2nd bullet under the Health and Safety heading in Section 2.2.3.2.2, Plan of Development Preparation, has been modified to include lightning protection standards as one of the elements to be addressed in the health and safety plan.

80032-005: The BLM does not intend to place requirements on operators for the use of recycled materials in the construction or operation of a wind energy project. Such use will be evaluated by the operators, in part, on the basis of cost and suitability of materials.

80032-006: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

80032-007: The BLM is committed to full implementation of the Wind Energy Development Program, elements of which require the incorporation of adaptive management strategies and comprehensive monitoring programs at all wind energy development sites (see Section 2.2.3.1, Proposed Policies, last bullet, and Section 2.2.3.2.2, Plan of Development Preparation, General, 7th bullet). The application of adaptive management strategies will ensure that programmatic policies and BMPs will be revised as new data regarding the impacts of wind power projects become available. The source for a significant portion of the new data is likely to be the required site-specific monitoring programs that will evaluate environmental conditions at a site through all phases of development. Site-specific monitoring programs will evaluate, among other things, the effectiveness of project-specific mitigation measures. A key requirement for the site-specific monitoring programs is the requirement that monitoring observations and additional identified mitigation measures be incorporated into standard operating procedures and project-specific BMPs.

80032-008: Thank you for your comment. We appreciate your input and participation in the public review process.

80032-009: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

Document 80033

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Wednesday, December 01, 2004 4:47 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80033

Thank you for your comment, Amy Myers.

The comment tracking number that has been assigned to your comment is 80033. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 1, 2004 04:47:09PM CDT

Wind Energy EIS Draft Comment: 80033

First Name: Amy
Middle Initial: C
Last Name: Myers
Address: P.O. Box 7493
City: Jackson
State: WY
Zip: 83002
Country: USA
Email: acmyers@uvm.edu
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
As an advocate of wind energy I believe that as long as the sighting process is done in an optimal manner to decrease adverse inpact the implementation of them in BLM areas would be an improvement for the entire community. 80033-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80033

80033-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80034

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Wednesday, December 01, 2004 5:30 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80034

Thank you for your comment, Keith Peters.

The comment tracking number that has been assigned to your comment is 80034. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 1, 2004 05:29:42PM CDT

Wind Energy EIS Draft Comment: 80034

First Name: Keith
Middle Initial: G
Last Name: Peters
City: #####
State: ##
Zip: #####
Country: USA
Privacy Preference: Withhold address only from public record

Comment Submitted:
Wind is an underutilized yet very sustainable source of energy. It's an energy source that is much less invasive and destructive than resources that must be extracted.

I strongly support the conclusion that the proposed action appears to provide the best approach for managing wind energy development on BLM-administered lands. 80034-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80034

80034-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80035

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, December 02, 2004 12:30 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80035

Thank you for your comment, Lester Williams.

The comment tracking number that has been assigned to your comment is 80035. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 2, 2004 12:30:06AM CDT

Wind Energy EIS Draft Comment: 80035

First Name: Lester
Middle Initial: E
Last Name: Williams
Organization: USNavy Retired
Address: #####
City: #####
State: ##
Zip: #####
Country: USA
Email: #####
Privacy Preference: Withhold address only from public record

Comment Submitted:
Please contact me by email or phone at ##### ABOUT how to learn more about a piece of property located in the Four Corners area of Southwestern Colorado that might be available along with some deeded land adjacent to it. It may also have something special concerning that I am a 100% disabled US veteran. Thank you,Lester E. Williams, ##### ##### ## #####

80035-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80035

80035-001: Your comment addresses issues that are beyond the scope of the PEIS, the mission and responsibilities of the BLM, and/or the defined programmatic scope of the proposed Wind Energy Development Program. We appreciate your input and participation in the public review process.

Document 80036

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, December 02, 2004 3:15 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80036

Thank you for your comment, Thomas Catino.

The comment tracking number that has been assigned to your comment is 80036. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 2, 2004 03:14:31AM CDT

Wind Energy EIS Draft Comment: 80036

First Name: Thomas
Middle Initial: F
Last Name: Catino
Privacy Preference: Withhold address only from public record

Comment Submitted:
I strongly support the use of federal lands for Wind Power turbines.Oue dependence of fossil fuels & the excess cordon dioxide produced by burning them has helped to create global problems.I believe the new Wind /Hydrogen systems developed by US WindFarming to be the best systems available & should be sought out for inclusion of wind projects on Federal lands. 80036-1

Wind Energy Cooperatives to Produce Electricity and Hydrogen for the Residential, Commercial and Transportation Industry Nationwide

CHICAGO--(BUSINESS WIRE)--Nov. 17, 2004--U.S. Wind Farming, Inc. (Pink Sheets:USWF - News): U.S. Wind Farming, Inc. will install the "Next Generation" of Integrated Renewable Energy Systems utilizing Decentralized Hydrogen Technology. This will become an important application for the Nation's Agricultural Community providing a considerable economic base while going far in removing this nation from dependence on foreign oil.

U.S. Wind Farming, Inc. (Pink Sheets:USWF - News), "America's Only Publicly Traded Wind Energy Company," (www.uswindfarming.com) announced their plans today to commission the Advanced Technology of GE Wind Turbines and Stuart Energy's Proprietary Integrated Hydrogen Generation Water Electrolysis Technologies. This is to provide U.S. Wind Farming's Wind Energy Cooperatives the ability to produce Commercially Viable Renewable and Clean Energy Commodities (Electricity & Hydrogen) thus "Unlocking" Substantial New Renewable Energy Reserves Nationwide.

U.S Wind Farming announces the next generation of Wind Farming Technologies creating not only electricity for sale during Peak Load Requirement times, but then producing Hydrogen for sale during off-peak times. This provides U.S. Wind Farming with the ability to "Harvest the Power of the Wind" to create valuable commodities garnering prime prices during all times of wind generation. This also allows U.S. Wind Farming to establish Wind Energy Electricity/Hydrogen Cooperatives nationwide in areas previously thought to not be viable candidates for wind energy development because of reduced wind velocities.

U.S. Wind Farming expects to commission GE Wind Energy (www.gewindenergy.com) to install and maintain all Wind Turbines for their Wind Energy Electricity/Hydrogen Cooperatives nationwide.

U.S. Wind Farming expects to commission Stuart Energy (www.stuartenergy.com) to install and maintain all Hydrogen Production/Pressurization/Storage and Dispensing equipment for their Wind Energy Electricity/Hydrogen Cooperatives nationwide.

Existing wind farms and new wind energy capable sites for these revolutionary new Wind Energy Electricity/Hydrogen Cooperatives have approached U.S. Wind Farming. Initial sites under consideration for development are located in California, Hawaii, Nebraska, North Carolina, New York, Tennessee, Oregon, Colorado, Wisconsin, South Dakota, North Dakota and Iowa.

U.S. Wind Farming, Inc. states that with the advent of this new paradigm of energy production, their Wind Energy Electricity/Hydrogen Cooperatives will not only provide extreme gains for our environment which is attractive to all the inhabitants of this Planet, but they have developed a way for Wind Energy to compete with all aspects of the fossil fuel industry, while providing considerable financial gain to the company and local farming communities. The company states that their Wind Energy Electricity/Hydrogen Cooperatives will go far in removing this nation's reliance on foreign oil.
sincerely,Thomas F Catino

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80036

80036-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80037

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, December 02, 2004 7:58 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80037

Thank you for your comment, Peter Knox.

The comment tracking number that has been assigned to your comment is 80037. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 2, 2004 07:58:05AM CDT

Wind Energy EIS Draft Comment: 80037

First Name: Peter
Last Name: Knox
Email: #####
Privacy Preference: Withhold address only from public record

Comment Submitted:
It has been said that one of the difficulties inherent in developing wind energy in my state of North Dakota is the distance that exists between the western part of the state and any significant population center. Everyone knows that the wind blows a lot in North Dakota and that there is plenty of non-cropland in the west half of the state to put up wind turbines. The trouble is getting the resultant harnessed energy to a population center without losing too much power in the transfer of that energy over long distances.

It is my understanding that electricity "travels" more effeciently over cold wires. Because the North Dakota winter is famous for being cold, perhaps the energy could be sent during the winter months. During the summer months, when the outside temperature is warmer, the power lines warm up as well making the transfer of energy less efficient. During these warmer periods, perhaps the energy could be stored close to the site of the wind turbine in some sort of battery cell until the onset of winter when the power lines would become cold again thus making the transfer of power over long distances more effecient.

80037-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80037

80037-001: Your comment addresses issues that are beyond the scope of the PEIS, the mission and responsibilities of the BLM, and/or the defined programmatic scope of the proposed Wind Energy Development Program. We appreciate your input and participation in the public review process.

Document 80038

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 03, 2004 10:53 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80038

Thank you for your comment, Richard Stoffle.

The comment tracking number that has been assigned to your comment is 80038. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 3, 2004 10:52:57AM CDT

Wind Energy EIS Draft Comment: 80038

First Name: Richard
Middle Initial: W
Last Name: Stoffle
Organization: University of Arizona
Address: 319 Anthr Bldg
City: Tucson
State: AZ
Zip: 85721
Country: USA
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
Our research team studied the potential placement of a wind farm on Shoshone Mountain located on the Nevada Test Site. The study found a wide range of American Indian sacred sites and other sacred resources such as viewscapes needed for vision questing. This Wind Farm was assumed to have no impacts because the area is isolated. No General EIS could have anticipated the very important negative impacts found during a site specific study. GEIS are a bad idea but especially with new technologies being placed in new places. 80038-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80038

80038-001: The PEIS states that site-specific research would be necessary for any wind development project. The purpose of the PEIS is to provide agencies with an understanding of the types of effects wind development projects could have on the environment in general terms.

Document 80039

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 03, 2004 10:55 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80039

Thank you for your comment, Stewart Rosenkrantz.

The comment tracking number that has been assigned to your comment is 80039. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 3, 2004 10:54:33AM CDT

Wind Energy EIS Draft Comment: 80039

First Name: Stewart
Last Name: Rosenkrantz
Address: 2319 SE 9th St.
City: Pompano Beach
State: FL
Zip: 33062-6704
Country: USA
Email: srosenkr@bellsouth.net
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
Wind energy development is mandatory but it must be done with a minimum effect on the environment. It's known that birds fly into the turbines and there could be a way to keep birds out such as putting the generators in a screened in area. 80039-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80039

80039-001: As required by the Wind Energy Development Program proposed policies and BMPs, any wind energy project proposed for BLM-administered lands shall be planned to minimize or mitigate impacts to wildlife habitats, and other resources and land uses. The policies and BMPs require the collection, evaluation, and consideration of site-specific information on ecological and other resources, with these analyses providing a basis for the siting and design of the wind facility to minimize or mitigate environmental impacts, including avian collisions with project structures. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting and design stipulations for incorporation into the POD. No text change has been made to the document in response to your comment.

Document 80040

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 03, 2004 12:52 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80040

Wind_Energy_80040.doc (185 KB)...

Thank you for your comment, Seth Wittke.

The comment tracking number that has been assigned to your comment is 80040. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 3, 2004 12:51:30PM CDT

Wind Energy EIS Draft Comment: 80040

First Name: Seth
Last Name: Wittke
Organization: Wyoming State Geological Survey
Address: P.O. Box 1347
City: Laramie
State: WY
Zip: 82073
Country: USA
Privacy Preference: Don't withhold name or address from public record
Attachment: H:\Wind Energy.doc

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

WYOMING STATE GEOLOGICAL SURVEY
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BLM Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

December 2, 2004

Seth Wittke of the Hazards Section of the Wyoming State Geological Survey has the following comments on the BLM Wind Energy Programmatic EIS.

Although sections in the plan deal with surface disruption, there aren't any specifics notably because of the large scale of the study. In most of the western states, there are stabilized dunes which exist in areas that would be suitable for wind power development. Proper precautions should be taken in order to maintain the stability of these landforms. 80040-1

Also, any study on slope stability should be taken with a grain of salt. Due to current drought conditions in the mountain west, slopes which seem stable in dry conditions may not be when the drought cycle ends.

Finally, proposed construction near aquifer recharge areas should be closely monitored to reduce the potential for contamination of said aquifer. This may require a study to determine localized aquifer recharge areas. 80040-2

Sincerely,

Ronald C. Surdam
Director and State Geologist

Cc: Governor's Planning Office

Responses for Document 80040

80040-001: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including analyses of slope and soils stability, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD.

80040-002: The text in Section 5.3.5 has been revised in response to your comment.

Document 80041

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 03, 2004 6:00 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80041

Thank you for your comment, Tolford Young.

The comment tracking number that has been assigned to your comment is 80041. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 3, 2004 05:59:34PM CDT

Wind Energy EIS Draft Comment: 80041

First Name: Tolford
Middle Initial: R
Last Name: Young
Address: 3260 E. Wasatch Pines Lane
City: Granite
State: UT
Zip: 84092-4212
Country: USA
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
I want to be on record as supportive of the "Proposed Action" of this PEIS for all the reasons for which it was proposed. 80041-1

Good work, neighbors!

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80041

80041-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80042

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Sunday, December 05, 2004 4:26 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80042

Thank you for your comment, Chiara Cannella.

The comment tracking number that has been assigned to your comment is 80042. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 5, 2004 04:25:48PM CDT

Wind Energy EIS Draft Comment: 80042

First Name: Chiara
Middle Initial: M
Last Name: Cannella
Address: #####
City: #####
State: ##
Zip: #####
Country: USA
Privacy Preference: Withhold address only from public record

Comment Submitted:
I am extrememly opposed to this proposal because of environmental affects, and the destruction of important lands. 80042-1

Other, less destructive energy alternatives should be considered instead.

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80042

80042-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80043

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Monday, December 06, 2004 7:46 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80043

Thank you for your comment, #####

The comment tracking number that has been assigned to your comment is 80043. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 6, 2004 07:45:42AM CDT

Wind Energy EIS Draft Comment: 80043

First Name: #####
Last Name: #####
Address: #####
City: #####
State: ##
Zip: #####
Country: USA
Privacy Preference: Withhold name and address from public record

Comment Submitted:
Whats wrong with more solar enegry as well as wind.
Spend more on the use of the sun as well as wind.
I think we as a nation had better be more contained & self suporting where enegry is concerned. 80043-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80043

80043-001: As stated in Chapter 1, the National Energy Policy recommends that the Department of the Interior work with other federal agencies to increase renewable energy production on public lands. The BLM has focused on wind energy development in this PEIS, in part, in response to the number of ROW applications it has received. The BLM issued a policy designed to encourage solar power development on public lands in October 2004; information about this policy can be obtained at http://www.blm.gov/nhp/news/releases/pages/2004/pr041021_solar.htm.

Document 80045

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Monday, December 06, 2004 4:37 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80045

Wind_Development _Draft_Program...

Thank you for your comment, Mark Watson.

The comment tracking number that has been assigned to your comment is 80045. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 6, 2004 04:36:59PM CDT

Wind Energy EIS Draft Comment: 80045

First Name: Mark
Middle Initial: L
Last Name: Watson
Organization: New Mexico Department of Game and Fish
Address: P.O. Box 25112
City: Santa Fe
State: NM
Zip: 87504
Country: USA
Email: mwatson@state.nm.us
Privacy Preference: Don't withhold name or address from public record
Attachment: C:\Documents and Settings\mwatson\My Documents\Federal Agencies\BLM\Wind\Wind Development Draft Programmatic EIS.doc

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH
One Wildlife Way
Post Office Box 25112
Santa Fe, NM 87504
Phone: (505) 476-8008
Fax: (505) 476-8124

Visit our website at www.wildlife.state.nm.us
For basic information or to order free publications: 1-800-862-9310.

December 5, 2004

BLM Wind Energy Programmatic EIS Scoping
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

Re: Draft Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States
NMGF Doc. No. 9591

Dear Sirs:

The New Mexico Department of Game and Fish (Department) has reviewed the Programmatic Environmental Impact Statement (PEIS) on Wind Energy Development on BLM-Administered Lands in the Western United States. The Department commented on 16 December 2003 on the Notice of Intent that announced the development of this PEIS. In those comments, we identified our concerns with the potential for large industrial wind turbine development projects to adversely impact 1) wildlife, such as night-migrating birds, raptors, and bats; and 2) important wildlife habitats, such as wetlands, waterways and migration corridors for birds and bats. We have attached a copy of those comments for you additional review.

The PEIS is thorough, well written and well documented. We are pleased to see that the issues we brought up in our previous comments are addressed as possible mitigation measures for wind development projects on western BLM lands. We recognize that these mitigation measures will need to be incorporated as best management practices (BMPs), stipulations and standards and guidelines in future Resource Management Plan amendments for New Mexico BLM Districts to authorize wind development projects on BLM lands in New Mexico.

However, based on our experience with BLM planning and regulatory efforts for oil and gas leasing and development, we are concerned that New Mexico BLM offices will not be provided with sufficient planning, permitting and enforcement staff to ensure that the proper mitigation strategies and methods identified by the PEIS are in fact implemented and enforced on the ground. In our opinion, current staffing levels do not provide adequate personnel to ensure enforcement of wildlife and wildlife habitat protection, mitigation and reclamation measures for oil and gas development on BLM land in New Mexico. Therefore, we recommend that the Final

80045-1

PEIS address how this issue will be dealt with in all of the individual western states that are covered under this PEIS. 80045-1 (cont.)

We appreciate the opportunity to comment on this PEIS. We look forward to working with New Mexico BLM staff to ensure that these wildlife and wildlife habitat protection and mitigation measures, BMPs, stipulations and standards and guidelines reviewed by the PEIS are considered and implemented where necessary for future wind development projects on BLM lands in New Mexico. Should you have any questions regarding our comments, please contact Mark Watson, Habitat Specialist, of my staff at (505) 476-8115, or <mwatson@state.nm.us>.

Sincerely,

Lisa Kirkpatrick, Chief
Conservation Services Division

LK/MLW

Attch. (1)

CC: Joy Nicholopoulos (Ecological Services Field Supervisor, USFWS)
Bruce Thompson (Director, NMGF)
Tod Stevenson (Deputy Director, NMGF)
Luke Shelby (Assistant Director, NMGF)
Area Chiefs (NMGF)
Area Habitat Specialists (NMGF)
Sandy Williams (Conservation Services Ornithologist, NMGF)
Conservation Services Mammalogist (NMGF)
Mark Watson (Conservation Services Habitat Specialist, NMGF)

GOVERNOR
Bill Richardson

STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH

One Wildlife Way
PO Box 25112
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Visit our website at www.gmfsh.state.nm.us
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Albuquerque, NM

Leo Sims
Hobbs, NM

December 16, 2003

BLM Wind Energy Programmatic EIS Scoping
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

Re: NOI to Prepare a Programmatic Environmental Impact Statement
To Evaluate Wind Energy Development on Western BLM Lands
NMGF Doc. No. 8976

Dear Sirs:

The New Mexico Department of Game and Fish has reviewed the 17 October 2003 Federal Register document regarding the above-referenced project. According to the document, the Bureau of Land Management (BLM) will prepare a Programmatic Environmental Impact Statement (PEIS) to evaluate issues associated with wind energy development on western public lands (excluding Alaska) administered by the BLM. The BLM requests information and comments on resources in the western United States that wind energy development may impact.

Commercial-sized wind energy turbine projects are known to have adverse impacts on birds and bats by direct killing. We provide the following recommendations for analysis in the PEIS and recommend that the BLM adopt these recommendations as policy and standard operating procedure for project proponents for design, sighting, construction and post-construction monitoring efforts for wind energy development projects relative to impacts on wildlife and habitats. Most of these guidelines are taken from the 10 July 2003 (Volume 68, Number 132) Federal Register, U.S. Fish and Wildlife Service's Interim Voluntary Guidelines to Avoid and Minimize Wildlife Impacts from Wind Turbines. For additional information on impacts to birds and bats, we refer you to this publication.

Sighting and Configuration
Avoid placing turbines in documented locations of any species of wildlife, fish or plant protected under the Federal Endangered Species Act. Consult and coordinate with the state wildlife agency regarding any potential impacts of site development to state threatened, endangered or sensitive species. Consider site development impacts on BLM sensitive species.

Avoid locating turbines in high concentration areas or important habitats for birds such as 1) known seasonal bird migration pathways (for neotropical and regional migrants, including

songbirds, waterfowl, raptors, shorebirds; 2) known daily movement flyways (e.g., between roosting and feeding areas); 3) areas near water, i.e. springs, rivers, lakes, riparian areas, seasonal and permanent playas, sloughs, prairie potholes and other wetlands; 4) occupied or potential habitat for lekking gallinaceous bird species such as lesser prairie chickens and sage grouse, which are known to exhibit extreme avoidance of vertical features and/or structural habitat fragmentation; and 5) areas with a high incidence of fog, mist, low cloud ceilings, and low visibility, due to the incidence of large night-migrating bird kills due to tower lighting.

Configure turbine locations to avoid areas or features of the landscape known to attract raptors (hawks, falcons, eagles, owls). For example, golden eagles, hawks, and falcons use cliff/rim edges extensively; setbacks from these edges may reduce mortality. Other examples include not locating turbines in saddles, dips or passes in a ridge. Avoid locating turbines in or near prairie dog colonies or attracting high densities of prey animals (rodents, rabbits, etc.) used by raptors.

Configure turbine arrays to avoid potential avian mortality where feasible. For example, group turbines rather than spreading them widely, and orient rows of turbines parallel to known bird movements, thereby decreasing the potential for bird strikes. Implement appropriate storm water management practices that do not create water attractions for birds and bats.

Avoid placing turbines near known bat hibernation, breeding and maternity/nursery colonies, in bat migration corridors, or in flight paths between colonies and feeding areas.

Avoid fragmenting large, contiguous tracts of wildlife habitat. Where practical, place turbines on lands already altered or cultivated, and away from areas of intact and healthy native habitats. If not practical, select fragmented or degraded habitats over relatively intact areas.

Reduce availability of carrion by practicing responsible animal husbandry (removing carcasses, fencing out cattle, etc.) to avoid attracting Golden Eagles and other raptors.

Post-development mortality studies should be a part of any site development plan to determine if or to what extent bird and bat mortality occurs. Studies should be designed in coordination with Federal and state agency biologists.

Turbine Design and Operation Recommendations

Use tubular supports with pointed tops rather than lattice supports to minimize bird perching and nesting opportunities. Avoid placing external ladders and platforms on tubular towers to minimize perching and nesting. Avoid use of guy wires for turbine or meteorological tower supports. All existing guy wires should be marked with recommended bird deterrent devices (*Avian Power Line Interaction Committee (APLIC). 1996. Suggested Practices for Raptor Protection on Power Lines. Edison Electric Institute/Raptor Research Foundation, Washington D.C., 128 pp.* and *Mitigating Bird Collisions with Power Lines: The State of the Art in 1994. Edison Electric Institute, Wahsington, D.C. 78 pp.* Copies can be obtained via the Internet at http://www.eei.org/resources/pubcat/enviro/, or by calling 1-800-334-5453).

If taller turbines (top of the rotor-swept area is >199 feet above ground level) require lights for aviation safety, the minimum amount of pilot warning and obstruction avoidance lighting specified by the Federal Aviation Administration (FAA) should be used (*Federal Aviation*

Administration. 2000. Obstruction marking and lighting. Advisory Circular AC 70/7460-1K, Air Traffic Airspace Management.31 pp.). Unless otherwise requested by the FAA, only white strobe lights should be used at night, and these should be the minimum number, minimum intensity, and minimum number of flashes per minute (longest duration between flashes) allowable by the FAA. Solid or pulsating red incandescent lights should not be used, as they appear to attract night-migrating birds at a much higher rate than white strobe lights.

Where feasible, place electric power lines underground (see NMGF Trenching Guidelines) or on the surface as insulated, shielded wire to avoid electrocution of birds. Use recommendations of the Avian Power Lines Interaction Committee (1994, 1996) for any required above-ground lines, transformer, or conductors.

High seasonal concentrations of birds may cause problems in some areas. If, however, power generation is critical in these areas, an average of three years monitoring data (e.g., acoustic, radar, infrared, or observational) should be collected and used to determine peak use dates for specific sites. Where feasible, turbines should be shut down during periods when birds are highly concentrated at those sites.

When upgrading or retrofitting turbines, follow the above guidelines as closely as possible. If studies indicate high mortality at specific older turbines, retrofitting or relocating is highly recommended.

We appreciate the opportunity to comment on this project. Should you have any questions regarding our comments, please contact Mark Watson, Habitat Specialist, of my staff at (505) 476-8115, or <mwatson@state.nm.us>.

Sincerely,

Harold Ward
for

Lisa Kirkpatrick, Chief
Conservation Services Division

LK/MLW

Attch.

CC: Joy Nicholopoulos (Ecological Services Field Supervisor, USFWS)
Area Habitat Specialists (NMGF)
Sandy Williams (Conservation Services Ornithologist, NMGF)
Terrence Enk (Conservation Services Mammalogist, NMGF)
Mark Watson (Conservation Services Habitat Specialist, NMGF)

Response for Document 80045

80045-001: The BLM is committed to full implementation of the Wind Energy Development Program proposed policies and BMPs (Section 2.2.3.1, Proposed Policies, and Section 2.2.3.2, Proposed BMPs) and will work within its budget and available resources to accomplish this.

Document 80046

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Monday, December 06, 2004 5:13 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80046

Thank you for your comment, Robert Thayer.

The comment tracking number that has been assigned to your comment is 80046. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 6, 2004 05:12:45PM CDT

Wind Energy EIS Draft Comment: 80046

First Name: Robert
Middle Initial: L
Last Name: Thayer
Organization: Bioregional planning consultant
Address: 2329 Goldberry Lane
City: Davis
State: CA
Zip: 95616
Country: USA
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
I have conducted research in wind energy siting conflicts since 1985. The three most critical issues in wind farm siting are: 1) avian mortality, 2) visual intrusion/compatibility, and 3) need for local regions accepting wind farms to be given "localized benefits" from the siting and installation os specific wind energy projects.

Therefore: 1) Any comprehensive federal program to establish wind energy developments should be preceded by equally comprehensive baseline avian migration and foraging studies; 2) any comprehensive federal program to establish wind energy developments should be preceded by baseline visibility studies, particularly from population centers and existing or proposed wilderness areas, and; 3) all federally-sanctioned wind energy developments should be accompanied by a stipulation that such energy developers designate a fixed percentage of kWh fee to a fund whose proceeds will go to local non-profit organizations in the region affected by the wind farm development. 80046-1 80046-2 80046-3

Robert Thayer
Davis, CA
December 6, 2004

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Responses for Document 80046

80046-001: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, which could include the evaluation of avian migration and foraging patterns, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Comprehensive baseline studies of avian migration and foraging are beyond the scope of the PEIS.

80046-002: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the evaluation of visibility issues, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Comprehensive visibility studies are beyond the scope of the PEIS.

80046-003: Portions of the federal revenues associated with wind energy development on BLM-administered lands are distributed to local governments under both (1) the Payments in Lieu of Taxes (PILT) program appropriated by Congress, and (2) provisions of the Reclamation Act of 1902 that distribute a percentage of the federal receipts. The BLM has no authority over the distribution of these funds at the local level.

Document 80047

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Tuesday, December 07, 2004 1:49 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80047

Thank you for your comment, Clint Carroll.

The comment tracking number that has been assigned to your comment is 80047. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 7, 2004 01:49:24AM CDT

Wind Energy EIS Draft Comment: 80047

First Name: Clint
Last Name: Carroll
Address: 2100 Channing Way
Address 2: #258
City: Berkeley
State: CA
Zip: 94704
Country: USA
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
I strongly oppose the establishment of over-arching protocol for wind energy development projects on the basis that the environmental and socio-cultural risks are too high. I urge the committee to consider each project on its own terms, as each project demands close attention to the specific risks at hand.

I do not support the proposed action because it is presented as a speedy way for energy companies to develop on public land. We should not place private interests above the careful consideration of the environmental and social impacts of each wind energy project. 80047-1

The report lists a large amount of adverse impacts of such projects and I have also heard personal accounts of what these projects do. These accounts have not been positive. If we wish to develop alternative methods for energy production, then these methods should account for and be respectful to the health of humans and the associated ecosystem. I believe this issue can be addressed with careful planning, not shortcuts.

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80047

80047-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80048

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Tuesday, December 07, 2004 11:14 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80048

Thank you for your comment, Charles Supsic.

The comment tracking number that has been assigned to your comment is 80048. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 7, 2004 11:13:47AM CDT

Wind Energy EIS Draft Comment: 80048

First Name: Charles
Last Name: Supsic
Address: 300 N.Ninth St.
City: Wheeling
State: IL
Zip: 60090
Country: USA
Email: retooler2000@yahoo.com
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
I believe it's time to invest our tax dollars into alternative energy sources. 80048-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80048

80048-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80049

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Tuesday, December 07, 2004 11:54 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80049

BLM-EIS-comments_80049.doc (27...

Thank you for your comment, Rebecca Efroymson.

The comment tracking number that has been assigned to your comment is 80049. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 7, 2004 11:54:11AM CDT

Wind Energy EIS Draft Comment: 80049

First Name: Rebecca
Middle Initial: A
Last Name: Efroymson
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State: TN
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Privacy Preference: Don't withhold name or address from public record
Attachment: D:\proposals\wind energy\BLM-EIS-comments.doc

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Comments from Dr. Rebecca Efroymson, Oak Ridge National Laboratory, Oak Ridge, TN, efroymsonra@ornl.gov, 865-574-7397.
December 7, 2004

Please note that these comments do not reflect the opinion or policy of officials at Oak Ridge National Laboratory or the US Department of Energy.

General comment: I agree that the proposed action appears to provide the best approach for managing wind energy development on BLM-administered lands. The EIS is generally well written and comprehensive. (My expertise is in the field of ecological risk assessment.) I have several comments that could improve the document. 80049-1

p. 5-36. Below these bullets or elsewhere, it would be helpful to mention that spatially-explicit, individual-based models are good tools for estimating abundance and "self-sustaining levels" of populations. 80049-2

p. 5-39, para 2. It would be helpful to have a paragraph on differences in recovery times for different types of ecosystems. For example, while recovery from physical disturbance in wet ecoregions may take years or a few decades, recovery in arid systems can take centuries. 80049-3

p. 5-45, para 2. Please clarify 1st sentence. Does this mean that no reproductive or behavioral effects (avoidance, flying from nest) have been observed? 80049-4

p. 5-49, para 2. Direct impacts are usually considered to be those that impact animals directly, such as collision or toxicity. Effects on species-specific habitat are generally considered indirect or secondary effects (these are direct effects on plants and soil). 80049-5

p. 5-49, para 2. More attention should be given to potential population-level effects, such as extinction risk. As mentioned above, the document would benefit from a discussion of individual-based models and their potential role in estimating population abundance and sustainability, based on quantity of habitat removed, extent of fragmentation (and actual spatial configuration of turbines, roads, power lines, etc.), and species life history characteristics. 80049-6

p. 5-49, para 4. The document would benefit from a discussion of tools that are available (or under development) to assess risk of collision. For example, Richard Podolsky gave a presentation at the latest National Wind Coordinating Committee wildlife meeting on such a model [http://www.nationalwind.org/events/wildlife/200411/presentations/Podolsky_Risk.pdf] Also, individual-based models would be useful for translating mortality figures to population-level effects. 80049-7

p. 5-57. last para. It is asserted that the avian fatality rates in 5.9.3-3 should be considered overestimates. However, Morrison (2002) asserts that searcher efficiency can range from 35-85%. Please indicate whether or not searcher efficiency was incorporated into the estimates in Table 5.9.3-3.
(Morrison, M. 2002. Searcher bias and scavenging rates in bird/wind energy studies. NREL/SR-500-30876. National Renewable Energy Laboratory, Golden, CO.) 80049-8

p. 5-58, Table 5.9.3-3. Last column. Is this per year? 80049-9

p. 5-65, 1st bullet. A reference for the statement that road cuts are favored by pocket gophers and ground squirrels would be helpful. 80049-10

p. 5-67, Table 5.9.3-6. Last column. Is this per year? 80049-11

p. 5-73. Bullets 2 and 6. It is important to note that the patch size and location of compensatory habitat restoration should be carefully considered. One hectare of sagebrush habitat does not have equivalent value in all locations. 80049-12

Responses for Document 80049

80049-001: Thank you for your comment. We appreciate your input and participation in the public review process.

80049-002: Specific models, tools, or approaches for species- and site-specific studies and monitoring programs will be selected at the project level in conjunction with input from other federal, state, and local agencies, and interested stakeholders. A discussion of the appropriateness of individual-based models for estimating animal abundance and population status is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80049-003: The PEIS acknowledges and adequately points out that recovery times will differ among habitats, and that some may never fully recover. The potential for disturbed habitats to recover, as well as the methods to be used for habitat restoration (recovery) will be considered during the Plan of Development. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any wind energy project proposed for BLM-administered lands. These site-specific analyses will include the identification of habitats at the proposed project area that may be affected by the project. The BMPs also require that a habitat restoration plan be developed for each proposed facility. The scope and approach for the analyses and restoration plans will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting and restoration stipulations for incorporation into the POD. No text change has been made to the document in response to your comment.

80049-004: The 1st sentence of this paragraph has been revised to indicate that blast noise has been found to elicit a variety of effects on wildlife. The remaining text provides examples of those effects.

80049-005: The text has been revised per the comment.

80049-006: The potential for population-level effects is acknowledged throughout Section 5.9, and many of the policies and BMPs developed for the Wind Energy Development Program are intended to aid in siting, designing, and operating wind energy facilities so that the potential for population-level effects is avoided, minimized, or mitigated. A discussion of individual-based models (IBMs) is beyond the scope of the PEIS. The use of IBMs or any other models, tools, or approaches for evaluating potential wind energy impacts on ecological resources will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. No text change has been made to the document in response to your comment.

80049-007: The methods and approaches for monitoring avian collisions and evaluating impacts (such as population-level effects) from collisions with wind energy facility structures will be selected on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. No text change has been made to the document in response to your comment.

80049-008: Text has been added stating that the range of reported mortality rates probably reflects both differences in habitats among the various sites as well as differences in the design of the survey methods used at the various facilities. The new text also points out that the methods used are not equivalent between facilities, and that because of likely differences in searcher efficiency and survey design, may not accurately estimate mortality rates.

80049-009: The table has been changed to indicate that the mortality rate is based on rotor swept area per year.

80049-010: The reference for the last bullet on this page applies to all the bullets in this list. In addition, earlier text in the text box discusses the use of road cuts by pocket gophers and ground squirrels and cites a reference. No text change has been made to the document in response to your comment.

80049-011: The table has been revised to indicate that the raptor fatalities per RSA are on a "per year" basis.

80049-012: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific restoration plans will be required for any wind energy project proposed for BLM-administered lands. The scope and approach of the restoration plans will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific habitat restoration stipulations for incorporation into the POD. Regarding sage-grouse species, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into the local, site-specific restoration plans. The stipulation of site-specific restoration plan requirements is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

Document 80050*

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Tuesday, December 07, 2004 1:09 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80050

BLMcomments_80050.wpd (34 KB)

Thank you for your comment, Gerald Winegrad.

The comment tracking number that has been assigned to your comment is 80050. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 7, 2004 01:09:20PM CDT

Wind Energy EIS Draft Comment: 80050

First Name: Gerald
Middle Initial: W
Last Name: Winegrad
Organization: American Bird Conservancy
Address: 1834 Jefferson Place, NW
City: Washington, DC
State: DC
Zip: 20036
Country: USA
Privacy Preference: Don't withhold name or address from public record
Attachment: C:\My Documents\WIND TURBINES\BLMcomments.wpd

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

* The comment numbers for this document appear to be out of sequence. However, some of the comments are repeated, and, therefore, were assigned the same number.

AMERICAN BIRD CONSERVANCY
CONSERVING WILD BIRDS AND THEIR HABITATS THROUGHOUT THE AMERICAS

December 7, 2004

BLM Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

Dear BLM:

These comments are submitted on behalf of American Bird Conservancy on the Bureau of Land Management (BLM) Draft Programmatic Environmental Impact Statement (DPEIS) on Wind Energy Development on BLM-Administered Lands in the Western United States. ABC is a 501(c)(3) not-for profit organization whose sole mission is to conserve wild birds and their habitats throughout the Americas. ABC has offices in The Plains, Virginia, and Washington, D.C., and staff in Colorado, Oregon, Missouri, Montana, and Vermont. ABC has more than 300 partner organizations in the Americas primarily through its leadership roles in the North American Bird Conservation Initiative, Partners in Flight, ABC's 88 member organization Bird Conservation Alliance, and ABC's international network.

American Bird Conservancy has been actively engaged in wind energy and avian impacts for some time. ABC fully supports the development of wind energy in the U.S. as an alternative to fossil fueled power plants to meet the current and growing demand for electrical energy. However, we emphasize that wind energy projects should be operated and designed to prevent/minimize bird mortality. We are concerned that the DPEIS does not adequately address avian impacts and we would recommend that BLM review ABC's Wind Energy Policy and consider its recommendations for inclusion before adopting the final EIS. You may access this Policy at: http://www.abcbirds.org/policy/windenergy.htm.

Along with the American Wind Energy Association, ABC co-sponsored a two day Wind Energy and Birds Workshop and the proceedings have now been posted at: www.abcbirds.org/policy/webb_proceedings.pdf. There are excellent summaries of presentations with a good deal of current information on wind energy and birds found in these proceedings. 80050-1

ABC recognizes the need to shift toward clean, renewable power sources like wind energy, but is concerned about the potential threat to birds from the construction and operation of wind energy projects. Wind energy production may affect birds through:
1) Mortality from collisions with the turbine blades, towers, power lines, or with other related structures, and electrocution on power lines;
2) Avoidance of the wind turbines and habitat surrounding them; and
3) Direct habitat impacts from the turbines' footprint, roads, power lines, and auxiliary buildings.

1834 JEFFERSON PLACE, NW • WASHINGTON, DC • 20036
PHONE: 202-452-1535 • FAX: 202-452-1534 • WEB: WWW.ABCBIRDS.ORG
E-MAIL: ABC@ABCBIRDS.ORG

It does not appear that the DPEIS adequately addresses these concerns. A more thorough review of recent data and literature on avian impacts from wind turbines should be conducted. ABC believes that with sound pre-construction analysis of each wind energy site and proper safeguards to protect birds from the three distinct threats outlined above, wind energy can be an environmentally sound choice for our nation's energy future. It is in this spirit that we recommend that the BLM adopt the proposed action in the DPEIS which would implement a Wind Energy Development Program, establish Best Management Practices for wind energy authorizations, and amend a number of BLM land use plans **only if** it adopts and addresses the following seven recommendations to reduce the risk of harm to avian species. Otherwise, we recommend that alternative #3 be adopted, a limited wind energy development alternative, which would allow wind energy development only in limited, selected locations. 80050-1 (cont.) 80050-2

Here are our recommendations which should become BLM Best Management Practices to prevent avian impacts and safeguard other wildlife:

(1) BLM ADOPT THE U.S. FWS GUIDELINES.

Very careful consideration must be given to each site for wind turbine projects. BLM should adopt uniform guidelines or regulations to assure the prevention or minimization of avian impacts from new wind turbine construction and operation. Comprehensive voluntary guidelines for siting, operating, and preventing/minimizing avian and other wildlife impacts have been issued by the U.S. Fish and Wildlife Service. See Interim Voluntary Guidelines To Avoid and Minimize Wildlife Impacts from Wind Turbines, dated July 2003, and accessible at: http://www.fws.gov/r9dhcbfa/wind.pdf. BLM should adopt these guidelines, even if modified, or similar guidelines for all wind energy facilities on BLM lands. Examples of other guidelines that are useful include the comprehensive Washington State Department of Fish and Wildlife Guidelines for Wind Energy Projects dated August 2003 at: http://wdfw.wa.gov/hab/engineer/windpower/index.htm. 80050-3

Such guidelines provide important steps for proper siting, operation, and monitoring of wind projects. The final EIS should contain comprehensive guidelines and we suggest that BLM use your sister agency's guidelines, especially since FWS is statutorily vested with responsibility for birds under the MBTA, ESA, and Golden and Bald Eagle Protection Acts.

(2) BLM REQUIRE SITING REVIEW.

As recommended by the guidelines and ABC Policy referenced above, surveys should be conducted before wind turbines are approved or constructed that would entail both on-site observations of birds on a seasonal basis (e.g., bird passage during spring and fall migration), as well as more detailed evaluation of the use of the site by birds, particularly of species of concern. Surveys for nocturnal migrants where migratory corridors exist, especially for wind projects along mountain ridgelines, should be conducted. If there are science-based concerns over avian mortality requiring more detailed surveys, two years of pre-construction surveys of migratory birds should be considered. 80050-4

As migration is highly variable in magnitude and temporal and spatial distribution, one year is considered a minimum for identifying potential problems, unless projects are very small or located in areas that have a very low risk to birds. The intensity and duration of preliminary studies can be reduced for projects in areas where risk to birds is clearly low, such as with small projects or projects in areas where existing data suggest little bird risk. Other research techniques and tools, such as Nexrad, may evolve that can provide an adequate level of confidence about migratory patterns and behavior and may be able to reduce the time required for such studies.

There are two basic steps that should be followed when reviewing sites for bird abundance and migration patterns:
First, biologists should complete a site assessment by conducting a literature review, evaluating existing published and unpublished data, speaking with people knowledgeable about the area, and conducting reconnaissance surveys to document major vegetation types and likelihood of bird, bat and other wildlife impacts. These reconnaissance surveys should be used to identify potential issues related to site development and to eliminate sites that have a likelihood of causing significant negative wildlife impacts following development. Before wind turbines are approved or constructed, surveys should be conducted by a team with no vested interests in the site selected, including federal and/or state agency wildlife professionals. These surveys should include both on-site observations of birds on a seasonal basis and more detailed evaluation of the use of the site by birds, particularly of species of concern, such as nocturnal migrants. After eliminating sites with a likelihood of significant harm to wildlife, more intense studies should be initiated to quantify bird use of the site. 80050-4 (cont.)

Second, after potentially suitable sites are located, a second level of more intensive surveys should be initiated, if warranted, that quantify bird and bat use of the proposed sites. These follow-up surveys may be necessary because reconnaissance surveys may not provide the level of understanding and detail needed for siting a wind farm, or for siting individual turbines. In other situations, such as for Golden Eagles at Altamont Pass in California, even more intensive studies are indicated (i.e., population level studies).

Sites known to be used by birds listed under the Endangered Species Act that may impact these species should be avoided. Wind turbines should not be sited in known major bird migration pathways, in areas where birds are highly concentrated, or in areas or landscape features known to attract large numbers of raptors. BLM should delineate areas that cannot be used for wind energy production because of potential impacts to birds, bats, and other wildlife, as well as designated critical habitat lands, wilderness areas or wilderness study areas.

Please see our Wind Energy policy and the FWS and the Washington State Department of Fish and Wildlife Guidelines cited above for details on siting surveys.

(3) BLM REQUIRE MINIMAL LIGHTING ON STRUCTURES. Limiting lighting on all turbines, towers, and auxiliary buildings is a high priority to prevent avian mortality. Although FAA Guidelines require that any structure over 200' must be lit for aviation safety, only a few 80050-5

wind turbines in a project should be and need be individually lit. For example, only 12 of the 44 turbines at the Mountaineer, WV site are lit and all of the lit towers employ red strobes, pulsing at 24 times per minute. Any lighting should be with strobe lights, either white or red. The pulse rate should be kept to 20 pulses per minute, if possible, and the pulses should be synchronized on all turbines so all flash at once. Any related structures should not be lit unless required by the FAA, and these lights should be shielded and kept to a minimal intensity.

The largest single avian mortality event ever recorded at a wind turbine site (27 birds found) is believed to have been caused or at least aggravated by a bright, sodium vapor lighting system on an auxiliary building, a substation. This was at the Mountaineer Wind Energy Project in West Virginia, where the building lights were eventually turned off after the mortality event and no such event has occurred there again.

The best science available indicates that particularly in poor visibility weather conditions at night, lights on towers and other obstructions (especially red solid state or slowly blinking lights) confuse a neotropical migratory bird's celestial navigation system and perhaps its magnetic navigation system. This resulting disorientation causes the birds to fly to the light source and circle the light source at the tower, causing the bird to be unable to establish its directional cues, and greatly increase its probability of striking the tower and guy wires, flying into other birds also circling, or losing most navigational capability and flying into the ground or ancillary structures. 80050-5 (cont.)

The U.S. FWS Tower Siting Guidelines provide that "The use of solid red or pulsating red warning lights at night should be avoided. Current research indicates that solid or pulsating (beacon) red lights attract night-migrating birds at a much higher rate than white strobe lights." See: http://migratorybirds.fws.gov/issues/towers/comtow.html. Documentation of this is found in several scientific documents, which we can provide upon request.

Most importantly, on April 6, 2004 the FAA issued a Memo regarding obstruction lighting to all Regional Air Traffic Division Managers. It states "Therefore, in consideration of the agreement between the FAA and the American Bird Conservancy, please advise your staff that medium intensity white strobe lights for nighttime conspicuity is to be considered the preferred system over red obstruction lighting systems to the maximum extent possible without compromising safety." The FAA cites the above mentioned FWS Tower Guidelines. See the attached FAA Memo.

The BLM EIS should clearly detail these lighting preferences–white or red synchronized medium intensity strobes but only on a few turbines and no lights on other structures unless absolutely required for safety.

(4) BLM PROHIBIT THE USE OF GUY WIRES AND LATTICE SUPPORTS. Guy wires should not be used for turbines, permanent meteorological towers, or communication towers. Tubular supports with pointed or sloped tops should be used rather than lattice supports to minimize bird perching and nesting. Where met towers use lattice supports, they should be 80050-6

diagonal. Nearly all utility-scale wind turbines are monopoles, without guy wires. Guy wires are known bird killers and should be avoided. Recent U.S. studies indicate that bird mortality at wind turbine projects varies from less than one bird/turbine/year to as high as 7.5 birds/per turbine/year. The latter fatality rate was at Buffalo Mountain, TN, where three wind turbines are in use, each with a 154' diameter, 3-blade rotor mounted on a 213' tall tubular steel tower. A meteorological tower constructed for the Buffalo Mountain wind plant had a mortality rate of 8.1 birds/year. It was guyed and lit.

80050-6 (cont.)

(5) BLM REQUIRE THAT WIND TURBINE POWER LINES BE UNDERGROUND AND THAT POWER LINES SHOULD, AT A MINIMUM, COMPLY WITH APLIC STANDARDS TO PREVENT AVIAN ELECTROCUTIONS AND COLLISIONS. Power lines should be placed underground to prevent avian collisions and electrocutions. All above-ground lines, transformers, or conductors should fully comply with the Avian Power Line Interaction Committee (APLIC) published standards to prevent avian mortality. See: http://www.aplic.org/resources.htm for publications offering a comprehensive portrait of the progress in documenting and addressing the issue of bird collisions and electrocutions at power lines, with a focus on both study techniques and management options for mitigating bird mortality situations. These publications emphasizes the need for attention to this issue before, during, and after line construction.

80050-7

(6) BLM SHOULD REQUIRE HABITAT REVIEW AND MITIGATION. Habitat fragmentation, avian disturbance, and avian site avoidance from the construction and operation of wind turbines, roads, transmission facilities, and other related facilities should be minimized and avoided where possible. The DPEIS discussion of this issue needs to be expanded and guidelines adopted that would fully address this issue. Wind project developers should be encouraged to: (1) site wind power projects on disturbed lands; (2) place linear facilities in or adjacent to existing disturbed corridors in order to minimize habitat fragmentation and degradation; and (3) avoid using or degrading high value habitat areas.

Of particular concern in western states are grassland breeding species. Prairie grouse are of great concern in wind energy development.

80050-8

The final EIS should also address and discourage the location of wind turbine projects in Important Bird Areas, wilderness areas, wilderness study areas, critical habitat of endangered birds and bats, in designated Areas of Critical Environmental Concern, and on other sensitive lands. BLM should delineate such areas that cannot be used for wind energy production because of their environmental sensitivity.

Habitat mitigation should be considered for wind energy projects developed on undisturbed habitat or, where appropriate, to mitigate direct mortality to birds and bats. See the Washington State Guidelines for an example of mitigation measures that could be applied.

(7) BLM SHOULD REQUIRE SAMPLING FOR AVIAN MORTALITY. Statistically robust studies of avian and bat mortality should be required for at least two years after operation of the turbines begins. If the monitoring raises mortality concerns, the studies should continue until these concerns are resolved. Permits should specify the degree of precision required in these studies. Monitoring data should be available to the public. Significant bird mortality from the operation of any turbine should be promptly rectified. This may necessitate shutting down turbines during periods of peak risk to birds or bats. Please see the ABC Wind Energy Policy and the U.S. FWS Wind Energy Guidelines.

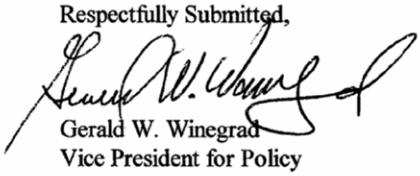
80050-9

Thank you for the opportunity to comment on measures to better protect birds and other wildlife from wind energy development on BLM administered lands. The above seven measures should be included as Best Management Practices in the final BLM wind energy policy.

80050-2 (cont.)

We would be happy to provide citations to the data we outline above or provide more data on these issues.

Respectfully Submitted,



Gerald W. Winegrad
Vice President for Policy

cc: Lee Otteni, Bureau of Land Management, Farmington Field Office, 1235 La Plata Highway, Suite A, Farmington, NM 87401

U S Department
of Transportation
Federal Aviation
Administration

Memorandum

ACTION: Advisory Circular (AC) 70/7460-1

Date: Apr. 6, 2004

From:
Program Director for Air Traffic
Airspace Management, ATA-1

To:
Regional Air Traffic Division Managers

The American Bird Conservancy has requested that the Federal Aviation Administration (FAA) standardize existing requirements for lighting systems on tall structures to minimize mortality to migratory birds. Specifically, the American Bird Conservancy, based on guidelines developed by the U.S. Fish and Wildlife Service, requests that the FAA reduce the issuance of aeronautical determinations recommending red lights at night and that white strobe lights be recommended for nighttime conspicuity.

The Federal Communications Commission has issued a Notice of Inquiry regarding the effects that may provide some guidance on and further study. At this time, there are no plans to change the existing standards in Advisory Circular (AC) 70/7460-1, Obstruction Marking and Lighting. From a safety perspective, we believe that the current standards and guidance are necessary to appropriately light obstacles and to avoid creating a hazardous condition for pilots. In the interim, we have agreed with the American Bird Conservancy, that when feasible and in cases in which safety would not be derogated, to consider and recommend the use of white lights for nighttime conspicuity instead of red lights.

It should be noted that in accordance with AC 70/7460-l, the use of which. lights for nighttime conspicuity within three nautical miles of an airport or in populated urban areas is discouraged and should also be considered when making a marking and. lighting recommendation.

Therefore, in consideration of the agreement between the FAA and the American Bird Conservancy, please advise your staff that medium intensity white strobe lights for nighttime conspicuity is to be considered the preferred system over red obstruction lighting systems to the maximum extent possible without compromising safety. Please refer to Chapter 6, Medium Intensity Flashing White Obstruction Light Systems, AC 70/7460-lK for specific guidance.

If you have any questions regarding this matter, please contact Reginald C. Matthews, Manager, Airspace and Rules Division ATA-400, at (202) 267-8783.

Sabra W Kaulia

Responses for Document 80050

80050-001: Section 5.9.3.2.3 and its associated text boxes provide considerable discussion regarding the impacts of wind energy projects on birds, with detailed discussions provided for raptors and gallinaceous birds. The identification of specific siting and design stipulations, as well as mitigation measures for addressing potential avian impacts of wind energy development on BLM-administered lands will be conducted at the project level. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of appropriate mitigation measures, will be conducted for any wind energy project proposed for BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by- project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting, design, and mitigation measure stipulations for incorporation into the POD. The presentation of site-specific siting, design, and mitigation details is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80050-002: Most of the recommendations suggested in this comment have already been incorporated into the proposed Wind Energy Development Program as discussed in the PEIS and the following responses.

80050-003: The BLM and USFWS share a common objective in terms of minimizing potential impacts to wildlife from wind energy development activities. Many of the USFWS voluntary guidance recommendations are imbedded within the BLM's proposed policies and BMPs, reflecting consistent objectives and parallel approaches. However, because the USFWS guidance is interim and voluntary, it is inappropriate to adopt it wholly in the PEIS or the proposed Wind Energy Development Program. No text change has been made to the document in response to your comment.

80050-004: These issues will be adequately addressed during the conduct of the site-specific analyses. Such analyses are required explicitly by the Wind Energy Development Program proposed BMP in the 5th bullet under Wildlife and Other Ecological Resources in Section 2.2.3.2.2, Plan of Development Preparation, that ensures an evaluation of avian and bat use of the proposed project area. The specific design of any monitoring program would be developed on a site-specific basis in coordination with the BLM and other appropriate resource agencies, and, as specified by the BMPs, would be scientifically rigorous and defensible.

80050-005: Projects must comply with FAA lighting regulations as required by the proposed BMP in the 7th bullet under Human Health and Safety in Section 2.2.3.2.2, Plan of Development Preparation. In this same section, under

Visual Resources, the 3rd bullet requires that lighting on ancillary structures be minimized. Additional lighting configurations addressing avian collisions will be considered and evaluated, with FAA consultation and input from other federal, state, and local agencies, and interested stakeholders, on a project-by-project, site-specific basis.

80050-006: Thank you for your recommendation. The Wind Energy Development Program proposed BMP in the 1st bullet under Wildlife in Section 2.2.3.2.3, Construction, has been changed to indicate that guy wires on permanent meteorological towers shall be avoided. In addition, the wildlife BMPs presented in Section 2.2.3.2.2 call for site facilities, such as power poles, to be designed to minimize or prevent perching or nesting activities.

80050-007: The Wind Energy Development Program proposed BMP in Section 2.2.3.2.3, Construction, General, 6th bullet, requires collector lines to be buried adjacent roads unless burial would cause further habitat disturbance. The site-specific Plans of Development will incorporate this BMP and other relevant BLM mitigation guidance for power lines as required in Section 2.2.3.1, Proposed Policies, 13th bullet.

80050-008: As stated in the PEIS, Section 2.2.3.1, under the proposed Wind Energy Development Program the BLM will not issue ROW authorizations for wind energy development on lands on which wind energy development is incompatible with specific resource values. Lands that would be excluded from development include Wilderness Areas, National Monuments, NCAs, Wild and Scenic Rivers, National Historic and Scenic Trails, and Areas of Critical Environmental Concern.

Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any wind energy project proposed for BLM-administered lands. The scope and approach for site-specific analyses, which include ecological surveys, will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting, design, mitigation, and monitoring stipulations for incorporation into the POD. In addition, the BLM is committed to full implementation of the proposed Wind Energy Development Program, elements of which require the incorporation of adaptive management strategies and monitoring programs at all wind energy development sites (see Section 2.2.3.1, Proposed Policies, last bullet, and Section 2.2.3.2.2, Plan of Development Preparation, General, 7th bullet). The application of adaptive management strategies will ensure that programmatic policies and BMPs will be revised as new data regarding the impacts of wind power projects become available. The

source for a significant portion of the new data is likely to be the required site-specific monitoring programs that will evaluate environmental conditions at a site through all phases of development. A key requirement for the site-specific monitoring programs is the requirement that monitoring observations and additional identified mitigation measures be incorporated into standard operating procedures and project-specific BMPs.

Regarding sage-grouse species, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into local, site-specific analyses.

The identification of specific siting and design conditions is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80050-009: The BLM is committed to full implementation of the Wind Energy Development Program proposed policies and BMPs that require the incorporation of monitoring programs and adaptive management strategies at all wind energy development sites (see Section 2.2.3.1, Proposed Policies, 17th bullet) in site-specific Plans of Development. During operation, observations of avian mortality shall also be reported immediately (see Section 2.2.3.2.4, Operation, Wildlife, 2nd bullet). Application of these strategies will ensure that BMPs will be revised as new data become available. Monitoring plans and adaptive management strategies to address the monitoring results will be developed on a project-specific basis.

Document 80051

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WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Tuesday, December 07, 2004 8:26 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80051

Thank you for your comment, Charles Battaglia.

The comment tracking number that has been assigned to your comment is 80051. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 7, 2004 08:25:56PM CDT

Wind Energy EIS Draft Comment: 80051

First Name: Charles
Last Name: Battaglia
Organization: University of California, Berkeley
Address: 304 Hilgard Hall
City: Berkeley
State: CA
Zip: 94720-5404
Country: USA
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
I feel any technology away from fossil fuels is worth pursuing, but wind needs to looked at carefully. From what I've learned, each site needs to be looked at separately since there are different impacts in different areas. Avian wildlife is of special concern, so please consider individual EIR's for each proposed site

80051-1

80051-2

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Responses for Document 80051

80051-001: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by- project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site- specific analyses are beyond the scope of the PEIS.

80051-002: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific environmental assessments will be conducted for any wind energy project proposed for BLM-administered lands. The scope and approaches of the site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop and incorporate project-specific siting, design, construction, and operation stipulations for minimizing or mitigating impacts to ecological resources, including birds, into the POD. No text change has been made to the document in response to your comment.

Document 80052

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Tuesday, December 07, 2004 11:04 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80052

Thank you for your comment, Gale Dupree.

The comment tracking number that has been assigned to your comment is 80052. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 7, 2004 11:03:28PM CDT

Wind Energy EIS Draft Comment: 80052

First Name: Gale
Middle Initial: G
Last Name: Dupree
Organization: Nevada Wildlife Federation (NvWF)
Address: 216 East Hampton Drive
City: Carson City
State: NV
Zip: 89706
Country: USA
Email: gale@nvwf.org
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
The NvWF is concerned that the Programmatic EIS does not adequately address sage grouse and sage grouse habitat. The BLM should ensure that wind energy infrastructure is not developed within two miles of known leks. New infrastructure should be located next to exisitng deveolped sites, such as, radio/telephone relay towers.
Exploration and development of energy sites should be suspended durng the sage grouse breeding and nesting sason, in Nevada February through June. Wind energy towers should not be located on high ridge sites occupied by roosting sage grouse. Research should be codndcuted to determine what methods can be used to prevent sage grouse and other birds from flying into the turbines. 80052-1

Thank you for the opportunity to comment on Wind Energy.

Gale Dupree
President
Nevada Widlife Federation

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80052

80052-001: As required by the Wind Energy Development Program proposed policies and BMPs, species-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for species- specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project- specific stipulations for incorporation into the POD. Regarding sage-grouse species, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into local, site-specific analyses. Research studies to determine methods for preventing bird-turbine collisions are beyond the scope of the PEIS.

Document 80053

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Wednesday, December 08, 2004 12:45 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80053

Thank you for your comment, Emily Van Engel.

The comment tracking number that has been assigned to your comment is 80053. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 8, 2004 12:45:03PM CDT

Wind Energy EIS Draft Comment: 80053

First Name: Emily
Last Name: Van Engel
Address: PO Box 6586
City: Jackson
State: WY
Zip: 83002
Country: USA
Email: evanengel@wesleyan.edu
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
I support your proposed action to address issues associated with wind energy development and encourage future wind energy projects. 80053-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80053

80053-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80054

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Wednesday, December 08, 2004 3:37 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80054

Thank you for your comment, Lesley Wischmann.

The comment tracking number that has been assigned to your comment is 80054. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 8, 2004 03:36:50PM CDT

Wind Energy EIS Draft Comment: 80054

First Name: Lesley
Last Name: Wischmann
Organization: Alliance for Historic Wyoming
Address: 712 South Second Street
City: Laramie
State: WY
Zip: 82070
Country: USA
Email: lesleywisch@earthlink.net
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
Thank you for this opportunity to comment on the Draft Programmatic Environmental Impact Statement.

The Alliance for Historic Wyoming is a nonprofit organization dedicated to protecting and advocating for the historic and cultural resources of the state of Wyoming.

We have several comments we would like to make in regards to the DPEIS. First of all, we support consistency in applying these standards between the various field offices of the BLM. However, we also want to stress that factors unique to each cultural or historic resource must receive adequate consideration.

One of the main challenges for AHW has been protecting the many miles of pristine historic emigrant trails that pass through Wyoming. While your document makes reference to protection of the National Historic Trails themselves, we fear that you have not paid enough attention to their unique setting, which provides a primary motivation for visiting these resources. Today, it is still possible to see some of these trails in Wyoming the same way the pioneers would have experienced them 150 years ago. We believe it is essential that this pristine setting remain this way. Viewsheds are absolutely critical to maintaining this historical integrity. How much land is protected on either side of the trail is important but no arbitray limit is adequate to protect the experiential value of being on these trails and seeing them without modern intrusion. Wind energy generators have high potential for negatively impacting the setting. We are especially concerned about the trails in Wyoming's Sweetwater Valley which is shown as a high potential area. 80054-1

We are also concerned about the many historic trails that are not officially designated as NHTs, although they are eligible for the National Register and thus subject to Section 106 processes. The DPEIS should make specific mention of historic resources in this class and direct that Section 106 processes be applied on a case-by-case basis. 80054-2

Third, the Best Management Practices (BMPs) presented in the DPEIS for cultural resources are inferior to those being used to deal with many of the energy projects already being developed in Wyoming. For example, the BMPs in the Pinedale Anticline EIS provide much 80054-3

more detail on mitigation when an adverse impact is identified. We would encourage to establish more specific BMPs.

80054-3 (cont.)

Thank you for considering our thoughts.

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Responses for Document 80054

80054-001: By including National Historic Trails within its NLCS, the BLM has recognized these trails as national treasures. The BLM accepts the responsibility to protect and preserve the value of these trails. This will be accomplished by protecting trail corridors associated with National Historic Trails, and segments of the trails, to the degree necessary to ensure that the values for which each trail was established remain intact. A BMP has been added to Section 2.2.3.2.2, Plan of Development Preparation, under the cultural/historic resources heading, specifying that when any ROW application includes remnants of a National Historic Trail, is located within the viewshed of a National Historic Trail's designated centerline, or includes or is within the viewshed of a trail eligible for listing on the *National Register of Historic Places*, the operator shall evaluate the potential visual impacts to the trail associated with the proposed project and identify appropriate mitigation measures for inclusion as stipulations in the POD.

80054-002: The text states that the NHPA requires a project to take into consideration its effect on significant cultural resources. Significant resources are defined as those properties that are on the NRHP or those that are eligible for listing.

80054-003: As stated in Section 2.2.3.2, additional guidance and BMPs are available from other BLM program-specific projects. As required by the Wind Energy Development Program proposed policies (Section 2.2.3.1), mitigation measures identified in or required by these existing guidance documents would be applied.

Document 80056

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Wednesday, December 08, 2004 5:28 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80056

comment_80056.doc (104 KB)

Thank you for your comment, Michael Perkins.

The comment tracking number that has been assigned to your comment is 80056. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 8, 2004 05:28:14PM CDT

Wind Energy EIS Draft Comment: 80056

First Name: Michael
Middle Initial: D
Last Name: Perkins
Organization: Worcester State College
Address: 14 Linda Street
City: Abington
State: MA
Zip: 02351
Country: USA
Privacy Preference: Don't withhold name or address from public record
Attachment: C:\Documents and Settings\Michael Perkins\My Documents\America\comment.doc

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Michael Perkins
14 Linda Street
Abington, MA
02351
1-617-710-1417
mperkins@worcester.edu

January 10, 2005

Dear whom this may concern,

This is a comment letter about the numerous proposals to develop wind energy on BLM lands. The right-of-way grants are currently administered by the BLM and are required to stay within the guidelines of the Federal Land Policy and Management Act of 1976 and the BLM Wind Energy Development Policy. Through these right-of-way grants there is at least 500 MW of installed wind capacity. It is a good idea that other Federal agencies are now working together to expand the usage of wind energy.

I feel that it is good that you are allowing the public to submit comments on the scope of the Programmatic Environmental Impact Statement (PEIS). It is a way to generate ideas for future amendments to this document.

The current land-use plan amendments are adequate with the exception of the fact that none of them allow for competitive right-of-way bidding. They include the adoption of the proposed programmatic policies and best management practices (BMP's) and the identification of specified areas where wind energy development would not be allowed. Neither one of these amendments allows for competitive right-of-way bidding nor should this be changed to allow for a greater number of wind energy developments. 80056-1

The draft (PEIS) should be able to evaluate site-specific issues associated with wind energy development projects. There is already variation from site to site when it comes to location-specific factors such as soil type, habitat and numerous other factors. The goal for the BLM might be to update the draft (PEIS) to make these factors less variable. 80056-2

The draft (PEIS) has three alternatives that analyze the potential impacts associated with the development of wind energy. The proposed action alternative proposes that the BLM implements a comprehensive program to address the issues associated with the development of wind energy on BLM lands. This mainly focuses on site-specific and species specific concerns that would be addressed during project level reviews. This proposal is a good idea, because it would put a high priority in protecting certain sites and certain species that may be either endangered or threatened. According to the draft (PEIS) an impact analysis could be conducted in order to make amendments to this document. These elements along with proposed amendments of land use plans may result in less time and less money needed to complete future wind energy projects. I support this all the way, because wind power may become more affordable if the cost of development goes down. The consistency in the way right-of-way applications and grants are managed would ensure the development of wind energy. With the study of the impacts being incorporated into any future policy it would ensure the development of this resource in a nice orderly fashion. I also fell that knowing about the environmental impacts ahead of time would keep the negative environmental effects to a minimum. This idea may also ensure economic benefits to the eleven state area that the BLM controls, for example if the BLM were to adopt this policy it would mean added tax revenue during construction and during operation. I feel that this proposal is the best idea in this draft (PEIS). 80056-3

The no action alternative is a proposal that would allow the BLM to continue administering wind energy development right-of-way grants. Analysis and review of the development of wind energy would be considered on a project to project basis and any amendments made to individual land-use plans would occur without the analysis provided by the draft (PEIS). This is a bad idea, because without that document being used in the analysis the amendments would be prone to the influence of private interests. I feel that the impacts of the no action alternative would be both bad and good. For example the amendments made to land use plans would only occur on a plan-by-plan basis. There would also be a positive impact if this alternative were implemented, for example wind energy development would be subject to the terms of the Interim Wind Energy Development Policy. Without this policy wind energy development would occur at a slower pace and the amount of time it would take to approve right-of-way grants would increase.

The limited wind energy development alternative proposes that wind energy development would only occur in areas that have existing wind development projects; this alternative is bad, because if you want to promote wind development over a wider area why would you restrict it to

certain areas. This alternative should be changed so other areas are promoted for wind development. I feel that there is a problem with the Limited Wind Energy Development alternative. For example out of the three alternatives this one would be the least effective, because according to this statement that I am commenting on it would be the least effective due to the least number of environmental and economic benefits.

80056-3 (cont.)

I feel that out of the three alternatives that the no action alternative is the best one. The current guidelines set up by the Wind Energy Development Policy ensure that the development of wind energy occurs in an orderly fashion. If I were you I would choose this alternative as your policy.

Sincerely,

Michael Perkins

Abington, Massachusetts

Sources

All of the facts I backed my opinions with were from the BLM Wind

Energy Programmatic EIS.

Responses for Document 80056

80056-001: As discussed in Sections 1.2 and 2.2.4, none of the alternatives in the PEIS includes amendment of land use plans to provide for competitive right-of-way bidding, in part, because interest in this approach was limited to two areas in California (the Palm Spring-South Coast Field Office and the Ridgecrest Field Office). If competitive bidding is conducted, it will be addressed on a case-by-case basis in local BLM land use planning efforts.

80056-002: The PEIS is a programmatic evaluation and does not evaluate site-specific issues (see Section 1.2, Scope of the Analysis). As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders.

80056-003: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80057

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Wednesday, December 08, 2004 7:08 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80057

PEISopencomment_80057.doc (39 ...

Thank you for your comment, Dustin Jolley.

The comment tracking number that has been assigned to your comment is 80057. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 8, 2004 07:07:25PM CDT

Wind Energy EIS Draft Comment: 80057

First Name: Dustin
Middle Initial: G
Last Name: Jolley
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City: arcata
State: CA
Zip: 95518
Country: USA
Email: dgj2@humboldt.edu
Privacy Preference: Don't withhold name or address from public record
Attachment: F:\engr 410\PEISopencomment.doc

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

MEMORANDUM

TO: BLM WIND ENERGY PROGRAMMATIC EIS

FROM: DUSTIN JOLLEY; SENIOR UNDERGRADUATE, HSU ENVIRONMENTAL RESOURCES ENGINEERING; AND STUDENT ASISTANT RESEARCH ENGINEER, SCHATZ ENERGY RESEARCH CENTER.

SUBJECT: DRAFT PEIS COMMENTS; WIND ENERGY DEVELOPMENT

DATE: 1/10/2005

Summary

In this DEIS, some of the areas and particular issues that would benefit from some improvement include:

- The DPEIS is inconsistent in Section 5, where the mitigations say "should" instead of "shall". The mitigations should be required.
- Again, loose language is used where it is important to require mitigation measures be followed.
- The DPEIS is unclear as to what "credible" sources of data are.
- Very little background information is provided on the alternatives.
- Impact significance was not thoroughly defined.
- Criteria for when a project-specific DEIS is required should be included.

- Studies that could have been done to make design and/or policy improvements were not found.
- Criteria for when a project-specific EIS is required should be included in the PEIS.

COMMENTS:

Scoping and Intent

Identification of impacts is too general to be useful.

The preparers of the PEIS correctly outline the difficulty in addressing possible impacts on such a broad scale, however, this is such a large proposal, covering a number of widely differing ecosystems, that there is really no way to predict all of the impacts that may be caused to the environment in the process of developing wind energy in all of these locations. It is possible to outline some impacts that may occur in common on all of the project locations, but, their degree of severity will surely differ. The statement is made that current "credible" sources of data have been used to predict the significance and magnitude of many of the possible impacts. I was not able to find any definition of "credible sources" in the body of the PEIS. Most of the language referring to the possible impacts on certain resources or aspects of the environment comes with the statement that investigations will have to be made on the project level to appropriately evaluate the effects on that particular ecosystem. Toward the end of this quote, it is clear that no project specific impacts are addressed under this PEIS. This document is in other words, purely administrative, and while it appears that it is done in good faith, it does almost nothing to address any specific impacts caused by a proposed project. 80057-1

Purpose and Need

A summary of the stated purpose and need of this project would be the following: With recent administrative decisions to explore and develop other sources of energy, the BLM, with its millions of acres of land under stewardship, feels a responsibility to develop a policy

to tap into renewable energy that is available on public lands. The need is supported by the current energy crisis that many western states are facing.
The MPDS (maximum potential development scenario) is certainly favored in such a purpose and need statement; from the beginning, the MPDS is the preferred alternative.

Alternatives

The primary administrative goal (as stated in the MPDS scenario) appears to be the amendment of numerous land use plans in all 11 of the participating states. These amendments, in short, will be tailored to make pursuing energy development on public lands easier.
No evidence could be found on how the alternatives were formulated in the first place.
Personally, I prefer the "no action alternative", which is not really "no action". The no action option says that the development project will simply continue on a project-to-project basis, which seems to make the most sense due to the huge variation in ecosystems where these projects will take place. 80057-2
The wording makes me feel like the sole goal of this proposal is to allow the amendment of many land use plans to expedite the process of wind energy development. While I believe that renewable energies should be proactively developed and implemented, I feel it is important to go about it with as little negative impact to the environment as possible, otherwise the intention of using renewable energy will be negated. To ensure an overall positive outcome, a painstaking project by project type approach, although more time comsuming and costly, is the best way to go about it.

Impacts and Mitigations

Significance was not defined.
Significance was not thoroughly defined in and instead, a general list of possible impacts was included. 80057-3
The general list outlined in chapter 5 seemed fairly comprehensive, but again, this was merely a broad list of possible impacts that could result from a wind energy development project. The only possible use for this list would be to get the thought process going for 80057-4

when the actual project specific DEIS comes through. I hope that project specific EIS's aren't intended to be avoided if the proposed amendments are adopted. Criteria for when a project-specific EIS is required should be included in the PEIS. 80057-4 (cont.)

Mitigations not defined. 80057-5

Extensive studies that are location and project specific would be necessary to conclude anything appropriate to the mitigation of environmental impacts. All of the statements regarding mitigation measures contain the word "should", but this leaves the end result open-ended as to whether or not all of the proposed mitigations will actually be followed. 80057-6
With the major development and infrastructure that are required for these types of projects, it is impossible to mitigate all of the resulting impacts. However, I think that with careful planning and design many negative impacts could be minimized.

Technical Information

Little data and few studies were reviewed and analyzed pertaining to environmental impacts and mitigations. Data determining where wind resources are available, and were reviewed, but how wind turbines in the past have affected flying wildlife.

I could not find any considerations on how to modify the design of turbines to remedy the problem of killing flying wildlife. Maybe protective cages could be placed around turbine blades similar to household fans. Although, this may cut down on the wind potential of the blades. Mitigations in this DPEIS should include funding for studies that would find and evaluate mitigation measures. 80057-7

Conclusion

This DPEIS appears to be purely administrative with a goal to amend many land use plans in order to expedite the wind energy development process.

These administrative changes should not be used to bypass important mitigations of significant environmental impacts. 80057-8

Responses for Document 80057

80057-001: The PEIS is a programmatic evaluation and does not evaluate site-specific issues (see Section 1.2, Scope of the Analysis). As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders.

This information used in the analyses in the PEIS was derived from comprehensive reviews of wind energy development activities; published data regarding wind energy development impacts; existing, relevant mitigation guidance; and standard industry practices (see the 1st paragraph in Chapter 5, Potential Impacts of Wind Energy Development and Analysis of Mitigation Measures). Section 8, References, lists the references used in the preparation of the PEIS.

80057-002: Thank you for your comment. We appreciate your input and participation in the public review process.

80057-003: In a programmatic analysis such as the Wind PEIS, which considers potential impacts over an 11-state study area, it is not valid to define the significance of impacts at specific locations. The significance of potential impacts and the effectiveness of mitigation measures that might be implemented will be determined by site- specific and project-specific factors. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will assess the significance of potential impacts and appropriate mitigation measures. The result will be the development of project-specific stipulations for incorporation into the POD.

80057-004: The PEIS is a programmatic evaluation and does not evaluate site-specific issues (see Section 1.2, Scope of the Analysis). As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. As stated in the 9th bullet under Section 2.2.3.1, Proposed Policies, the level of environmental assessment required will be determined at the Field Office level. In certain instances, it may be determined that a tiered EA is appropriate in lieu of an EIS.

80057-005: Mitigation is defined in the Glossary (Chapter 10). Specific mitigations are identified in the PEIS to the extent it is possible to do so at a programmatic level. Site-specific and species-specific mitigations must be addressed at the individual project level.

80057-006: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

80057-007: This information used in the analyses in the PEIS was derived from comprehensive reviews of wind energy development activities; published data regarding wind energy development impacts; existing, relevant mitigation guidance; and standard industry practices (see the 1st paragraph in Chapter 5, Potential Impacts of Wind Energy Development and Analysis of Mitigation Measures). Section 8, References, lists the references used in the preparation of the PEIS.

Consideration of how to modify turbine designs does not fall within the scope of the PEIS.

80057-008: The PEIS is a programmatic evaluation and does not evaluate site-specific issues (see Section 1.2, Scope of the Analysis). As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders.

Document 80058

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, December 09, 2004 12:41 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80058

Thank you for your comment, John Curtis.

The comment tracking number that has been assigned to your comment is 80058. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 9, 2004 12:41:23AM CDT

Wind Energy EIS Draft Comment: 80058

First Name: John
Last Name: Curtis
Address: 2233 S 1700 E
City: SaltLakeCity
State: UT
Zip: 84106
Country: USA
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
Please pursue development of 'cleaner' & 'greener' means of energy creation. In particular wind & solar power sources. Funding on a national level for encouraging individual participation in 'green' programs, similar to the rebates and tax credits for installing updated & more effiecent furnaces, windows, & water heaters. 80058-1

I fully support wind energy creation.
J Curtis

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80058

80058-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80059

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, December 09, 2004 12:55 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80059


Doc1_80059.doc
(430 KB)

Thank you for your comment, joe little coyote sr..

The comment tracking number that has been assigned to your comment is 80059. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 9, 2004 12:55:01PM CDT

Wind Energy EIS Draft Comment: 80059

First Name: joe
Middle Initial: d
Last Name: little coyote sr.
Organization: eda & doe
Address: cheyenne ave
Address 2: P.O. box 128
City: Lame Deer
State: MT
Zip: 59003
Country: USA
Privacy Preference: Don't withhold name or address from public record
Attachment: A:\Doc1.doc

Comment Submitted:
The Northern Cheyenne Tribe is a sovereign Indian Tribe organized under the Amended Constitution and Bylaws & Corporate Charter approved pursuant to the Indian Reorganization Act of 1934, 25 U.S.C. subsec. 461 et. seq., and the Act of June 18, 1934, 48 stat. 984, the Tribal Council being the governing authority of the Tribe, is responsible for establishing policy and creating conditions that foster and promote the socio-economic well being of its members. In these regards, on the 2nd day of July, 2001, the Tribal Council adopted its Comprehensive Economic Development Strategies Planning Document, Resolution No. DOI-184(2001), which set a Renewable Energy Development direction for the Tribe. Pursuant to this, the Tribe has completed a Wind Resource feasibility study with findings that the Tribe has commercial scale winds and is in process of developing a business plan with which to raise "investment capital financing" to undertake a 30 MW Wind Project. This was made possible with two DOE Grants amounting to over one million dollars (feasibility & development). It is requested the federal government and its instrumentalities make every possible means availble to see that its investment into our Wind Project -- bears fruit. Given its scant financial resources The Tribe is not able to provide Capital to finance said Project. The availabilty of BLM Lands that could be used by Indian Tribe's to develop wind resources to stimulate their economies is certainly a constructive and productive initiative that can only benefit the economic health and security of this country, and creat new taxes to meet the many pressing needs of the country, not to mention the great potential for addressing environmental concerns. The only concerns we have are potential impacts to the historical and Native American cultural resources that might be found in these land areas. In this regard, we would be very interested that we no longer be treated as recipients of what ever the federal government plans, but rather we would like to be given the opportunity to be full participants in the planning and implementation of any Projects or initiatives being underatken that would involve lands that were historically and culturally used by our Tribe. The Tribe is

80059-1

80059-2

heartened to see the federal government use a "Capital Economic Development Model" to stimulate the national economy as well as providing opportunities to Indian Tribe's to become contributing forces to the economic health and security of this country.

80059-2 (cont.)

Thank You,

Eugene Little Coyote, President
Northern Cheyenne Tribe

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

TRIBAL COUNCIL OF THE NORTHERN CHEYENNE TRIBE
NORTHERN CHEYENNE RESERVATION
LAME DEER, MONTANA

RESOLUTION NO. DOI – 184(2001)

A RESOLUTION OF THE NORTHERN CHEYENNE TRIBAL COUNCIL APPROVING THE COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGIES PLANNING DOCUMENT FOR FISCAL YEAR 2001.

WHEREAS: *the Northern Cheyenne Tribe is a federally recognized sovereign American Indian Tribe, organized under an Amended Constitution and Bylaws and Corporate Charter pursuant to the Indian Reorganization Act of 1934, 25 USC subsec. 461 et. Seq., approved by the Secretary of the Interior on May 31, 1996, the Tribe Council being the governing authority for the Tribe, is responsible for establishing policy and creating conditions that foster the socio-economic well being of its members; and*

WHEREAS; *pursuant to Tribal Council Resolution No. DOI – 016(2000), adopted on November 15, 1999, approving the submission of an application for a $35,000 Planning Assistance Grant from the Economic Development Administration (EDA) of the U.S. Department of Commerce, that as part of the ongoing grant award, an update of the Comprehensive Economic Development Strategy (CEDS) is required; and*

WHEREAS; *accordingly, the Tribal Council has identified the goals, objectives and priorities which have been incorporated into the updated CEDS Planning Document dated June 30, 2001 which shall serve as an economic development guide for the Northern Cheyenne Tribe; now*

THEREFORE BE IT RESOLVED *by the Northern Cheyenne Tribal Council the attached CEDS Planning Document dated June 30, 2001 is hereby approved.*

PASSED, ADOPTED AND APPROVED *by the Northern Cheyenne Tribal Council by nine (9) votes for passage and adoption and zero (0) votes against passage and adoption this 2nd day of July, 2001.*

Geri Small, President
Northern Cheyenne Tribe

ATTEST:

Serena K. Brady, Secretary
Northern Cheyenne Tribe

Responses for Document 80059

80059-001: Valuable wind resources on Tribal lands may be available for commercial development in a manner similar to the Proposed Action or the Interim Wind Energy Development Policy described in Appendix A. Financing for commercial development on Tribal lands would be an obligation of the developer, and the Tribe would realize a financial return in the form of rentals, including minimum rentals and production rentals as well as other payments that it may require. For a Tribe to develop wind resources on BLM-administered lands, the Tribe would need to obtain a ROW authorization from the BLM.

80059-002: The text at Section 2.2.3.2.2 and at Section 5.12.5 describes how the BLM will address your concerns regarding the full participation of Native American Tribes in the process through government-to-government consultations, as well as opportunities for public involvement.

Document 80060

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, December 09, 2004 1:17 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80060

Thank you for your comment, SANDRA JONES.

The comment tracking number that has been assigned to your comment is 80060. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 9, 2004 01:17:15PM CDT

Wind Energy EIS Draft Comment: 80060

First Name: SANDRA
Middle Initial: A
Last Name: JONES
Organization: KAMALANI DEVELOPMENT CORPORATION
Address: P O BOX 1593
City: KAILUA KONA
State: HI
Zip: 96745
Country: USA
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
We need to be looking to alternative, clean, renewable sources for our electric power.Wind farms would provide this source and a clean backup system is possible. We are continuing to use and demand use of more and more each year. Buying it from offshore countries is no longer a sensible option for the U.S.A. 80060-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80060

80060-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80061

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, December 09, 2004 1:26 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80061

Thank you for your comment, Autumn Radle.

The comment tracking number that has been assigned to your comment is 80061. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 9, 2004 01:26:09PM CDT

Wind Energy EIS Draft Comment: 80061

First Name: Autumn
Last Name: Radle
State: ##
Country: USA
Email: #####
Privacy Preference: Withhold address only from public record

Comment Submitted:
To Whom It May Concern:
I would like to express my support for the Draft EIS including its conclusions to pursue the proposed action. Any steps we can take on any level of government to support renewable energy and reduce our dependence on foreign oil as well as polluting energy sources such as coal will go along way towards protecting our resources for future generations. I will look to seeing wind energy projectd developed on BLM lands - and hopefully on USFS lands in the future. It's a far better use of the land than oil drilling, mining, logging and grazing. 80061-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80061

80061-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80062

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, December 09, 2004 2:08 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80062

Wind_comments_8
0062.doc (45 KB...

Thank you for your comment, Tim Ballard.

The comment tracking number that has been assigned to your comment is 80062. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 9, 2004 02:07:29PM CDT

Wind Energy EIS Draft Comment: 80062

First Name: Tim
Last Name: Ballard
Organization: Umpqua Watersheds Inc.
Address: P.O. Box 101
City: Roseburg
State: OR
Zip: 97470
Country: USA
Privacy Preference: Don't withhold name or address from public record
Attachment: /G4 HD/data files/NEPA writing/BLM general and poc/Wind EIS comments/Wind comments.doc

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

December 9, 2004

Dear BLM,

Please accept the following comments from Umpqua Watersheds Inc. We are a conservation organization representing over 500 members, whose primary focus is protecting and restoring the public lands of the Umpqua Basin watersheds in Southwest Oregon. In many respects, wind energy is commendable, and preferable to fossil fuel energy, but development must be considered very carefully, as it is not without serious environmental impacts. Our main concerns are:

1. Roadless areas: Unroaded areas greater than 1,000 acres – whether they have been officially inventoried or not – provide valuable natural resource attributes that must be protected. Please consider each of the roadless area characteristics identified in 36 CFR 294.116 including:

- High quality or undisturbed soil, water, and air;
- Sources of public drinking water
- Diversity of plant and animal communities
- Habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land;
- Natural appearing landscapes with high scenic quality;
- Other locally identified unique characteristics.

80062-1

2. Special Areas: Please exclude special areas from wind development. In Oregon these places include but are not limited to: Steens Mtn, Hart Mtn, Abert Rim, Blue/Wallowa Mtns, all designated wilderness areas, wilderness study areas, Coast Range ridge tops, >1,000 acre roadless areas.

80062-2

3. Bird Mortality: Wind farms are a well-known cause of bird mortality, especially for raptors. Please fully disclose impacts to birds on a species-specific basis, with special emphasis on raptors, migratory birds, and other species of conservation concern.

- Please do not allow wind development in bird migration corridors.
- Areas of low visibility such as the foggy south coast of Oregon should also be avoided.
- Areas where prey species occur should also be avoided to prevent attracting birds of prey into turbine danger zones.

80062-3

- Sage grouse habitat must be avoided, because they avoid areas with trees and other large vertical structures.
- Fence building should be avoided because they can harm other wildlife.

Given that many bird fatalities occur during inclement weather (DEIS p 5-61), places such as the Oregon Coastal region, the Columbia River Gorge, and mountainous regions such as Steens Mtn, where wind is often mixed with clouds and rain should be excluded from wind farm consideration. Another way to minimize raptor collisions is to locate wind farms away from sites with abundant raptor prey, such as meadows and rock formations located on or near ridge-tops. 80062-3 (cont.)

4. **Tower Lighting**: Lights are thought to be an attractant to migratory birds, causing increased mortality. The EIS should consider shorter towers that do not require FAA. 80062-4

5. **Invasive Weeds**: Construction, roads, and power line right-of-ways will all cause extensive ground disturbance and act as a vector for invasive plant species. Weeds are becoming one of the biggest environmental problems of the future. Since wind farms will be located on windy sites, weeds that are wind-dispersed may become a serious problem. 80062-5

6. **Service Roads**: Roads constructed and maintained to facilitate wind energy development will cause serious adverse impacts including:

- Increased surface flows and peak storm flows;
- Habitat and wildlife will be disturbed and displaced;
- In SW Oregon a root disease (Phytophthora lateralis) fatal to rare and endemic Port Orford Cedar trees is a serious problem. It is known to be spread by vehicles.

80062-6

7. **Scenic Impacts**: Ridge top locations are often visible for many miles. Scenic impairment as observed from roadless, wilderness and recreation areas and scenic highways are of special concern. 80062-7

8.**Transmission Corridors**: Construction of transmission corridors necessary to connect wind farms to the existing grid will exacerbate all of the above effects and must be considered as a cumulative impact of wind farms. 80062-8

Your consideration is appreciated.

Tim Ballard
Umpqua Watersheds Inc.

P.O. Box 101
Roseburg, OR 97470

Responses for Document 80062

80062-001: A number of the BMPs, existing mitigation guidance, and mitigation measures identified or discussed in the PEIS address the natural resource attributes that would be encountered within the roadless areas (see Sections 2.2.3 and 3.6 and the mitigation measures presented in Chapter 5). Site-specific analyses of roadless areas will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Such site-specific analyses are beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80062-002: Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

80062-003: A species-by-species account would not be practicable nor is it necessary. The PEIS presents bird mortality numbers and estimates that have been reported by others. This information is presented in a manner to indicate that avian mortality does occur at wind facilities. The PEIS does discuss impacts to raptors, a group that has been shown to be susceptible to impacts from wind facilities at some locations.

The Wind Energy Development Program proposed policies and BMPs identify a number of siting considerations (such as the avoidance of landscape features that are attractive to raptors) for incorporation into the POD for any wind energy project proposed for BLM-administered lands. As required by these policies and BMPs, site- and species-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for species-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific design, siting, and monitoring stipulations for incorporation into the POD. The identification of site- and species-specific analyses is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80062-004: The intent of the BLM is to not place restrictions on development based on design features in this PEIS. Design criteria will be evaluated at the project level.

80062-005: The Wind Energy Development Program BMPs include the requirement that wind energy project operators develop plans to control noxious weed and invasive species in areas with new surface disturbance activities. Specific plans will be developed on a project-specific basis for all proposed wind energy projects on BLM- administered lands. Site-specific noxious weed and invasive species control plans are beyond the scope of the PEIS.

80062-006: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

80062-007: Such concerns would be addressed during site-specific evaluations, determined through input from other federal, state, and local agencies, and interested stakeholders.

80062-008: Section 6.4.3 acknowledges that wind energy development on BLM-administered lands may require the construction of new transmission lines. Such construction would constitute a separate but related activity and would require interagency cooperation and multidisciplinary environmental reviews. The designation of new transmission corridors on BLM-administered lands will occur as a result of interagency consultations, not as a result of a unilateral decision by the BLM. Any such designations would be evaluated through either regional or local land use planning efforts, with opportunities for full public involvement. The potential impacts of transmission system interconnects or expansions that would be required by an individual wind energy project on BLM-administered lands will be assessed as part of the site-specific analyses with input from other federal, state, and local agencies, and interested stakeholders.

Document 80063

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, December 09, 2004 2:56 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80063

Thank you for your comment, Mike Denny.

The comment tracking number that has been assigned to your comment is 80063. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 9, 2004 02:56:02PM CDT

Wind Energy EIS Draft Comment: 80063

First Name: Mike
Middle Initial: E
Last Name: Denny
Organization: Blue Mountain Audubon
Address: #####
City: #####
State: ##
Zip: #####
Country: USA
Privacy Preference: Withhold address only from public record

Comment Submitted:
The Blue Mountain Audubon has been deeply involved in the wind industry since 1998.These are our comments resulting from our years of experiance with this industry. We are a Pro-wind chapter of the National Audubon Society, however in order to support any wind project we get involved from the planning phase right up through the placement phase and then through the mortality monitoring and are members of the projects TAC group for the life of the project.

1. Placement of individual turbines is everything! Poor placement of just 2-3 turbines can result in very high Bird and Bat mortality on any one project. Therefore we urge the BLM to require pre-construction monitoring of birds and bats (18 months minimum) on proposed turbine sites, not around the edge of the project area, but on exact sites of lead turbines. there should be at least 5 ten min. surveys from each selected point each season. Also require nocturnal migration monitoring for every proposed site with a minimum of two seasons. 80063-1

2. Cumulative impacts to migrating and resident Federaly protected species are the huge growing concern with these wind projects. So the more that is known and understood about bird and bat movements concerning each proposed site the better the BLM will be at minimizing these losses. 80063-2

3. There must be ongoing wildlife monitoring throughout the life of each wind project. We push for two seasons of work every 4-5 years throughout the projected life of the project. This would include mortality monitoring and diurnal point counts from within the wind project. 80063-3

4. The BLM would bennifit greatly by forming a TAC (Technical Advisory Committee) group for each project built on federal lands. This group must enclude voting and alternate members. These folks should be there to represent a broad range of interests from the general public as well as wildlife professionals, hikers, campers,the Wind Developer and BLM & USF&W folks. This group should meet quarterly for the first two years of the wind project and yearly there after. The purpose of this group is to recieve the wildlife reports from the wind developer and to make suggestions where red flags pop up over 80063-4

mortality issues. There must be the option of turbine removal should individual turbines create too many dead bats and birds. 80063-4 (cont.)

5. There must be TFZ zones
(TURBINE Free Zones)on public lands. These would be areas that contain sensitive biological sites or cultral sites. These should be clearly marked on maps and their entrance non-negoable for the wind industry. Areas of high raptor use, rare reptiles, plants or sites of major neo-tropical bird migration must be set aside and placed in TFZs. Not every ridge is ok for turbines regardless of its wind resources. 80063-5

6. These wind turbine projects should use underground connecting transmission cables between turbines and collector stations. ELECTRICAL SUBSTATIONS should be placed so that their overhead transmission cables create little if any mortality to birds. Trenching should be completely avoided across seasonal lithosol pools and stream courses as this will puncture the lenses and distroy these features in water starved areas. The loss of seasonal lithosol pools could greatly impact local amphibian populations. 80063-6

7. The placement of TUBULAR Met Towers WITHOUT guy lines is very important. 80063-7

8. There should not be any Wind Turbines placed right at the edge of a ridge or in the saddles of ridges. Push for a minimum of 300' away from the absolute edge of a ridge. Always keep in mind cumulative impact to birds and how to reduce it on every project. 80063-8

9. There are three sites in Southeastern Oregon that must be off limits (TFZs) these are.....
The Oregon Canyon/Trout Creek Mountains, Pueblo Mountains and the Steens Mountain. These sites are areas of great beauty and biological diversity and wind turbines would forever distroy the unique atomosphere these sites bring to the Great Basin. 80063-9

10. Roads and weeds are a major problem on all wind farms. Please push for strict weed controls and limit roads open to the public on these projects to reduce impacts to wildlife by poachers, road kills ect. 80063-10

11. Require a wind employee wildlife mortality collection protocal. This is a system that requires maintanance employees to give notice when they discover dead birds and bats on wind farm projects.They must bag and tag them and report them to the BLM. 80063-11

12. We are concerned about Wind Projects on public lands as we have observed the unacceptable minimal grazing payments ranchers and corporations have paied over the years for the use of public lands. We greatly hope and urge the BLM WILL REQUIRE the standard going rate payments of $3-5000.00 per turbine per year.on every wind project developed on public lands. These funds should go to paying the salary of a wind project dedicated Ornithologist/Population Biologist that deals with the Wind Projects on BLM lands. This person must understand the wind industry,local wildlife populations and mortality monitoring proticals and how to reduce and minimize cumulative impacts over time to native protected species. 80063-12

13. We would urge the BLM to institute a educational component into every agreement signed with the wind industry. This would allow Grad. and Post-doc. Students from accredited colleges and universities across the west to do peer reviewed research on all wind farms on BLM lands. This would bring credibility and additional understanding of the impacts this new industry is having on a broad range of studies from economics to wildlife to climet. This would creat ballance in an industry that likes to generate their own numbers by hiring consultants. 80063-13

14. We recognize that wind is a clean renewable energy and that we all must consider the mess with the polluting alternatives, however here in the beginning age of this wind industry we all have an opportunity to help this industry grow in the right directions by setting precedents that will better and improve where and how this industry functions. 5-7000 turbines in one huge farm is not the answer, but rather 1-200 highly productive turbnes makes more sense. 80063-14

15. All proposed wind turbine farms on public lands should meet three very important criteria and these are.....
The site must have better than class 3 wind resources and the project must produce a minimum of 30% of the time and there must be a number set where bird and bat mortality 80063-15

will trigger removal of the offending turbines. This number must be tied to sustainable viable populations of any one species impacted. If these standards are not met then we the people are once again subsidizing huge multi-national corporations. We have often thought that only American owned companies should be allowed on American public lands!

80063-15 (cont.)

Thank-you for this notice and the opportunity to comment.

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Responses for Document 80063

80063-001: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including predesign surveys of habitats and wildlife occurrence and activity of the project area, will be conducted for any wind energy project proposed for BLM-administered lands. The scope, approach, and design for these site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting and design stipulations for incorporation into the POD. Details regarding the design of site-specific analyses are beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80063-002: As required by the Wind Energy Development Program proposed policies and BMPs, site- and species-specific analyses, including evaluations of bird and bat occurrence and migrations within the proposed project area, will be conducted for any wind energy project proposed for BLM-administered lands. The scope and approach for these analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting and design stipulations for incorporation into the POD. No text change has been made to the document in response to your comment.

80063-003: As required by the Wind Energy Development Program proposed policies and BMPs (see Section 2), wildlife monitoring will be conducted for any wind energy project proposed for BLM-administered lands. The scope, approach, and duration of any wildlife monitoring program will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80063-004: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands in conjunction with input from other federal, state, and local agencies, and interested stakeholders. The establishment of a technical advisory committee to oversee activities at a given site would be a topic for consideration during the site-specific analyses.

80063-005: As stated in the 1st bullet in Section 2.2.3.1, Proposed Policies, the BLM will exclude wind energy development from specific areas. Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. As required by

the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

80063-006: Section 2.2.3.2.3, Construction, under the General heading, contains a BMP requiring addressing the burial of power collector lines on the wind project site. This BMP has been reworded to encourage the burial of all power collector lines unless burial would result in additional project-related habitat disturbance.

80063-007: The BLM has proposed a BMP that will prohibit the use of guy wires on permanent meteorological towers (see Section 2.2.3.2.3, Construction, under the Wildlife heading). The BLM does not intend to place additional restrictions on the type of turbine towers or their installation. These types of design issues will be driven by site-specific and project-specific requirements.

80063-008: Exclusions of specific areas, such as ridges and saddles, from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. No text change has been made to the document in response to your comment.

80063-009: Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts with opportunities for full public involvement.

80063-010: The Wind Energy Development Program proposed policies and BMPs require the use of existing roads and other right-of-ways (to the maximum extent feasible) and the development of a noxious weed control plan for any wind energy project proposed for BLM-administered lands. The extent to which additional access roads will be needed, and the details of the noxious weed control plan, will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific descriptions are beyond the scope of the PEIS.

80063-011: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific monitoring programs for bird and bat mortality will be designed and implemented for any wind energy project proposed for BLM-administered lands. The BMPs also require that observations of wildlife mortality be immediately reported to the BLM authorized officer. The scope

and approach for monitoring programs and details regarding data collection will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project- specific stipulations for incorporation into the POD. Site-specific details regarding data collection and handling are beyond the scope of the PEIS.

80063-012: Rental rates for wind energy development will be based on fair market value. A discussion of how rates are currently calculated can be found in Appendix A, page A-7. The proceeds generated from rentals are deposited in the federal treasury. BLM wildlife biologists will review the results of monitoring at wind energy development sites to determine their effect on wildlife populations and will participate in the development of adaptive management actions that may be required.

80063-013: Thank you for your comment. We appreciate your input and your participation in the public review process. The BLM will take your suggestion under advisement.

80063-014: Thank you for your comment. We appreciate your input and participation in the public review process.

80063-015: The MPDS constructed for the PEIS analyses is limited to Class 3 or higher wind resources because they are projected to be technologically developable over the next 20 years. A number of factors will determine the economic viability of individual projects and will be evaluated by the industry. This approach is preferable to establishing a minimum limit on production.

Regarding the establishment of bird and bat mortality limits, these issues also will be evaluated at the site- specific level during the planning process and throughout operations. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Furthermore, the program will require the incorporation of adaptive management strategies and monitoring programs at all wind energy development sites (see Section 2.2.3.1, Proposed Policies, last bullet, and Section 2.2.3.2.2, Plan of Development Preparation, General, 7th bullet). The application of adaptive management strategies will ensure that programmatic policies and BMPs will be revised as new data regarding the impacts of wind power projects become available. The source for a significant portion of the new data is likely to be the required site-specific monitoring programs that will evaluate environmental conditions at a site through all phases of development. A key requirement for the site-specific monitoring programs is that monitoring

observations and additional identified mitigation measures be incorporated into standard operating procedures and project-specific BMPs.

Document 80064

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, December 09, 2004 3:39 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80064

Thank you for your comment, mike gill.

The comment tracking number that has been assigned to your comment is 80064. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 9, 2004 03:38:53PM CDT

Wind Energy EIS Draft Comment: 80064

First Name: mike
Last Name: gill
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State: WY
Zip: 82007
Country: USA
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
At this time i dont think the goverment should get involved in wind energy. At this time i dont feel its fair to land owners who own land and are working on wind projects, and the goverment stepping in taking up what little space is available on the power grid as it is. Now when theere is enough new transmission lines run thru the country i believe that would be the time to get involved with doing it on BLM lands. It just isnt fair for the people who own land allready

80064-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80064

80064-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80065

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, December 09, 2004 4:03 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80065

Thank you for your comment, Michele Fikel.

The comment tracking number that has been assigned to your comment is 80065. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 9, 2004 04:02:25PM CDT

Wind Energy EIS Draft Comment: 80065

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Last Name: Fikel
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State: ID
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Country: USA
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Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
Will low altitude aircraft affect wind generation or affect the windmills? At what altitude would the wind power generators be affected? At what speeds? Will there be an altitude restriction placed over the wind energy farms? 80065-1

Thanks,

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80065

80065-001: It is improbable that a low-flying aircraft could create sufficient turbulence to impact wind turbines. The BLM expects that wind farms utilizing turbines whose towers are tall enough to affect low-altitude aircraft or are located in established flight paths will be identified to pilots. In general, although wind turbines will create areas of turbulence both ahead of and behind their propellers, these areas are relatively small, and safety margins established by the FAA would keep all aircraft well away from such areas. As to whether airspace around wind farms will be further restricted, such decisions are the jurisdiction of the FAA and will be made at the appropriate time as part of the FAA's site-specific reviews of proposed wind farms.

Document 80066*

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, December 09, 2004 5:36 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80066

BLM_Wind_Energy_PEIS_80066.doc...

Thank you for your comment, Steve Goddard.

The comment tracking number that has been assigned to your comment is 80066. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 9, 2004 05:35:35PM CDT

Wind Energy EIS Draft Comment: 80066

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Privacy Preference: Don't withhold name or address from public record
Attachment: C:\Documents and Settings\Cherie\My Documents\BLM Wind Energy PEIS.doc

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

* The comment numbers for this document appear to be out of sequence. However, some of the comments are repeated, and, therefore, were assigned the same number.

The Comments
Of the
Idaho Wildlife Federation
On the
BLM Wind Energy Programmatic PEIS

Page 2-5, Table 2.2.1.1, the 9100 acres for Idaho cannot be correct since there are four projects proposed that cover over 21,000 acres. The Brown's Bench proposal alone will impact about 13,000 acres. 80066-1

Page 5-37, p5.92 and 5-41, 5.9.2.2, Site construction and operations activities along with the transmission lines and roads may cause sage grouse to not only abandon the project area, but also abandon thousands of acres adjacent to the site. 80066-2

Page 5-43, Table 5.9.2.2, the interference with behavioral activities such as lekking would be long term, not short term as described in the table. 80066-3

Page 5-53; 5.19.32, same as above.

P 6-13. The statement that only a small amount of the BLM land would be developed is true in terms of acreage but is very misleading in the terms of impact on sage-grouse populations. The Cotterel and Brown's Bench project are an excellent example. They involve about 17,000 acres but all of the acreage is in sage grouse stronghold habitat and the impact of the projects may be the complete abandonment of thousands of additional acres by the birds due to their avoidance of tall structures such as the turbines and transmission lines. 80066-4

Table 6.4.1-1. As has already been stated supra, the 9,100 acres for Idaho is incorrect. There are already applications that cover over 20,000 acres. 80066-1 (cont.)

Page 6.21. The land area disturbance is much larger than is indicated. While the amount of the actual physical disturbance may be small, the impact on wildlife may be tremendous, especially with sage grouse in which data indicates that all leks within 3 kms of transmission lines dropped to zero. 80066-5

Page 6.25. The construction of transmission lines can have a profound impact when they are constructed in sage grouse habitat because they may led to lek abandonment and nesting. 80066-6

Page 6.27, p.6.5.3. The statement "During construction, operation, and decommissioning, individual animals would be impacted; entire populations, however, would be unlikely to be adversely impacted." is not correct, because the project may lead to the loss of entire populations over a large area. Examples of this would be the Cotterel and Brown's Bench projects in Idaho. 80066-7

P.6-28, 6.5.4. There cannot be mitigation for the complete loss of sage grouse populations. 80066-8

Responses for Document 80066

80066-001: The projected numbers of economically developable acres of BLM-administered lands presented in Tables 2.2.1- 1 and 6.4.1-1 are based on results of WinDS model analyses. These projections do not include existing capacity and are unlikely to correspond to specific initiatives underway or being considered. The purpose of the modeling efforts in this PEIS is to provide a general framework of possible development over the next 20 years, in order to assess the potential spatial, environmental, social, and economic impacts of implementing a Wind Energy Development Program for BLM-administered lands. The BLM recognizes that many factors can affect the accuracy of the projections, and, as discussed in Appendix B, a variety of factors will determine actual development levels. However, the MPDS and WinDS models employed in the PEIS are adequate for forecasting potential development levels over such a large geographic area and long, projected time frame. Greater accuracy in these forecasts would not likely result in changes to the requirements of the Wind Energy Development Program; that is, the proposed policies and BMPs would not be changed at this time. Under the proposed program, the BLM will employ adaptive management strategies to the oversight of wind energy development on BLM-administered lands, including any projects that may be proposed in Idaho. The BLM will monitor the level of wind energy development into the future as well as the effectiveness of its policies and BMPs. If necessary, adjustments to the programmatic requirements will be made.

80066-002: The Wind Energy Development Program proposed policies and BMPs presented in Section 2.2.3 identify a number of requirements that will be considered on a site-specific, project-by-project basis regarding the avoidance or minimization of construction and operation impacts to wildlife, including sage-grouse species. In addition, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into any proposed wind energy project on BLM-administered lands.

80066-003: The tables have been revised to indicate potential long-term and population-level effects for some species.

80066-004: The cited text is not intended to address impacts to sage-grouse or other resources, but rather to present a description of the physical acreages that could be developed on BLM-administered lands for wind energy. Cumulative impacts from habitat disturbance are discussed in Section 6.4.1.10. Potential effects of habitat disturbance on wildlife (including sage-grouse) habitat are presented in Section 5.9, and as required by the Wind Energy Development policies and BMPs, species-specific analyses will be conducted for any proposed project on BLM-administered lands, the scope of which will be determined on a project-by-project basis.

80066-005: The discussion of land area disturbance presented on this page (Section 6.4.2.1) deals only with impacts to land resources, not ecological resources. Impacts to ecological resources are discussed earlier in Section 6.4.1.10, and this discussion includes the potential for wildlife impacts to occur in areas outside the footprint of a wind energy facility.

80066-006: The Wind Energy Development Program proposed policies and BMPs presented in Section 2.2.3 identify a number of requirements and restrictions for avoiding or minimizing impacts to wildlife (including sage-grouse and their habitats) during the siting, design, construction, operation, and decommissioning of wind energy projects. The application of the policies and BMPs will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. In addition, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into any proposed wind energy project on BLM-administered lands. The application of the policies, BMPs, and sage-grouse guidance will occur at the site-specific level and is beyond the scope of the PEIS.

80066-007: The text has been revised to state that for some species, population-level effects may be possible. Additional text has been added to point out that through the conduct of species-specific and site-specific analyses conducted during all project phases, the potential for population-level effects would be minimized to the fullest extent possible.

80066-008: With the implementation of the Wind Energy Development Program proposed policies and BMPs identified in Section 2.2.3, together with site-specific analyses related to the siting, design, construction, operation, and decommissioning of proposed wind energy projects on BLM-administered lands, the complete loss of sage-grouse populations is implausible. The application of the policies and BMPs will be determined on a project-by- project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. In addition, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into any proposed wind energy project on BLM-administered lands, further reducing the likelihood that wind energy development would result in such a catastrophic impact.

Document 80067

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, December 09, 2004 6:14 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80067

WIWET-BLM-EIScomments-12-10-04...

Thank you for your comment, Thomas Carr.

The comment tracking number that has been assigned to your comment is 80067. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 9, 2004 06:14:00PM CDT

Wind Energy EIS Draft Comment: 80067

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Middle Initial: A
Last Name: Carr
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Attachment: Y:\My Documents\WI Wind Evaluation Team\WIWET-BLM-EIScomments-12-10-04.pdf

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Western Interstate Energy Board/ WINB

Comments of the Western Interconnection Wind Evaluation Team on the Bureau of Land Management's Draft Programmatic Environmental Impact Statement for Wind Energy Development

December 10, 2004

The Western Interstate Energy Board's Western Interconnection Wind Evaluation Team (WIWET) submits the following comments to the Bureau of Land Management (BLM) regarding the Draft Programmatic Environmental Impact Statement (PEIS) on Wind Energy Development on BLM-Administered Lands in the Western United States.

The PEIS supports BLM's effort to formulate a Wind Energy Development Program. WIWET understands the forthcoming policy to include the following: Development of comprehensive policies and Best Management Practices (BMPs) for all wind energy development projects on BLM lands; Amendment of land use plans to address energy development in those planning areas with future wind development; Implementation of a consistent right-of-way (ROW) application and grant process across all BLM lands; and Tiering of project-specific environmental analyses off the PEIS analysis, thereby allowing future analyses of wind energy projects to focus on site-specific issues of concern. 80067-1

I. BLM's Wind Energy Policy Is Consistent with Policies in the West to Encourage Greater Wind Energy Development

The Western Interstate Energy Board (WIEB) is an organization of energy officials from 12 Western states and three Canadian provinces. WIEB is charged with assisting in the implementation of energy policies of the Western Governors' Association (WGA). WIWET is a WIEB working-group whose objectives are to identify, evaluate and promote regional policies that support the development of wind resources in the Western Interconnection.

The Western Governors' Association Resolution 03-03 states:

> "Western Governors believe that the development and deployment of renewable energy technologies can benefit the region by: diversifying the region's energy supply; promoting the development of new technologies and Western companies in a growing global market; reducing air pollutants from energy production; providing a safety net in the event reductions in greenhouse gases are required; meeting our obligation for

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> careful stewardship of our natural resources; providing a hedge against fluctuating energy prices; and saving precious water resources."

The WGA has adopted policies to expand the use of renewables and is launching a new effort with the goal of reaching 30,000 MW of "clean" energy generating capacity in the 18-state WGA region by 2015. Five individual states within the Western Interconnection have adopted Renewable Portfolio Standards (RPS) that target the amount of renewable energy used to produce electricity in a state: (1) Arizona (1.1% by 2007); California (20% by 2017); Colorado (10% by 2015); Nevada (15% by 2013); and New Mexico (10% by 2011). Wind will be playing a major role in the future generation resource mix of western states because of the declining cost of wind generation, implementation of state RPS, utility resource acquisition plans, extension of the Production Tax Credit, and high natural gas prices.

WIWET believes that the BLM's PEIS and Wind Energy Development Program facilitates and embraces the Governors' renewable energy policy, state RPS policies, and the market trend toward greater utilization of wind energy.

80067-1 (cont.)

The Team believes that the BLM's PEIS represents a comprehensive analysis of the potential impacts to the environment from the proposed Wind Energy Development Program. In particular, the Team acknowledges and recognizes the following specific elements of the PEIS.

- The Maximum Potential Development Scenario (MPDS) represents an upper bound of future wind energy development. The National Renewable Energy Lab (NREL) calculated MPDS by aggregating Class 3-7 wind resources across BLM lands in 11-western states after excluding protected lands (i.e. Wilderness, Wilderness Study Areas, National Monuments, and National Conservation Areas).

- The PEIS evaluates potential impacts to the many natural resources on BLM lands including air quality, wildlife and visual resources.

- The comparison of wind energy to other sources of energy illustrates an important benefit of wind energy with respect to air pollution. At page 6-22, Table 6.4.2-2 shows that wind energy generation produces zero air pollution emissions compared to significantly higher levels of air pollution emissions for coal, oil and natural gas generation per average megawatt.

- The PEIS examines the research of wind energy development on bird and bat collisions and mortalities, and proposes important mitigation measures.

- The BLM analysis addresses the impact of wind energy on visual resources and advances mitigation measures designed to minimize adverse impacts on the natural landscape.

- The PEIS provides an analysis of the economic impact of wind energy development on BLM land in 11 western states. Specific impacts were quantified for employment, income, gross state product, tax revenues, and ROW rental income. The study also addressed the impact of wind energy development on property values.

II. Western State Wind Energy Development May Exceed BLM's Forecast

The PEIS forecasts the amount of wind energy development by 2025 on BLM land in 11 western states will be 3,240 MW. The corresponding projection for wind energy on non-BLM lands in the 11 western states is 17,561 MW for a combined total of 20,801 MW in the 11 western states. See Table 1 below. Long-range forecasts are inherently fraught with uncertainty and qualifications. The forecast of wind energy development on BLM lands seems particularly conservative in light of the large amount of potential wind resources located in this region, the trend of state and federal policies to further promote wind energy, the rising price of natural gas, improvements of wind energy technology, and the potential expansion of transmission infrastructure to support wind development in this region.

As of November 2004, the American Wind Energy Association reports that the U.S. portion of the Western Interconnection has 3,274 MWs of installed wind generating capacity, another 1,781 MWs of planned wind energy, and a wind generation potential of more than 300,000 MWs. Montana and Wyoming are two western states with significantly large wind energy resources amounting to 116,000 MW and 85,000 MW of potential wind energy output, respectively. See Table 2 below. For example, AWEA reports that there is already 284 MW of wind energy in Wyoming, an amount the PEIS does not anticipate being reached until after 2015. In Colorado, Xcel Energy recently issued an RFP for 500 MW of wind energy which will be in addition to the existing installed capacity of nearly 230 MW. The combined total of 730 MW of wind energy in Colorado exceeds the PEIS forecast for 2015. 80067-2

Substantial wind resources also exist in Colorado, New Mexico, Nevada and California. The ability to tap wind resources in the west crucially depends on whether there are investments in transmission to bring the wind energy resources to load areas.

Table 1

BLM's Projected Wind Power Development (MW)		2005	2015	2025
Arizona	Non-BLM	19	37	192
	BLM	1	2	31
	Total	20	40	223
California	Non-BLM	2,830	5,395	7,651
	BLM	784	1,323	1,462
	Total	3,614	6,718	9,113
Colorado	Non-BLM	225	622	1,848
	BLM	33	67	85
	Total	258	688	1,933
Idaho	Non-BLM	75	156	916
	BLM	52	105	185
	Total	127	261	1,101
Montana	Non-BLM	121	397	1,287
	BLM	10	27	37
	Total	131	424	1,325
Nevada	Non-BLM	417	545	604
	BLM	388	574	701
	Total	805	1,119	1,305
New Mexic	Non-BLM	476	952	1,344
	BLM	54	108	199
	Total	530	1,060	1,543
Oregon	Non-BLM	452	743	1,562
	BLM	92	144	196
	Total	543	887	1,758
Utah	Non-BLM	162	467	485
	BLM	89	248	256
	Total	251	716	741
Washingto	Non-BLM	246	630	1,314
	BLM	3	6	12
	Total	249	636	1,326
Wyoming	Non-BLM	105	211	357
	BLM	12	24	75
	Total	117	234	433
Total	Non-BLM	5,128	10,154	17,561
	BLM	1,517	2,628	3,240
	Total	6,645	12,782	20,801

80067-2
(cont.)

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Table 2

	Installed MW	Planned MW	Potential Ave.Power Output MW	National Rank
Arizona	NA	NA	NA	
California	2,051.2	367.6	6,770	17th
Colorado	229.2	6.0	54,900	11th
Idaho	0.2	381.5	8,290	13th
Montana	0.1	189.7	116,000	5th
Nevada	0.0	130.0	5,740	21st
New Mexico	205.3	60.0	49,700	12th
Oregon	260.1	0.0	4,870	23rd
Utah	0.2	0.0	2,770	26th
Washington	234.4	645.0	3,740	24th
Wyoming	284.6	0.0	85,000	7th
Total	3,265.3	1,779.8	337,780	

80067-2 (cont.)

III. BLM and Other Federal Land Managers Need to Address Future Transmission Expansion for Wind Energy in the West

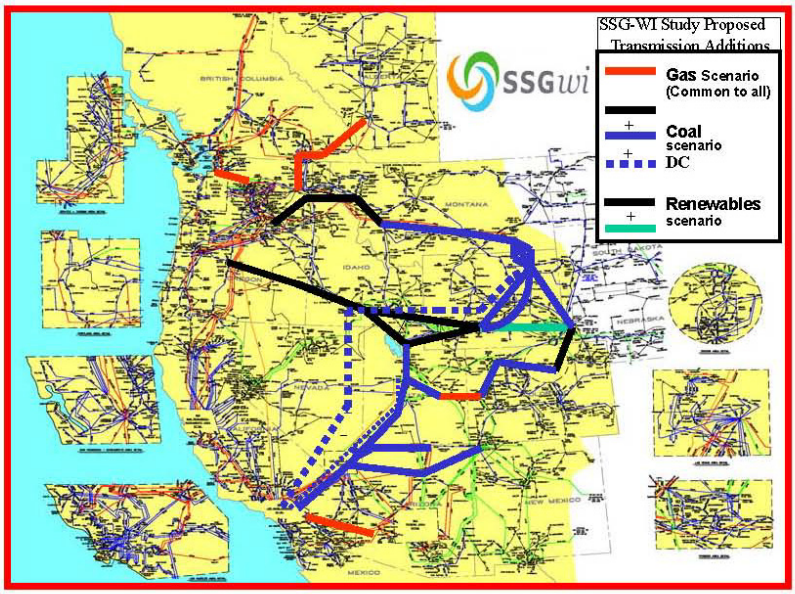
Transmission is the most significant limiting factor to wind development in the West. New transmission lines will be needed to connect the West's remote and vast wind resources to load centers. Future expansion of the western transmission lines will likely cross federal lands and thereby trigger federal review and permitting. While the current PEIS addresses wind development, it does not anticipate the corresponding potential expansion of new transmission lines over federal lands. WIWET understands that BLM and other federal entities intended to study the potential expansion of transmission facilities across federal lands in conjunction with future wind energy development. WIWET encourages the BLM and the Department of Energy, along with other federal land management entities such as the Forest Service, the Fish and Wildlife Service, the National Parks Service, and the Department of Defense, to develop a parallel policy and EIS review of new transmission projects in the West.

80067-3

Transmission expansion in the West is currently being explored by numerous planning efforts. The Seams Steering Group-Western Interconnection (SGG-WI) is an ad hoc group examining transmission expansion of the entire Western Interconnection. In October 2003, SSG-WI issued an initial report that evaluated new transmission infrastructure assuming three "bookend" generation scenarios that rely primarily on natural gas, coal or renewables. The SSG-WI renewables scenario included 21,400 MW of wind. Figure 1 shows transmission additions under the three bookend scenarios. SSG-WI is beginning a new analysis to model transmission needs under a "realistic" generation scenario that would fall somewhere within the bookend analysis done last year.

Figure 1

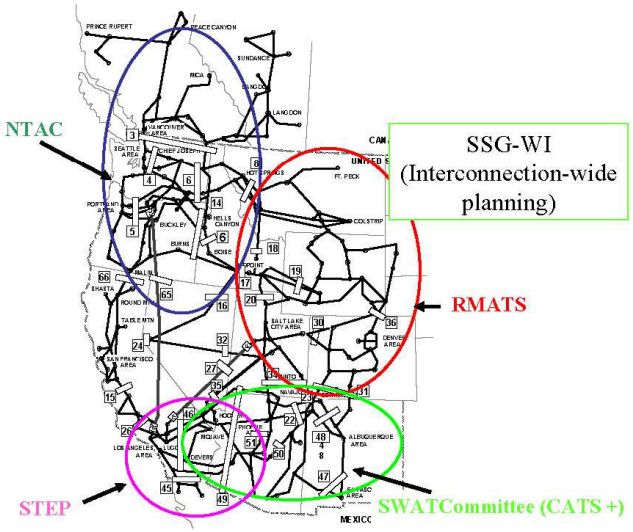
Transmission Expansion in SSG-WI Generation Scenarios



80067-3 (cont.)

In addition to SSG-WI, four sub-regional planning efforts are focusing on transmission within their respective smaller footprints: (1) Rocky Mountain Area Transmission Study (RMATS); (2) Southwest Area Transmission Planning Committee (SWAT); (3) Southwest Transmission Expansion Planning (STEP); and (4) Northwest Transmission Assessment Committee (NTAC). Figure 2 illustrates the project area under these sub-regional studies.

Figure 2
Interconnection-wide and Sub-Regional Transmission Planning in the Western Interconnection



80067-3
(cont.)

The RMATS Phase I report of September 2004 identified two different recommendations for development of energy resources and transmission expansion in the 5-state region of Montana, Wyoming, Utah, Idaho and Colorado. RMATS Recommendation 1 specified economical transmission additions to meet the future electrical load in the five-state region assuming 2,205 MW of wind energy, and additional coal projects. The three transmission projects in Recommendation 1 included: (1) the Montana system upgrade that would expand transmission capacity to the Northwest; (2) the Bridger west upgrades from Wyoming to Utah and Idaho; and (3) a Wyoming to Colorado upgrade.

The RMATS Recommendation 2 envisioned a bolder plan consisting of 4,955 MW of wind, more coal projects, and additional transmission additions to export electricity to coastal states. The transmission expansion includes significant upgrades within the Rocky Mountain region and at least two 500 Kv paths to markets on the West Coast and Southwest. Figures 3 and 4 show the maps depicting the economical transmission additions under Recommendations 1 and 2, respectively.

Figure 3
RMATS Recommendation 1

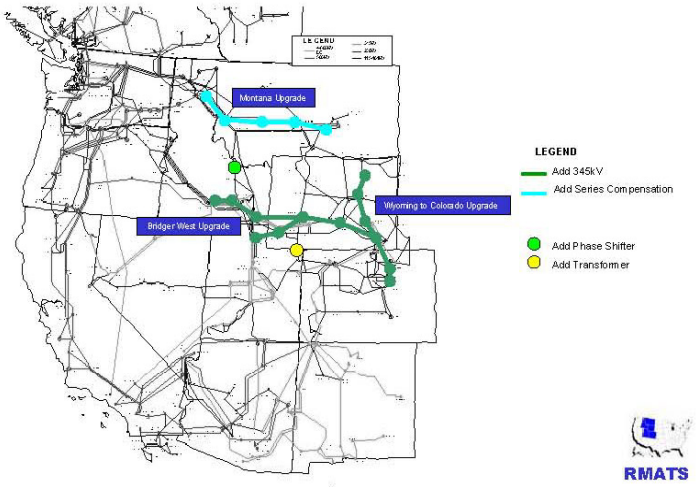
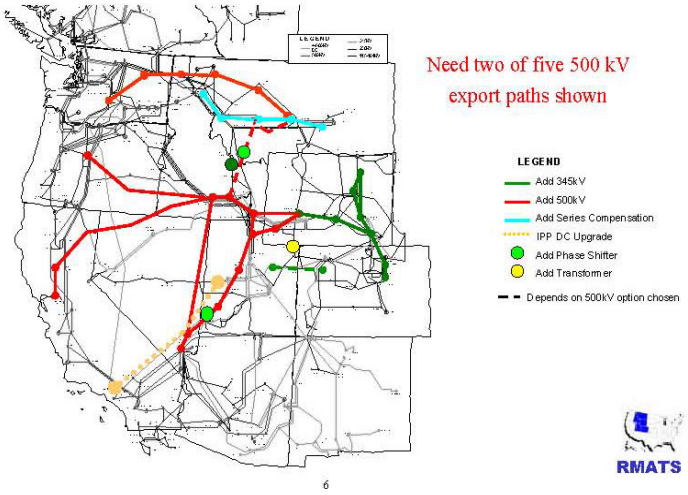


Figure 4
RMATS Recommendation 2 – Export Scenario



80067-3 (cont.)

The SWAT study is presently examining transmission needed to move New Mexico wind generation west and expects a report in January. The other two transmission planning processes, STEP and NTAC, are in the initial stages and have not released specific transmission proposals.

In addition to the sub-regional transmission planning efforts, some individual states are taking a close look at transmission expansion. The State of Nevada is completing an analysis of transmission needed to move wind and other renewable energy generation located in the northern part of the state to the Las Vegas area and export markets. California is examining transmission needs to meet its RPS and has directed major transmission expansion in the Tehachapi region to enable the development of wind resources.

The federal government is an important and large land holder throughout the West. See Table 3 below for the specific breakdown of federal land holdings in western states. The expansion of transmission lines across western states will invariably cross federal lands and require new permits and right-of-ways. The federal government should anticipate this trend and pursue a policy to analyze the potential impacts with a programmatic environmental impact statement.

Table 3

	Land Total Million Acres	Federal Surface Lands Million Acres	%	BLM Surface Land Million Acres	%
Arizona	72.69	33.0	45%	11.7	16%
California	100.21	45.0	45%	15.0	15%
Colorado	66.49	24.1	36%	8.4	13%
Idaho	52.93	33.1	63%	11.9	22%
Montana	93.27	26.1	28%	8.0	9%
Nevada	70.26	58.4	83%	47.8	68%
New Mexico	77.77	26.5	34%	13.4	17%
Oregon	61.60	32.4	53%	16.1	26%
Utah	52.70	34.0	65%	22.9	43%
Washington	42.69	12.2	29%	0.4	1%
Wyoming	62.34	30.0	48%	18.4	30%
Total	752.95	354.80	47%	174.0	23%

80067-3 (cont.)

WIWET appreciates the opportunity to provide comments on BLM's PEIS. The Team believes the project to be a step in the right direction to facilitate the development of wind resources in the West. WIWET looks forward to future collaboration with BLM in ensuring dependable, reasonably priced and environmentally sound energy supplies for western loads.

WIWET contact information:

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Denver, CO 80202
dlarson@westgov.org
303 573-8910

cc: Pam Inmann, Acting Executive Director, Western Governors' Association

Attachment: Western Interconnection Wind Evaluation Team members

The Western Interconnection Wind Evaluation Team

State	Organization	Name
California	California Energy Commission	Grace Anderson George Simons
Colorado	Colorado Governor's Office of Energy Conservation and Management	Ed Lewis
	Colorado Public Utilities Commission	Gary Schmitz
Idaho	Idaho Public Utilities Commission	Laura Nelson
	Idaho Department of Water Resources	Gerald Fleischer
Montana	Montana Department of Environmental Quality	Paul Cartwright
	Montana Consumer Council	Larry Nordell
Nebraska	Nebraska Energy Office	Larry Pearce
Nevada	Nevada State Energy Office	Pete Konesky Dick Burdette
New Mexico	New Mexico Department of Energy, Minerals and Natural Resources	Michael McDiarmid
	New Mexico PRC	Prasad Potturi
Oregon	Oregon Department of Energy	Phil Carver Carel deWinkle
Utah	Utah Energy Office	Vacant
Washington	Washington Department of Community, Trade and Economic Development	Tony Usibelli Greg Nothstein
Wyoming	Wyoming Governor's Office	Steve Ellenbecker
	Wyoming Consumer Advocate	Bryce Freeman

Responses for Document 80067

80067-001: Thank you for your comment. We appreciate your input and participation in the public review process.

80067-002: The projected wind power development presented in Table 5.13-1 is based on the results of WinDS model analyses. These projections do not include existing capacity and are unlikely to correspond directly to specific initiatives underway or being considered.

The purpose of the modeling efforts in this PEIS is to provide a general framework of possible development over the next 20 years, in order to assess the potential spatial, environmental, social, and economic impacts of implementing a Wind Energy Development Program for BLM-administered lands. The BLM recognizes that many factors can affect the accuracy of the projections, and, as discussed in Appendix B, a variety of factors will determine actual development levels. However, the MPDS and WinDS models employed in the PEIS are adequate for forecasting potential development levels over such a large geographic area and long, projected time frame. Greater accuracy in these forecasts would not likely result in changes to the requirements of the Wind Energy Development Program; that is, the proposed policies and BMPs would not be changed at this time. Under the proposed program, the BLM will employ adaptive management strategies to the oversight of wind energy development on BLM-administered lands. The BLM will monitor the level of wind energy development into the future as well as the effectiveness of its policies and BMPs. If necessary, adjustments to the programmatic requirements will be made.

80067-003: The BLM concurs with the Western Interconnection Wind Evaluation Team's (WIWET's) comments that transmission issues must be addressed through interagency consultation, in which the BLM intends to participate. In the interim, with respect to specific wind energy development projects on BLM-administered lands, the BLM will require site-specific analyses for each project to consider the potential impacts of required transmission system interconnects or expansions. These analyses will be conducted with input from other federal, state, and local agencies, and interested stakeholders.

Document 80068

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 10:01 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80068

Thank you for your comment, Lisa Stapleton.

The comment tracking number that has been assigned to your comment is 80068. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 10:01:15AM CDT

Wind Energy EIS Draft Comment: 80068

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Last Name: Stapleton
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City: Yerington
State: NV
Zip: 89447
Country: USA
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
I believe this study is necessary to establish alternative energy sources. Please keep up te good work! | 80068-1

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80068

80068-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80069

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 11:44 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80069

Comments_on_wind _eis_80069.doc...

Thank you for your comment, Andrew Orahoske.

The comment tracking number that has been assigned to your comment is 80069. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 11:43:45AM CDT

Wind Energy EIS Draft Comment: 80069

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City: Eugene
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Privacy Preference: Don't withhold name or address from public record
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Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

TO: **Bureau of Land Management, Wind EIS**
FROM: **Andrew J. Orahoske**
1737 Orchard Street
Eugene, Oregon 97403
enforcembta@yahoo.com
RE: **Comments on the U.S. Bureau of Land Management Draft Programmatic Wind Energy Environmental Impact Statement**
DATE: **December 10, 2004**

The Nature of a Programmatic EIS under NEPA

The Bureau of Land Management (BLM) claims to issue a draft programmatic environmental impact statement (PEIS) in pursuance of obligations imposed by the National Environmental Policy Act (NEPA). Whether a NEPA document is programmatic in nature depends upon the nature and scope of the proposed action document rather than the label of the document. As such, the analysis must be sufficiently comprehensive to identify and evaluate all potentially significant consequences of the proposal. Furthermore, if an agency decides to rely on a programmatic EIS for a decision on a site specific or project level activity, the impact statement must include the detailed information required to support the claim. 80069-1

The scope of the undertaking by the BLM in the present PEIS contemplates large scale regional and national development. "Although the agency has the discretion to define the scope its actions, such discretion does not allow the agency to determine the specificity required by NEPA." *City of Tenakee Springs v. Block*, 778 F.2d 1402,1407 (9th Cir. 1985). A project's site specific impacts should be evaluated when "the agency proposes to make an irreversible and irretrievable commitment of the availability of resources to a project at particular site. *California v. Block*, 690 F.2d 753 (9th Cir. 1982).

The PEIS fails to adequately analyze the full impact of the proposed action and

fails to determine, with enough the specificity, the scope of this impact. The BLM fails to satisfy the alternative requirements of NEPA, fails to adequately analyze the cumulative impacts of the proposed action with all other reasonable foreseeable actions, and fails to fully disclose the impacts on individual bird species, including mortality and habitat destruction and fragmentation.

80069-1 (cont.)

Range of Alternatives

The Council on Environmental Quality (CEQ) regulations directs that an EIS include a set alternatives along with the proposed action, and describes the alternatives section as "the heart of the environmental impact statement." 40 C.F.R. § 1502.14. The regulation requires "a rigorous exploration . . . of all reasonable alternatives, and a discussion of about why any alternatives were eliminated from detailed study." *Id.* In addition the regulation requires "substantial treatment of each alternative…so that reviewers may compare their merits." *Id.*

The Draft PEIS does not provide an adequate survey of alternatives to the proposed action. Only three alternatives are provided in the current draft PEIS. In addition to the proposed action, the Draft EIS provides and evaluation of a no-action alternative and a limited development alternative. The proposed action would put in place a framework to implement the maximum potential development of wind energy projects on all BLM lands in the western U.S. outside a few congressionally or administratively withdrawn areas. "Under the limited wind energy development alternative, only three new wind energy projects would be developed on BLM-administered land, and expansion of capacity would occur at two existing sites over the period 2005 to 2015." Draft EIS p.6-8.

80069-2

Clearly there can be several more alternatives to the all or nothing approach of the BLM in the current Draft PEIS. Because the BLM fails to provide an adequate number of alternatives with sufficient detail, the current document fails the NEPA alternatives requirement.

80069-2 (cont.)

Cumulative impacts

The PEIS fails to take into account the cumulative effects of the development of wind projects as implemented in the proposed action with the development of other energy projects on public lands. In undeveloped areas of Wyoming and Montana, where large scale energy development is to occur (both wind and fossil fuels), the current PEIS should disclose and analyze relevant information and evaluate the combined effects of all types of planned energy development on BLM lands. In addition to not taking into account other energy development projects, the EIS fails to disclose the Executive Order 13212 which expedites the application process for energy development on BLM lands.

80069-3

In a section entitled "Impacts of Wind Energy Development versus other Sources of Energy", the EIS embarks on a completely meaningless and unnecessary evaluation of abstraction. Draft EIS p.6-20. The purpose of an EIS is to disclose the impacts on the environment of the proposed action. In comparing the impacts of other forms of energy development, a meaningful cumulative impacts analysis as required by NEPA must disclose and analyze the combined of affects of all reasonably foreseeable actions and the proposed action.

Fossil Fuel Energy Development

Passage of the Energy Policy and Conservation Act (EPCA) of 1975 emphasized the need to stabilize the supply of energy and develop fossil fuels located on federal

80069-4

public lands. 42 U.S.C. § 6201-6202. The reauthorization of the EPCA in 2000 also directed the U.S. Departments of Energy, Agriculture, and Interior to inventory all onshore oil and gas reserves and to identify impediments to the development of those resources. Public Law No. 106-469. Executive Order 13212, signed in 2001, stated that "agencies shall expedite their review of permits or take other actions as necessary to accelerate the completion of such projects, while maintaining safety, public health, and environmental protections." Executive Order 13212, 66 Fed. Reg. 28357 (May 18, 2001). In response, the BLM has followed an administrative policy to ensure the timely development of these critical energy resources in an environmentally sound manner and has directed land-use planners to not unduly restrict access to federal lands, while continuing to protect resources when they review oil and gas lease stipulations. U.S. Bureau of Land Management. 2003. Application for permit to drill (APD)-Process improvement #1—Comprehensive strategies. U.S. Bureau of Land Management, Washington Office, Instruction Memorandum IM 2003-152.

80069-4 (cont.)

Fossil fuel energy development is scheduled on both private and public lands overlapping the areas analyzed in this draft PEIS. This development is a highly destructive activity that destroys and fragments habitat and disrupts wildlife behavior during critical mating, calving and nesting periods. Expedited fossil fuel energy development is proposed for large parts of Wyoming and Montana, the heart of the major potential areas of wind development according to the draft PEIS. Current plans for the Powder River Basin in Wyoming envision 65,000 new wells, 27,000 miles of roads, and 53,000 miles of pipeline, powerlines, and utility corridors, an area over 80,000 square miles in size. Draft/Final Environmental Impact Statement and Draft Planning

Amendment for the Powder River Basin Oil and Gas Project (Wyoming) and Montana Statewide Draft/Final Oil and Gas Environmental Impact Statement and Amendment of the Powder River and Billings Resource Management Plans. 80069-4 (cont.)

Bird Mortality

The issue of bird mortality due to collisions with wind turbines often turns into an argument over what man-made sources kill the most birds. "Birds" is usually defined in the generic sense, and species differentiation is not usually part of the discussion. Such a discussion, however enlightening for the purposes of discovering the myriad of sources of bird mortality, does not inform the purpose of the current EIS. The issue presently before the BLM is to determine the impact of the proposed action on the environment. The overall mortality of individual bird species is one such impact. This impact is not conjectural or abstract and in fact has been the source of considerable controversy.

The Draft EIS quotes studies which blame skyscrapers, cars, transmission lines, pesticides and domestic cats for killing far more birds than wind turbines: "The number of bird collisions at wind energy projects is relatively small, when compared with collisions with other human-made structures." Draft EIS p.6-18. 80069-5

However, this comparison does little to enlighten the reviewer of the scope of the impact of the proposed action. Cats, no matter how mean and well fed, do not kill eagles. And, for that matter, hawks, shrikes, swans, storks or condors are equally safe from the vicious jaws of feral felines. To implicate other sources of mortality when evaluating the effects of bird mortality due to wind turbines simply misses the point. They are valuable numbers when calculating the overall mortality to all birds due to humans, but for the purposes of disclosing the effects of bird mortality due to the proposed action, they are

simply inadequate. The following report should be included in the discussion of bird mortality: W. Grainger Hunt et al., *Golden Eagles in a Perilous Landscape: Predicting The Effects Of Mitigation For Wind Turbine Blade-Strike Mortality*, University of California, Santa Cruz. California Energy Commission Report, 2002.)

80069-5 (cont.)

Effects on Sage Grouse

Wind energy developments, specifically the roads and transmission lines that fragment the landscape and provide perches for predatory raptors, pose a risk and impact on a potentially endangered or threatened species.

Sage grouse inhabited the western United States and southern Canada for tens of thousands of years, through ice ages, floods and drought. Lewis and Clark in 1806, described the numerous birds as clouds darkening the sky and fields of gray that moving across the landscape. Once numbering in the millions, their historic range encompassed the distribution of sagebrush on the prairie and steppe regions of what became 16 western states and three Canadian provinces.

80069-6

Since 1900, the sage grouse has been extirpated from the periphery of its range and they are now gone from Arizona, British Columbia, Kansas, Nebraska, New Mexico, and Oklahoma. Range wide population declines of 45-80 percent over the past 20 years due to habitat destruction, degradation and fragmentation, has left the population at less than 140,000 individuals, representing only about 8 percent of historic numbers. Furthermore, rather than possessing robust core populations, the sage grouse are sparsely distributed over vast tracts of degraded habitat.

The sage grouse is entirely dependent on sagebrush ecosystems that dominate much of western North America. Three fundamental characteristics of the sage brush

ecosystems have been altered from pre-settlement conditions. First, the total area covered by sagebrush is reduced, for example, approximately 75% of the sagebrush in the state of Washington and virtually all the sagebrush habitats in southern Idaho is now agricultural cropland. Second, the sagebrush habitat is degraded by non-native invasive species, especially cheatgrass (*Bromus tectorum*), the fire regime is altered and resulted in the loss of vast expanses of sagebrush. Overgrazing by cattle, perhaps more than any other single factor, has contributed to the marked degradation of habitat throughout the entire range of the sage grouse. Lastly, not only has the habitat disappeared and been degraded, it is increasingly fragmented by roads, powerlines, fences, and other developments, including oil and gas exploitation. Changes in quantity, composition, and configuration of sagebrush habitat is primary reason for the decline of the sage grouse.

Approximately 30% of the sagebrush lands in the United States are privately owned. Federal agencies in the United States are responsible for management of 66% of the sagebrush landscape, of which BLM manages one-half. Less than 1% of the range currently occupied by greater sage grouse, and very little sagebrush habitat overall is legally protected. Threats to the sage grouse and its habitat include livestock grazing, mining, energy development (including wind energy development), conversion to agriculture, and urbanization. The use of off-road vehicles degrades habitat and if allowed in lekking areas during the breeding season can directly impact populations of sage grouse.

80069-6 (cont.)

In April 2004, the USFWS issued a 90-day finding for three petitions to list the greater sage-grouse (*Centrocercus urophasianus*) as threatened or endangered, under the Endangered Species Act (ESA) of 1973, as amended. 69 Fed. Reg. 21484, 21484 (April

21, 2004). The Service found that the petition and other information presented substantial information indicating that listing of the greater sage-grouse may be warranted. *Id.* at 21484. The Western Association of Fish and Wildlife Agencies (WAFWA) completed a report in June 2004 which echoed the calls of alarm trumpeted by the petition to list filed by the coalition of environmental organizations. Connelly, J. W., S. T. Knick, M. A. Schroeder, and S. J. Stiver. 2004. *Conservation Assessment of Greater Sage-grouse and Sagebrush Habitats*. Western Association of Fish and Wildlife Agencies. Unpublished Report. Cheyenne, Wyoming.

80069-6 (cont.)

Reliance on the Programmatic EIS for Site-specific Analysis

The level of environmental assessment required at the in project level is independent of the supposed requirements stated in the Draft EIS. Each federal action that may significantly affect the environment requires the preparation of an EIS that fully discloses and analyzes all potential impacts. The BLM should not necessarily use this programmatic EIS as a way of avoiding the obligations imposed by NEPA. While the draft PEIS addresses this issue as follows, the reliance on a vague and general PEIS does not satisfy the mandate of NEPA to fully evaluate the site specific effects.

80069-7

> The level of environmental assessment to be required for individual wind power projects will be determined at the Field Office level. In certain instances, it may be determined that an environmental assessment (EA) is sufficient in lieu of an EIS. To the extent that this PEIS addresses anticipated issues and concerns associated with an individual project, including potential cumulative impacts, the BLM will tier off of the decisions embedded in this PEIS and limit the scope of additional project-specific NEPA analyses. In particular, the mitigation measures discussed in Chapter 5 may be consulted in determining site-specific requirements. Public involvement will be incorporated into all wind energy development projects to ensure that all concerns and issues are identified and adequately addressed.

Draft EIS p.2-7.

Responses for Document 80069

80069-001: The PEIS analyzes the impact of establishing and implementing a Wind Energy Development Program on BLM-administered lands in 11 western states. Site-specific analyses are beyond the scope of the PEIS. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including additional cumulative impact analyses, if necessary, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific and species-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies and interested stakeholders. Alternatives analyzed in the PEIS were selected to provide a reasonable range of approaches for increasing wind energy development on BLM-administered lands. No additional alternatives were identified during the public scoping process. Cumulative impacts, addressed in the PEIS in Section 6.4, include those effects that could result from incremental impacts of development in accordance with the terms and conditions of the proposed Wind Energy Development Program when added to other past, present, and reasonably foreseeable future actions.

80069-002: The PEIS meets the requirements of the CEQ regulations for analysis of alternatives by evaluating a set of alternatives that presents a range of options. Scoping was conducted as required, in part, to identify the range of alternatives to be considered. Comments received during the scoping process did not identify any additional alternatives.

80069-003: A new BMP has been inserted in Section 2.2.3.1, Proposed Policies, to ensure that site-specific NEPA analyses will identify and assess any cumulative impacts that are beyond the scope of the cumulative impacts addressed in the PEIS. The lack of certainty at this time on the location, timing, and types of new energy facilities on BLM- administered lands does not allow for a meaningful, detailed analysis of cumulative impacts when considered along with wind energy facilities.

80069-004: As discussed in the previous response, cumulative analyses will be conducted during site-specific NEPA analyses to the extent the potential impacts are beyond the scope assessed in the PEIS. This would include assessments of cumulative impacts of other energy development activities in the area.

80069-005: The presentation of other causes of bird mortality are included to identify other sources of mortality to which wind energy impacts may cumulatively contribute. The discussion of bird mortality associated with collisions with wind energy facility structures presents mortality rates that have been reported at existing facilities. The discussion further points out that depending on the species involved, population-level effects may occur for some species. As required by the Wind Energy Development Program proposed policies and BMPs, species- and site- specific analyses will be conducted for any proposed

wind energy project on BLM-administered lands. The intent of these analyses is to identify important, sensitive, or vulnerable ecological resources that could be impacted by a wind energy facility, and to aid in the siting, design, and operational stipulations for avoiding (if possible), mitigating, or minimizing impacts to those resources. The scope and approach for the site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting, design, and operational stipulations for incorporation into the POD.

The Hunt (2002) document suggested for inclusion in the PEIS is already cited; see the text box on compatibility of wind energy development and raptors presented in Section 5.9.3.2.3. No text change has been made to the document in response to your comment.

80069-006: The Wind Energy Development Program proposed policies and BMPs presented in Section 2.2.3 include numerous surveys and monitoring requirements; siting and design constraints; and construction, operation, and decommissioning requirements for mitigating environmental impacts. These will be required for any proposed wind energy project on BLM-administered lands. The scope and implementation of these policies and BMPs will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. In addition, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated at the project level, as applicable.

80069-007: The mandate of NEPA is fulfilled in the PEIS, as appropriate, at the programmatic level. The site-specific impacts that are not within the scope of this PEIS will be evaluated in site-specific NEPA documents. To clarify this point in the PEIS, the proposed policy in Section 2.2.3.1 regarding site-specific NEPA analyses has been modified.

Document 80070

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 1:16 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80070

AF_REVIEW_COM
ENTS_v2_80070.dc

Thank you for your comment, Jack Bush.

The comment tracking number that has been assigned to your comment is 80070. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 01:15:36PM CDT

Wind Energy EIS Draft Comment: 80070

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Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

GENERAL COMMENTS

Recommendation: Insert the following (examples of proposed language) in the executive summary and elsewhere (i.e., Chap 1, 2, 3.3.4, et al) in the document where a discussion of location-specific and project-specific coordination may be applicable:

1. As a programmatic evaluation, this draft PEIS does not evaluate site-specific issues associated with individual wind energy development projects. A variety of location-specific factors (e.g., soil type, watershed, habitat, vegetation, view shed, public sentiment, the presence of threatened and endangered species, the presence of cultural resources) will vary considerably from site to site, especially over an 11-state region. In addition, the variations in project size and design will greatly determine the magnitude of the impacts from given projects. The combined effects of these location-specific and project-specific factors cannot be fully anticipated or addressed in a programmatic analysis; such effects must be evaluated at the project level.

BLM generally encourages the development of wind energy in acceptable areas. Wind energy site testing and monitoring activities are typically developed in conformance with existing land use plans and in consultation, as may be required, with other Agencies such as the Departments of the Interior, Energy, Agriculture, Federal Aviation Administration, and Defense. 80070-1

Existing land use plans and coordination with responsible Agencies can identify a variety of land use activities within various types of designated land use areas, such as Areas of Critical Environmental Concern (ACEC), visual resource management areas, National Landscape Conservation System units, critical habitat areas, military Special Use Airspace (SUA) and test and training ranges, and other special management areas. These various land use areas may require or suggest location-specific and project-specific opportunities or restrictions to wind energy site testing, monitoring, and future development.

Rational: As BLM is aware; wind farms can impact our military operations. Consequently, providing language that suggests that location-specific and project specific coordination should take place will go far in furthering the intent of BLM's response to the National Energy Policy recommendations that the Departments of the Interior, Energy, Agriculture, and Defense work together to increase renewable energy production.

2. Impacts on military operations come from two perspectives: Obstruction & Radar Interference. We have provided some insight on these perspectives:

> Obstruction: This appears to be fairly well understood by all and covered in the EIS. 400' tower versus 200' low-level can equal disaster. Radar Interference: Still appears to be fairly misunderstood. We recommend separating the radar equation into 3 pieces to make it easier for outsiders to understand: 80070-2

a. Ground-Based Radar. The radar on the ground (usually around an airfield) used for airfield operations (takeoff/landing etc). We agree that in most cases (assuming they are located away from radar sites) these should not impact the AF.

b. Aircraft Radar - Target Identification (finding the bad guy in the sky or on the ground). By increasing clutter (noise) with wind farms in an area, it makes identifying a target (air or ground) difficult, if not impossible, especially in a relatively quite (low noise) radar test area. This could be compared to attempting to view a picture on your TV screen when it is covered with "snow" - almost impossible.

c. Aircraft Radar - Terrain Following Radar (TFR). Radar bounces off the ground, constantly checking location & altitude etc. Much of our TFR testing is done over the exact same routes verifying each version of TFR software upgrades. We benchmark the last software results against the newest version to ensure it performs as expected. Any deviations can be attributed to a potential software glitch. However, any major changes to the terrain (such as the addition of a wind farm 400' tall x 1 mile square) would cause us to start the software testing verification process from scratch, on a route we may not have in our inventory. This inability to use previous baselines would have a drastic negative impact (increase) to cost & schedule for delivering weapons upgrades, etc.

80070-2 (cont.)

3. Please revise PEIS in light of what follows from the wind energy industry (AWEA) - see http://www.bwea.com/aviation/ams_report.html:

Will a wind project interfere with radar?

Yes. Radar is basically designed to filter out stationary objects and display moving ones, and moving wind turbine blades create radar echoes. It is possible to modify a radar installation to eliminate this problem, according to a consulting firm that has studied it for the British government. According to the study: "This study concludes that radars can be modified to ensure that air safety is maintained in the presence of wind turbine farms. Individual circumstances will dictate the degree and cost of modification required, some installations may require no change at all whilst others may require significant modification."

80070-3

If a wind project is proposed near an airport or military airfield, this issue will likely require further technical investigation. The interference is generally limited to objects (airplanes) that are physically shadowed by the turbines (that is, very low-flying aircraft), so the further the turbines are from an airfield and the lower their altitude, the less interference should occur.

Myths:

Myth #1: "Wind Turbines are now stealthy." This statement may actually be true, but just because the technology exists, does not mean it is being deployed. From our years of experience with the wind industry, they have

told us a different view. Composite (or stealth) turbine technology does exist, however it is too cost prohibitive to use on projects. As you know, wind projects are very competitive with other green technology and any increase in the total project cost could push it out of reach (financially). To our knowledge "stealth" turbines are not being installed.

Stealthy windmills would also cause TFR systems to either not react or delay their reaction when attempting to overfly the sites, causing potential aircraft to windmill collisions.

Myth #2: Some think that we only fly at high altitudes these days. Not true - we still do a lot of low-level work (TFR work, etc). We must protect the low-level operations with the same vigor as the high altitude work.

80070-3 (cont.)

4. Consider, to the extent practicable, the following broad issues:

- Identify sensitive locations on BLM lands where wind projects potentially affect DoD mission sustainability;
- Include the legal/regulatory basis for BLM disapproval of a wind project due to impacts (i.e., endangered species, ACEC conflicts, impacts to DoD mission sustainability).
- Include a DoD-provided overview of airspace and its use by the military, FAA items/inputs, general education points (we stand ready to expedite this with BLM, as required);
- Mention the availability of Area Planning AP/1B Chart, Military Training Routes- Western States, as one reference showing MTRs and FAA routes (available to the public - see Digital Aeronautical Flight Information File at https://164.214.2.62/products/digitalaero/index.cfm#plan), or its replacement;
- Include, as inherent in the wind energy planning and siting process, the pre-permit issuance coordination process by which BLM will coordinate with stakeholder/oversight agencies such as USF&WS, USDA, DoD, FAA, etc.

80070-4

- Require wind and other renewable energy source developers to minimally include conceptual information on energy transmission line routes on BLM lands;
- Address in the BLM's method of alerting stakeholders (including DoD) to proposed energy transmission line routes on BLM lands, that support wind and other renewable energy source developments on privately owned lands;
- Create a real time database summarizing the status of all wind facility applications/wind project development, transmission line projects on BLM lands, and make this accessible to the public. We recommend that this be established outside the application of NEPA and other consultations, etc;

- List the state-specific or regional energy workgroups, or similar, that BLM supports, and describe the influence that each has relative to wind projects on BLM lands. 80070-4 (cont.)

Military Installations are addressed in Section 4.7.3 as part of the Affected Environment, but the impacts analysis in Chapter 5, specifically Section 5.8.2, does not discuss actual potential impacts to AF pilots and their aircraft from aviation safety interference. However, it does an extensive job of addressing avian collisions. Section 5.10.3 raises the issue, but does not actually analyze any potential impacts. Rather it merely states on p. 5-88 that DoD "should be consulted regarding potential impacts on military operations." We recommend that "should be" needs to be changed to "will" or "shall", be consulted in the pre-permit application timeframe. 80070-5

5. General: The writing needs to be more accessible. Sentences are too long and written in such a way that the meaning changes. 80070-6

6. General: Need an up front explanation about why there was an interim policy and what it is. It reads like segmentation of the action. 80070-7

7. General: The necessity of the Programmatic EIS is not immediately obvious and should be so. It appears that the main advantage over preparing only action-by-action NEPA documents is a comprehensive change of land use plans. 80070-8

SPECIFIC COMMENTS

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Following the listing for Par 4.7 (AFFECTED ENVIRONMENT) “Land Use”, add a new Par 4.8 “Airspace Use/ Airspace Resources”. Transfer existing Par. 4.7.2 (Aviation Considerations) and 4.7.3 (Military Installations) so that they fall under this new Par 4.8, and renumber paragraphs as appropriate. This elevates “Airspace Use/ Airspace Resources” to a proper level of importance relative to other “Affected Environment”.

Following the listing for Par 5.10 (POTENTIAL IMPACTS OF WIND ENERGY DEVELOPMENT AND ANALYSIS OF MITIGATION MEASURES) “Land Use”, add a new Par 5.11 “Airspace Use/ Airspace Resources”. Transfer existing Par. 5.10.2 (Potential Impacts to Aviation) and 5.10.3 (Potential Impacts to Military Installations) so that they fall under this new Par 5.11, and renumber paragraphs as appropriate. This elevates “Airspace Use/ Airspace Resources” to a proper level of importance relative to other “Affected Environment”. 80070-9

Under Par 3.6 “Existing Mitigation Guidance”, add a new Par 3.6.3 entitled “Military Mitigation Guidance Relevant to Wind Power Development”. Within the added paragraph, state that military policy/ guidance for coordinating siting of wind facilities with military use of public lands, and airspace above, will typically be done in the pre-permit application time frame. Provide military POC and contact information, and recommend that wind developers engage in pre-permit consultation with military.

Executive Summary

ES. 4 and ES 5.3 - We recommend combining *the Limited wind energy development* alternative with the no action alternative while at the same time removing any language regarding "limited development" or a complete removal of the text under the limited alternative. This would leave the EIS with only the proposed action and the no action. As currently scoped, the limited energy alternative would not appear to further the goals of the National Energy Policy, and since the actions defined under this alternative already exist or will be in existence by the time the PEIS is completed, the alternative will have already been overcome by events.	80070-10
ES.5 - State that there can be "potential adverse impacts to airspace use/ airspace resources", in addition to other impacts listed. This item was not listed.	80070-11
ES.5 - Executive Summary does not comment on the affects windmills would have on military and civil aviation. This is an important issue that should be highlighed in the Executive Summary.	80070-12
ES-5, paragraph 3: There is no way to ensure that impacts that are not assessed at the site-specific level will be minimal to negligible. Consider rewording.	80070-13
ES-5, paragraph 3: The requirement that site-specific and species-specific concerns be addressed comprehensively at the project level is redundant to NEPA. This would have been performed with or without a Programmatic EIS.	80070-14
ES-5, last paragraph: Ensure is equivalent to guarantee". Recommend against using the word in a NEPA document, since it is a legal document.	80070-15
ES-6 - The conclusion that the proposed action is the *best approach* for managing wind energy development is questionable, based on the lack of specificity of the PEIS.	80070-16
ES-6, paragraph 2: It may read to the general public that it is convenient that BLM didn't calculate impacts to residential property values but suggests that the impacts will not be negative. Consider wording these statements more strongly, such as indicating that this PEIS did not calculate those impacts because other studies overwhelmingly suggest the impacts will not be negative.	80070-17
ES-6, paragraph 4: Is the comprehensive guidance regarding mitigation anything different than would have been expected on a project by project basis? If not, recommend that this point not be oversold.	80070-18
ES-7, paragraph 6: "Lowest potential cost to industry" sentence begs the question if it is the lowest cost to the Federal government (i.e. taxpayers).	80070-19

Chapter 1

1.1 Purpose and Need: Recommend rewrite: "To support wind energy development on public lands and also to minimize potential environmental and sociocultural impacts, the BLM is seeking to build on the existing interim policy to establish a Wind Energy Development Program. Anticipated elements of the	80070-20

BLM's proposed Wind Energy Development Program include (1) an assessment of wind energy development potential on BLM-administered lands through 2025 (a 20-year period); (2) policies regarding the processing of wind energy development ROW grant applications; (3) timely consultation with other oversight, regulatory, or stakeholder Agencies on proposed permit applications; (4) best management practices (BMPs) for mitigating the potential impacts of wind energy development on BLM-administered lands; and (5) proposed amendments of specific land use plans to address wind energy development.	80070-20 (cont.)
1.3 - Relationship Of The Proposed Action to Other BLM Programs, Policies, And Plans - It would be useful to provide a similar section as follows, "…1.4 RELATIONSHIP OF THE PROPOSED ACTION TO OTHER AGENCY PROGRAMS, POLICIES, AND PLANS" with sub-headings that discuss DoD, USDA, F&WS, etc.	80070-21
Chapter 2	
2.2 Description Of The Proposed Action: Recommend inserting as another benefit, the following: Interagency/Intergovernmental Reviews. The BLM shall encourage pre-application reviews to facilitate identification of potential conflicts among the various responsible agencies and related stakeholders, for all applications.	80070-22
2.2.1: Third sub-paragraph. Recommend deleting from consideration under the MPDS model withdrawn public lands. (such as the lands covered in PL 106-65)	80070-23
2.2.1: Sixth sub- paragraph - clarify. This paragraph states the WinDS model output indicates how many total acres might be economically developable and in the next sentence states the model does not show where the land is located. How do you calculate total acres developable yet not know where they are?	80070-24
2.2.3.1 Proposed BLM Policies - Add an additional bullet stating that "The BLM will initiate pre-permit issuance consultation with appropriate military representatives when a proposed wind facility or transmission lines may have potential to interface/encroach upon with military airspace and/or miliitary test and training ranges.	80070-25
2.2.3.1: 5th bullet requires entities seeking to develop a wind energy project to consult with the DoD and shall occur simultaneously at both the installation/field level and the Pentagon/BLM Washington Office level. Need to state the reason for coordination is to obtain DoD concurrence the proposed project would have no impact to the military's mission. Should also specify the type information that should be coordinated. DoD or local installations do not have the authority to approve or disapprove a project. The only guidance DoD or an installation may provide is the proposed action may have a serious impact, negligable/minor impact or no impact, etc.	80070-26
2.2.3.1: 8th bullet states the existing Categorical Exclusion applicable to short term ROWs or land use authorizations may be applicable to some site monitoring and testing activities. DoD requests that any request for meteorlogical or other test sites be coordinated with DoD to appropriately assess potential impacts to	80070-27

military operations. Recommend full coordination as outlined in fifth bullet (gain DoD input on potential impact).	80070-27 (cont.)
2.2.3.2.2 Plan of Development Preparation - General: Insert new bullet item:	
The BLM and commercial operators should contact DoD airspace and range managers in the pre-application planning process to identify potential encroachment, sensitive land uses and issues, land use concerns specific to the region, and the potential for electro-magnetic effects.	80070-28
2.2.3.2.2 Proposed BMPs/Plan of Development Preparation- To be complete, add a paragraph listing "Airspace Use/ Airspace Resources", and state Plan of Development BMPs for coordination of wind project with military, along with other listed resource BMPs (can assist BLM on this item by providing POCs, and coordination policy for wind projects).	80070-29
2.2.3.2.2, "Plan of Development Preparation" - Specifically requires that both the Department of Defense and individual military services be notified of each project early in the development process to allow for identification of possible military impacts.	80070-30
2.2.3.2.2: 1 bullet - how is appropriate agencies defined? Does it include DoD? Suggest changing the word "should" to "shall". It is imperative any future meteorlogical tower or windmills be evaluated to determine potential impacts to military operations. BLM should request DoD provide an appropriate agency POC/Phone etc where they can submit any proposal for evaluation. DoD should also establish guidance on response times and who is the appropriate office to coordinate with BLM.	80070-31
2.2.3.2.3 - Human Health and Safety paragraphs, 7th bullet. Recommend developer be required to coordinate and gain comments from affected airports, military etc. as a requirement for the POD approval.	80070-32
2.2.3.2.4 - 8th bullet states "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." This statement appears to gloss over a serious problem and simply stating additional warning information may need to be conveyed to aircraft is weak at best. How would pilots, both military and civilian, be notified of radar of echoes or EMI from wind turbines? It may be much more appropriate to restrict the construction of wind turbines in areas where the turbines would interfere with the safe flying operations.	80070-33
2.2.3.2.5, "Decommissioning" - Site revegetation should use the same species and plant communities as present prior to the project rather than simply "commensurate with the ecological setting" unless it can be clearly determined through consultation with potentially affected facilities that the original vegetation had not been cultivated and/or managed for certain physical properties. For example, it would be inappropriate to plant a woody species of tallest growth potential near an airport/airfield or below airspace set aside for military use if that species had not been present prior to site wind energy development.	80070-34

2.6.4 - Should the BLM be concerning themselves with the cost of wind energy development in this document? In particular what is the BLM's interest in low cost to industry? 80070-35

2-22 - the Transportation section talks about truck traffic hazards, but not about air traffic (pgs 2-13). This raises the question of air traffic hazards, which are not discussed. Perhaps the title should be changed to Ground Transportation, or expand to include air traffic. 80070-36

2-23 - under Public Health and Safety (pgs 2-17, 2-23), the discussion only addresses proximity to military bases and training areas, but does not specifically address airspace, MTRs, MOAs or pilot safety. 80070-37

Chapter 3

3.1 - Description Of Wind Energy Projects, 2nd line- Include "pre-permit consultation" (with BLM, military, tribal governments etc.) as a project phase, and list this before "site testing and monitoring. 80070-38

3.1.2.4 - Why are dielectric-fluid containing electrical devices only "likely" to use mineral oil based dielectric fluids (as opposed to PCB), can not the BLM require that on its lands? 80070-39

3.1.1 - Second sub-paragraph mentions 50m meteorological towers. In a recent meeting in Reno with BLM, DoD and State personnel, it was mentioned that we could expect to see met towers exceeding 50 meters in the near future. Recommend addressing the taller towers envisioned by industry for met towers. 80070-40

3.2- Regulatory Requirements For Wind Energy Projects, Pg 3-13- Below "Land Use" bullet, add a bullet entitled "Airspace Use/ Airspace Resources" and refer to applicable regulations. 80070-41

3.3.4 - States "This study concludes that radars can be modified to ensure that air safety is maintained in the presence of wind turbine farms". While this may be a suitable repair for a stationary type (approach control type) radar system for both military and civlilian airfield, we do not want to introduce "filters" into a Test and Evaluation phase of systems. Inplacing multiple filters into the systems we use to train and provide feed back to the aircrews could introduce multiplicity of errors that invaildate the training (In a sense provide false training). Filters are not a solution in or near a test and evaluation or high density training area. 80070-42

3.3.4 - How tall are the turbines? The FAA will need a "Determination of Hazard to Air Navigation" for any structure over 500 feet. 80070-43

3.3.4 - The Air Force is concerned with the potential for wind turbines to interfere with the electromagnetic signals that are part of communications and radar. 80070-44

3.3.6 The Air Force is concerned with anything that could be a hazard to aviation. Does shadow flicker pose a threat to aviation in the vicinity of the wind farms? 80070-45

Chapter 4

4.7.3 - Military Installations: Recommended Edits - Navigation concerns also exist where tall structures are located within military airspace, referred to as 80070-46

military operations areas (MOAs), or military training routes (MTRs) or next to military test and training ranges. A MOA is airspace designated for military training activities, including aerobatics, air combat tactics, formation training, and other activities. An MTR is made up of a series of linked segments of airspace within which various training activities are conducted. Although not required to, military aircraft typically fly an MTR along a defined centerline that governs the plane's height and course. The floor and ceiling for both MOA and MTR airspace are defined and, in either type of space, the floor may extend all the way down to the earth's surface. Military ranges consist of both ground and airspace assets used for composite force training, tactics development, and testing. As a potential result of wind energy development, wind turbines can intrude upon these airspace and ranges if not located properly. The DoD must be contacted during pre-application planning and before permit issuances for any proposed testing, construction, or alteration of objects that may affect military airspace or ranges.	80070-46 (cont.)
4.7.3 Military Installations - 8th line- Modify sentence to read "As a result, wind turbines can intrude upon these airspaces if not properly located, and thus incompatibility with military mission can be a basis for permit denial, should there be no available mitigation alternatives."	80070-47
4.7.3 - This paragraph while titled "Military Installations" only speaks to physical obstruction impact to Military Installation. Recommend adding discussion on radar interference to Military Installations (airspace/operations). The impact to the military mission also comes from radar signals outside the boarder of the airspace. Windmills do not have to be in the direct flight path of the aircraft or antenna to be a source of interference.	80070-48
Figure 4.7.3-1 - shows the locations of MOAs and MTRs in the western United States. Table 4.7.3-1 summarizes the number of U.S. military installations located within the 11 western states, recommend double check/validation.	80070-49
Chapter 5	
5 - "Potential Impacts": Discuss the potential impacts of EMF/EMI on military radar rather than just commercial radar.	80070-50
The developer should be required to post some form of surety to ensure that funding is available to adequately accomplish site decommissioning. The amount could be based on the size of the project, perhaps by total acreage using a unit cost per acre developed.	80070-51
5.5.3.1 - Wind Turbine Noise, 1st sentence- States that "Wind turbines produce two categories of noise: mechanical and aerodynamic". Reverify whether "EMI" is adequately addressed under noise paragraph.	80070-52
5.8.2 - 5th bullet - again states warning information may also need to be conveyed to aircraft with onboard radar systems so that echoes can be quickly recognized. Has the FAA developed any guidance or procedures in respect to windmills?	80070-53

5.8.2 - 6th bullet - This does not seem to be a "mitigation" but more a directive. This should be an up-front requirement to coordinate in the planning/design phase with local affected concerns i.e. local airports, and military installations (to inlcude airspace). Make this a requirement in writing for the developed to obtain coordination in writing. See previous comment re: pre-permit issaucne coordniation. 80070-54

5.10.3 - Recommend adding word "Testing" in paragraph as it speaks to "training". We do both testing and training, each with special requirements. But in some locations both need an electronic interference free environment. Additional windmills/met towers do introduce electronic polution into the airspace. 80070-55

5.10.3 - Potential Impacts to Military Installations - Add following sentences at bottom "The aforementioned constraints to military training operations may be the basis of a permit denial. Developers are encouraged to conduct pre-permit consultation with BLM and appropriate military representatives", or similar discussion. 80070-56

5.10.5 Mitigation Measures - 3rd bullet states "The DoD should be consulted regarding the potential impact of a proposed wind energy project on military operations in order to identify and address any DoD concerns;" Recommend two clarification points: 80070-57

- BLM shall be acknowledged as the primary source for coordinating potential wind farm projects (on public lands) with DoD.
- Individuals shall submit their requests to BLM and then BLM shall coordinate with all the appropriate and affected agencies to determine if there are any impacts.

5.10.5 and 4.7.2 - Recommend BLM require the highest point of the structure (i.e. tip of the blade) be considered in all applications and insist to FAA that the blade tips be lighted and counted in all applications, not just the fixed portion of the tower. Lighting should be requried for all towers over 100ft AGL. 80070-58

Chapter 6

6.4.1.4 - Land Use, 7th line- Include "military activity" among activities with which wind energy development must be compatible. 80070-59

Chapter 7

7.4 - Agency Consultation and Coordination - Recommend additional paragraph: "For actions potentially impacting on military airspace and/or ranges, specific DoD airspace and or range managers will be contacted on a case by case basis during pre-application planning and before permit issuances for any proposed testing, construction, or alteration of objects that may affect military airspace or ranges." (Note: DoD may be able to provide a specific list of potential POCs for various ranges/airspace). 80070-60

Responses for Document 80070

80070-001: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. The 5th bullet in Section 2.2.3.1, Proposed Policies, requires consultation with DoD. Site-specific analyses are beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80070-002: Discussion on radar interference has been added to Sections 4.7.3 and 5.10.3.

80070-003: Information on radar interference has been added to Sections 4.7.3 and 5.10.3 in response to a previous comment. The scope and approach that could be required to minimize or eliminate potential radar interference would be determined on a project-by-project basis with input from the FAA and DoD.

80070-004: Regarding bullets 1, 2, and 6: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

Regarding bullets 3 and 4: The BLM and DoD are working on an interagency protocol agreement that will establish a consultation process between the two agencies on wind energy development projects on BLM- administered land. The agreement will establish a process and identify the scope of potential issues for consultation. The BLM will seek consultation with the DoD on all wind energy development projects.

Regarding bullets 5, 7, and 8: The coordination process is already required under the Wind Energy Development Program proposed policies and BMPs (Section 2.2.3.1, Proposed Policies, and Section 2.2.3.2, Proposed BMPs).

Regarding bullet 9: Information about state and regional energy work groups is available through other sources and has not been added to the PEIS.

80070-005: The Wind Energy Development Program proposed policies and BMPs, as listed in the Final PEIS, have been reworded to make them required elements of any wind energy development activity on BLM-administered land.

80070-006: Thank you for your comment.

80070-007: As stated in Chapter 1, the National Energy Policy recommended that the BLM and other federal departments work together to increase renewable energy production. In response to that recommendation, the BLM has undertaken efforts to evaluate wind energy potential on public lands and has issued an Interim Wind Energy Development Policy (see Appendix A) that establishes requirements for processing applications for wind energy site testing and monitoring and commercial wind energy development projects. No text change has been made to the document in response to your request.

80070-008: As stated in Chapter 1, Purpose and Need, the objectives of the PEIS are to (1) assess the environmental, social, and economic impacts associated with wind energy development on BLM-administered land, and (2) evaluate a number of alternatives to address the question of whether the proposed action presents the best management approach that the BLM can adopt in terms of mitigating potential impacts and facilitating wind energy development. The amendment of land use plans is one of four anticipated elements of the proposed action, development of the Wind Energy Development Program.

80070-009: "Land Use" is a long-recognized section in NEPA documents that includes activities such as commercial forestry; recreation; residential, commercial, and industrial developments; agriculture and grazing; mining; and military use. Generally, these activities are not elevated to a distinct stand-alone section.

Section 3.6 discusses comprehensive guidance that has been developed specifically for wind energy projects. As yet, the DoD has not prepared such guidance. Nevertheless, Section 5.10.5 provides a requirement for consultation with DoD. This consultation, to be conducted on a project-by-project basis, would address the concerns expressed in the comment. No text change has been made to the document in response to your comment.

80070-010: Thank you for your comment. No text change has been made to the document in response to your comment.

80070-011: Thank you for your comment. No text change has been made to the document in response to your comment.

80070-012: Thank you for your comment. No text change has been made to the document in response to your comment.

80070-013: As stated in paragraph 2, the proposed program will require that issues and concerns be identified and addressed in project-specific plans, programs, and stipulations, and that mitigation measures protecting resources be incorporated into project PODs. The statement in paragraph 3 concludes appropriately that the requirements to address all the issues and concerns thoroughly at the site-specific level will ensure that impacts will be minimal to negligible. No text change has been made to the document in response to your comment.

80070-014: The explicit requirements to conduct site-specific and species-specific analyses at the project level have been included in the proposed program specifically to provide assurance to interested stakeholders that wind energy development on BLM-administered lands will be thoroughly evaluated with full public involvement.

80070-015: The term ensure is also defined as "to make sure" or "insure." The sentence under consideration appropriately states that adoption of adaptive management strategies would "further ensure that potential environmental impacts would be kept to a minimum." The concept that adaptive management helps insure or make sure that impacts will be kept to a minimum is valid. No text change has been made to the document in response to your comment.

80070-016: Thank you for your comment.

80070-017: Thank you for your comment. No text change has been made to the document in response to your comment.

80070-018: By providing a comprehensive program, the BLM can ensure that wind energy development on BLM- administered lands is managed consistently across the many Field Offices that may be involved. By establishing minimum mitigation standards, the BLM is ensuring that potential adverse impacts will be minimized to the greatest extent possible. In addition, the proposed program will provide for the amendment of 52 land use plans to address wind energy development and for future tiering of project-specific NEPA analyses. The potential benefits of these outcomes, in terms of improved environmental management and likely time and cost savings, are significant.

80070-019: As stated in Chapter 1, the National Energy Policy recommends that the Department of the Interior work with other federal agencies to increase renewable energy production on public lands. If the BLM's Wind Energy Development Program establishes requirements that render wind energy development on BLM-administered lands uneconomic, the National Energy Policy recommendation will not be accomplished. The BLM's program ensures that potential adverse impacts will be minimized to the greatest extent possible while simultaneously increasing the amount of wind energy development on BLM-administered lands over the next 20 years. The Wind Energy Development Program also will result in cost savings for the federal government (i.e., the BLM) by establishing standard policies and BMPs, providing programmatic analyses to support tiering of future NEPA analyses, and amending multiple land use plans simultaneously.

80070-020: The Wind Energy Development Program proposed policies and BMPs provide for the consultations suggested by the proposed additional item (3). The proposed polices and BMPs in Section 2.2.3.1, Proposed Policies, 3rd and 5th bullets, and Section 2.2.3.2.2, Plan of Development Preparation, 1st bullet,

ensure timely consultations with appropriate federal, state, and local agencies, and other stakeholders, including DoD. No text change has been made to the document in response to your comment.

80070-021: Thank you for your comment. No text change has been made to the document in response to your comment.

80070-022: Thank you for your comment. No text change has been made to the document in response to your comment.

80070-023: Most public lands that are "withdrawn" are public lands withdrawn from entry under the mining laws (1872 Mining Law) and continue to be available for a wide variety of other uses, including ROWs and energy mineral development, including wind energy. As a result, there is no reason to categorically exclude these lands from wind energy development. Lands withdrawn for military purposes are under the jurisdiction of the military and are not managed by the BLM until the withdrawal is revoked and the lands returned to the administration of the BLM. As a result, lands withdrawn for military purposes would not be available for wind energy development under the auspices of the BLM's proposed Wind Energy Development Program. The 5th bullet in Section 2.2.3.1 has been revised to clarify that lands withdrawn for military purposes are under the administrative jurisdiction of the DoD or a military service and are not available for issuance of wind energy authorizations by the BLM.

80070-024: The WinDS model cannot predict the exact location of the developable acreage. The WinDS model has 356 regions that cover the United States. For each of these regions, the model has a four-step supply curve for each class of wind resource within the region. Each step of the supply curve includes numerous wind sites with roughly equal costs. Frequently a step is only partially used. In these cases, WinDS does not know exactly which windy areas on the step are used. The WinDS model estimated the amount of wind power that will be generated over the next 20 years in the 11-state study area. These estimates of power generation were then converted to number of acres developed on the basis of 1 MW of power requiring approximately 50 acres of land. The text in Section B.2.2.1 has been modified to include this information.

80070-025: The 5th bullet in Section 2.2.3.1, Proposed Policies, already requires consultation with the DoD. No text change has been made to the document in response to your comment.

80070-026: The BLM and DoD are working on an interagency protocol agreement that will establish a consultation process between the two agencies on wind energy development projects on BLM-administered land. The agreement will establish a process and identify the scope of potential issues for consultation. The BLM will seek consultation with the DoD on all wind energy development projects.

80070-027: The BLM and DoD are working on an interagency protocol agreement that will establish a consultation process between the two agencies on wind energy development projects on BLM-administered land. The agreement will establish a process and identify the scope of potential issues for consultation. The BLM will seek consultation with the DoD on all wind energy development projects.

80070-028: Section 2.2.3.1, Proposed Policies, 5th bullet, and Section 2.2.3.2.2, Plan of Development Preparation, General, 1st bullet, require early contact with appropriate agencies, including DoD. DoD airspace and range managers would be included among the appropriate agencies. No text change has been made to the document in response to your comment.

80070-029: The 1st bullet in Section 2.2.3.2.2, Plan of Development Preparation, and the 5th bullet in Section 2.2.3.1, Proposed Policies, provide for adequate consultation with DoD. No text change has been made to the document in response to your comment.

80070-030: The notifications you suggest are already required by the Wind Energy Development Program proposed policies and BMPs under the 5th bullet in Section 2.2.3.1, Proposed Policies, and the 1st bullet under General in Section 2.2.3.2.2, Plan of Development Preparation.

80070-031: The consultation you suggest is already required by the 5th bullet in Section 2.2.3.1, Proposed Policies. This bullet has been modified to reflect that the BLM and DoD are working on an interagency protocol agreement that will establish a consultation process between the two agencies on wind energy development projects on BLM-administered land. The agreement will establish a process and identify the scope of potential issues on which to be consulted.

The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

80070-032: Section 2.2.3.1, Proposed Policies, 5th bullet, and Section 2.2.3.2.2, Plan of Development Preparation, General, 1st and 4th bullets ensure coordination with the military and the FAA as well as other appropriate parties.

80070-033: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. Conduct of these site-specific analyses will provide an opportunity to adequately address issues associated with radar echoes from wind turbines. With regard to the military, the BLM and DoD are working on an interagency protocol agreement that will establish a consultation process between the two agencies on wind energy development projects on BLM-administered land. The agreement will establish a process and identify the

scope of potential issues for consultation. The BLM will seek consultation with the DoD on all wind energy development projects.

80070-034: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific habitat restoration plans will be developed for any wind energy project proposed for BLM-administered lands. As specified in the BMP, the plan shall be developed to minimize or mitigate negative impacts to vulnerable wildlife while maintaining or enhancing habitat values for other species, and shall require that restoration occur as soon as possible after completion of activities. The restoration approach, tools, and methods will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders, or through local land use requirements and planning efforts with opportunities for full public involvement. Through this process, the BLM will develop project-specific restoration stipulations for incorporation into the POD. No text change has been made to the document in response to your comment.

80070-035: As stated in Chapter 1, the National Energy Policy recommends that the Department of the Interior work with other federal agencies to increase renewable energy production on public lands. If the BLM's Wind Energy Development Program establishes requirements that render wind energy development on BLM-administered lands uneconomic, the National Energy Policy recommendation will not be accomplished. The BLM's program ensures that potential adverse impacts will be minimized to the greatest extent possible while simultaneously increasing the amount of wind energy development on BLM-administered lands over the next 20 years.

80070-036: The referenced BMP has been retitled "Ground Transportation" as suggested.

80070-037: The BLM and DoD are working on an interagency protocol agreement that will establish a consultation process between the two agencies on wind energy development projects on BLM-administered land. The agreement will establish a process and identify the scope of potential issues for consultation. The BLM will seek consultation with the DoD on all wind energy development projects.

80070-038: Section 3.1 describes typical development activities associated with wind energy projects, not prepermit consultations. Pre-permit consultation is discussed in Chapter 2, Proposed Action and Alternatives. Pre- construction requirements would be addressed in the plan of development for a particular project. Section 2.2.3.2.2, Plan of Development Preparation, provides the BLM standards for these plans. No text change has been made to the document in response to your comment.

80070-039: The use of PCB-containing dielectric fluids is limited by statute (the Toxic Substances Control Act, TSCA) as well as by federal regulation (see 40 CFR 761.30). Although there are no categorical prohibitions regarding the use of

PCB dielectric fluids in wind farms, the wind farm operator's ability to do so is quite limited, especially since production of PCBs has ceased in the United States. The decision to use PCB-containing dielectric fluids in transformers and other electrical devices rests with the developer. Because certain uses of PCB-containing electrical equipment are still permitted, the BLM will not categorically prohibit their use unless it has clear evidence that such use would inexorably result in adverse impacts to the environment, facility personnel, or the public.

80070-040: The third paragraph of Section 3.1.1 acknowledges the trend toward taller meteorological towers in order to measure wind regime characteristics at or near the hub heights of the expected wind turbines. That discussion also goes on to note the particular requirements that would be associated with erection of these taller towers; for example, the foundations that would be required and the potential applicability of FAA lighting regulations.

80070-041: The applicable regulations are listed in Table E-2, Land Use, in Appendix E. No text change has been made to the document in response to your comment.

80070-042: The BLM and DoD are working on an interagency protocol agreement that will establish a consultation process between the two agencies on wind energy development projects on BLM-administered land. The agreement will establish a process and identify the scope of potential issues for consultation. The BLM will seek consultation with the DoD on all wind energy development projects.

80070-043: The rotor hub height (considered to be approximately equivalent to tower height) ranges from 30 to 120 m (98 to 394 ft) (see Table D-2). Adding the length of turbine blades could result in a height greater than 152 m (500 ft). However, because a wind energy development project would have to meet appropriate FAA criteria, no adverse impacts to aviation would be expected.

80070-044: The BLM and DoD are working on an interagency protocol agreement that will establish a consultation process between the two agencies on wind energy development projects on BLM-administered land. The agreement will establish a process and identify the scope of potential issues for consultation. The BLM will seek consultation with the DoD on all wind energy development projects.

80070-045: The BLM and DoD are working on an interagency protocol agreement that will establish a consultation process between the two agencies on wind energy development projects on BLM-administered land. The agreement will establish a process and identify the scope of potential issues for consultation. The BLM will seek consultation with the DoD on all wind energy development projects.

80070-046: The text has been revised or clarified in response to your comment.

80070-047: A sentence has been added to Section 4.7.3 that states that incompatibility with military missions could be a basis for permit denial should there be no available mitigation options.

80070-048: Text has been added to Sections 4.7.3 and 5.10.3 that discusses the potential for radar interference from wind energy facilities.

80070-049: Figure 4.7.3-1 was provided to the BLM for use in the PEIS by the U.S. Air Force. The information presented in Section 4.7.3 presents the most current information that is readily available to the public for all of the states considered in the PEIS. Updating this information would not change the conclusions in the PDEIS. The most current information will be required for site-specific analyses. This will be determined on a project-by-project basis in conjunction with input from the DoD. No text change has been made to the document in response to your comment.

80070-050: The PEIS does not distinguish between commercial and military radar. This issue would need to be considered under the DoD protocol. The BLM and DoD are working on an interagency protocol agreement that will establish a consultation process between the two agencies on wind energy development projects on BLM- administered land. The agreement will establish a process and identify the scope of potential issues for consultation, including potential impacts of EMF/EMI on military radar.

80070-051: The reclamation efforts needed to restore a site as close as possible to a predevelopment state will be evaluated at the site-specific level at the point in time when a decision is made to decommission a site. Development of a decommissioning plan at the Plan of Development phase is premature given that decommissioning may not occur for several decades. A BMP has been added to Section 2.2.3.2.5, Decommissioning, requiring the development and implementation of an approved decommissioning plan prior to termination of the ROW authorization. Required elements of the decommissioning plan include a site reclamation plan and monitoring program.

The BLM will require financial bonds for all wind energy development projects on BLM-administered lands to ensure compliance with the terms and conditions of the ROW authorization and the requirements of applicable regulatory requirements, including reclamation costs. The amount of the required bond will be determined during the ROW authorization process on the basis of site-specific and project-specific factors. The BLM may also require financial bonds for site monitoring and testing authorizations. A requirement regarding the establishment of bonds has been added to the proposed policies (see Section 2.2.3.1).

80070-052: EMI is discussed in Section 3.3.4, Aviation Operations and Electromagnetic Interference. Mitigation measures applicable to limiting EMI are discussed in

Section 5.8.2, and BMPs have been proposed in Section 2.2.3.2.2, Plan of Development Preparation, and Section 2.2.3.2.4, Operation, under the health and safety headings.

80070-053: The BLM and DoD are working on an interagency protocol agreement that will establish a consultation process between the two agencies on wind energy development projects on BLM-administered land. The agreement will establish a process and identify the scope of potential issues for consultation. The BLM will seek consultation with the DoD on all wind energy development projects.

80070-054: The BLM and DoD are working on an interagency protocol agreement that will establish a consultation process between the two agencies on wind energy development projects on BLM-administered land. The agreement will establish a process and identify the scope of potential issues for consultation. The BLM will seek consultation with the DoD on all wind energy development projects.

80070-055: The suggested editorial change has been made. A discussion has also been added to Section 5.10.3 that indicates that wind project structures could cause radar interference.

80070-056: Text has been added to the end of Section 5.10.3 to reflect the editorial suggestions made in the comment.

80070-057: The BLM and DoD are working on an interagency protocol agreement that will establish a consultation process between the two agencies on wind energy development projects on BLM-administered land. The agreement will establish a process and identify the scope of potential issues for consultation. The BLM will seek consultation with the DoD on all wind energy development projects.

80070-058: As stated in Section 5.10.2, a wind energy development would need to meet appropriate FAA criteria. Placement of lights on turbine blades could result in additional visual and ecological impacts. Knowledge of the location of wind development projects and maximum turbine blade height above ground level could be considered in preplanning for military testing and training operations. No text change has been made to the document in response to your comment.

80070-059: The referenced sentence lists land uses that would generally be compatible with wind energy development. For many reasons discussed in the PEIS, this may not be true for military activities; therefore, it would be inappropriate to make the suggested change.

80070-060: Chapter 7, which has been retitled as "Consultation and Coordination Undertaken to Support Preparation of the PEIS," describes consultation and coordination that took place during the preparation of the draft PEIS. The Wind Energy Development Program proposed policies and BMPs in Section 2.2, Description of the Proposed Action, ensure that needed consultations and

coordination will continue into the future. No text change has been made to the document in response to your comment.

Document 80071

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 2:21 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80071

Bennet_letter_8007 1.pdf (29 KB...

Thank you for your comment, sadrul ula.

The comment tracking number that has been assigned to your comment is 80071. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 02:20:47PM CDT

Wind Energy EIS Draft Comment: 80071

First Name: sadrul
Last Name: ula
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City: cheyenne
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Zip: 82002
Country: USA
Privacy Preference: Don't withhold name or address from public record
Attachment: C:\Documents and Settings\sula\My Documents\Bennet letter.pdf

Comment Submitted:
Comments from the Governor of Wyoming's Office is attached as a pdf file.

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

DAVE FREUDENTHAL
GOVERNOR

THE STATE OF WYOMING

STATE CAPITOL
CHEYENNE, WY 82002

Office of the Governor

December 10, 2004

Robert A. Bennett
State Director
Bureau of Land Management
US Department of the Interior
Cheyenne, Wyoming 82003-1828

Subject: BLM's Draft Programmatic Environmental Impact Statement (DPEIS) on Wind Energy Development

Dear Mr. Bennett:

Thank you for seeking Governor Freudenthal's input on BLM's Draft Programmatic Environmental Impact Statement (DPEIS) on Wind Energy Development on BLM-Administered Lands in the Western United States. I offer this response on behalf of Governor Freudenthal.

Regarding BLM's proposed action to implement a **Wind Energy Development Program** for the years 2005-2025, we agree with the following potential benefits listed in the DPEIS:

1. *Amendment of land use plans.* This PEIS would provide the necessary level of NEPA analysis to support the amendment of land use plans to address wind energy development in those planning areas that have the potential for future wind energy development.
2. *Tiering of project-specific environmental analyses.* The future, project-specific environmental analyses for wind energy development would tier off 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.
3. *Development of comprehensive policies and BMPs.* This would provide comprehensive policies and Best Management Practices (BMPs) providing guidance that would be applicable to all wind energy development projects on BLM-administered lands.
4. *Consistency of ROW application and grant process.* Implementation of this PEIS would result in greater consistency in the Right of Way (ROW) application and grant process.

With respect to the Maximum Potential Development Scenario (MPDS), with wind power classes ranging from 1 to 7, Class 3 and higher were considered economically developable in this study. Figure 2.2.1-1 of this draft shows Wyoming to have the best

80071-1

TTY: 777-7860 PHONE: (307) 777-7434 FAX: (307) 632-3909

wind potential among these 11 western states. Similarly, in Table 2.2.1-1, the Total Potentially Developable Land generated by the MPDS Model is shown as 7,902,000 acres – by far the largest among these states. But the Total Economically Developable Land generated by the WinDS Model shows only 3,700 acres – one of the lowest states in the list

Figure D-7, which was adapted from the American Wind Energy Association (AWEA 2004), shows the existing wind energy projects in the US : Wyoming has 284.6 MW compared to Utah's 0.2 MW. The wind energy development so far is a clear indication of the economic viability of the wind projects under the existing conditions and it appears that Wyoming's proven record in wind energy development has been severely discounted in this WinDS Model.

80071-1 (cont.)

As stated in Section 2.6.1, "The proposed action to implement a Wind Energy Development Program would likely minimize some of the delays and costs currently associated with development on BLM-administered lands by providing programmatic guidance, facilitating land use plan amendments, and ensuing consistency in the ROW application and grant process." We strongly agree with this statement.

We also agree with the statement found in Section 2.6.2, "In contrast, under the **no action alternative**, the BLM would continue to address environmental impact issues at the project level in accordance with the terms and conditions of the Interim Wind Energy Development Policy (BLM 2002a) (Appendix A). While it is likely that these efforts also would result in effective project-specific impact mitigation, the potential for inconsistencies in the type and degree of required mitigation would exist." This no action alternative would likely cause development to occur at a slower pace with greater cost of wind energy development.

80071-2

The **limited wind energy development alternative** would essentially restrict new developments only on the existing sites and would result in least development of this vast renewable resource.

Over all, we like the BLM's proposed action to implement a Wind Energy Development Program. But we would like to draw your attention to the drastically reduced number shown for Wyoming's economically developable land, as explained above.

If you have any questions, please do not hesitate to contact me at 307 777 6924.

Sincerely,

Sadrul Ula
Energy Advisor
Office of the Governor
122 West 25th St.
Cheyenne, WY 82002
Phone: 307 777 6924
FAX : 307 777 8586

Responses for Document 80071

80071-001: The projected numbers of economically developable acres of BLM-administered lands presented in Table 2.2.1- 1, which are based on results of WinDS model analyses, do not include existing capacity and are unlikely to correspond to specific initiatives underway or being considered. The projection for proportionately lower wind energy development in Wyoming (and in Montana) is likely the result of several factors considered in the WinDS model, such as distance from areas of high electricity demand and from available transmission line capacity. Finally, the results in Table 2.2.1-1 are only for wind development on BLM-administered land.

The purpose of the modeling efforts in this PEIS is to provide a general framework of possible development over the next 20 years, in order to assess the potential spatial, environmental, social, and economic impacts of implementing a Wind Energy Development Program for BLM-administered lands. The BLM recognizes that many factors can affect the accuracy of the projections, and, as discussed in Appendix B, a variety of factors will determine actual development levels. However, the MPDS and WinDS models employed in the PEIS are adequate for forecasting potential development levels over such a large geographic area and long, projected time frame. Greater accuracy in these forecasts would not likely result in changes to the requirements of the Wind Energy Development Program; that is, the proposed policies and BMPs would not be changed at this time. Under the proposed Program, the BLM will employ adaptive management strategies to the oversight of wind energy development on BLM-administered lands. The BLM will monitor the level of wind energy development into the future as well as the effectiveness of its policies and BMPs. If necessary, adjustments to the programmatic requirements will be made.

80071-002: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80072

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 2:54 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80072

BLM_wind_commen
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Thank you for your comment, Dustin Miller.

The comment tracking number that has been assigned to your comment is 80072. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 02:54:09PM CDT

Wind Energy EIS Draft Comment: 80072

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Privacy Preference: Don't withhold name or address from public record
Attachment: C:\Documents and Settings\dmiller\Desktop\Dustin\BLM wind comments 12-04.doc

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

IDAHO FARM BUREAU FEDERATION
P.O. Box 167 • 500 West Washington Street
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December 9, 2004

BLM Wind Energy Programmatic EIS
Argonne National Laboratory, EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

RE: WIND ENERGY DEVELOPMENT PROGRAM

To Whom It May Concern:

On behalf of the more than 62,000 families who are members of the Idaho Farm Bureau, I am pleased to offer these comments on the suitability of developing wind power on BLM administered lands and its recent draft programmatic environmental impact statement (PEIS).

The members of the Farm Bureau applaud the President and the Department of Interior's efforts to strengthen our nation's energy security through increasing the use of efficient and renewable local resources. With our ever increasing energy consumption pattern in the United States, and our current dependency on foreign oil resources, it is extremely important to look into alternate fuel sources domestically to help meet our energy demands in the future.

The members of the Idaho Farm Bureau support wind energy on federal lands for three main reasons. First, rural areas would experience a boost in high paying skilled jobs. This will provide an opportunity for local kids to stay in their rural communities and be able to support a family. One of the most serious problems in rural areas today is the lack of good paying, skilled job opportunities, leading to the recent trend of rural youth moving to more urban areas to experience more opportunities.

Second, wind power rates are inherently low and stable over an extremely long contract period. Farmers use a significant amount of power during the summer months in Idaho pumping irrigation water. Idaho Power's answer to increased demand for power has been to build additional gas fired power plants. Unfortunately, gas prices are extremely volatile. Farmers are very concerned that they will be doomed to paying ever-increasing costs for power as the cost of more and more expensive gas is passed on each year in the annual power cost adjustment. Wind power offers the potential for extremely competitive, fixed pricing over a long period of time. This will help to smooth and lower the cost of power for all ratepayers over time.

80072-1

Third, rural counties will receive property taxes on wind turbines located in their counties on Bureau of Land Management (BLM) land. This will be a great opportunity for a much-needed infusion of tax dollars into depressed rural economies. Since each megawatt of installed wind power roughly equates to a million dollars of invested capital, this would be a significant source of new revenue for rural counties to reduce already heavy tax burdens.

The recent draft programmatic environmental impact statement (PEIS) prepared by the BLM for the establishment of a Wind Energy Development Program this year includes three alternatives: (1) A proposed action to implement a wind energy development program, (2) A no-action alternative, and (3) a limited wind energy development alternative. The IFBF strongly supports the proposed action simply because the benefits of implementing a wind energy development program greatly out-weigh the costs.

The proposed action, if implemented would allow private interests to make use of this renewable resource bringing to rural areas the benefits stated earlier. Under this alternative, a number of BLM land-use plans would be amended to address wind energy development in areas of high wind production potential. Although the BLM is charged with the management of a vast array of multiple-use activities that take place on these federal lands, we believe that wind power development would coincide well within their management objectives. Furthermore, we believe that the development of wind power on these lands would do nothing to diminish the ability of another currently allowed activity to persist. 80072-1 (cont.)

As we discussed in our comments dated November of 2003 that we submitted in the scoping phase of the analysis, it is our understanding that private wind developers on BLM land pay royalties to the agency depending on the amount of power that is sold from each tower. We have also come to understand that the BLM has relatively minor expenses for the administration of the development once it is in place.

Therefore, we propose a practical solution to this by having royalty payments that are paid by a wind producer to the BLM, be split with the county government. So essentially the wind power producer would pay half of his royalties to the BLM while the other half went to the county the producer operates in. This would give additional incentives to those counties who have good wind resources to assist in attracting and locating these facilities in their counties and would also result in a real economic boom to the rural area. Further reductions in local tax rates, made possible through these shared royalties, would help to attract other businesses and would start a cycle of enhanced economic activity in the county. 80072-2

Therefore, the members of the Idaho Farm Bureau strongly support the BLM allowing the development of wind energy on federal lands as it will bring needed jobs, taxes and economic development to rural areas of the state and lower, more stable power prices for all ratepayers. We hope this EIS will streamline the process and allow future wind projects on the BLM to be completed in an efficient and timely manner.

Thank you for the opportunity to comment on this important issue.

Sincerely,

Frank Priestley, President
Idaho Farm Bureau Federation

Responses for Document 80072

80072-001: Thank you for your comment. We appreciate your input and participation in the public review process.

80072-002: Portions of the federal revenues associated with wind energy development on BLM-administered lands are distributed to local governments under both (1) the Payments in Lieu of Taxes (PILT) program appropriated by Congress, and (2) provisions of the Reclamation Act of 1902 that distribute a percentage of the federal receipts. The BLM has no authority over the distribution of these funds at the local level.

Document 80073

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 3:06 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80073

BLM_Draft_PEIS_-_AWEA_comments...

Thank you for your comment, Laurie Jodziewicz.

The comment tracking number that has been assigned to your comment is 80073. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 03:06:01PM CDT

Wind Energy EIS Draft Comment: 80073

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Privacy Preference: Don't withhold name or address from public record
Attachment: H:\BLM PEIS\Draft PEIS comments\BLM Draft PEIS - AWEA comments Final.pdf

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

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."

80073-1

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."

80073-2

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.

80073-3

- 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."

80073-3 (cont.)

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]

80073-4

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]

80073-5

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]

80073-6

- 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."

80073-6 (cont.)

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]

80073-7

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]

80073-8

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

80073-9

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]

80073-9 (cont.)

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.

80070-10

- 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.

80073-11

- 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.

80073-12

- Recommendation: Delete this statement.

80073-12 (cont.)

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.

80073-13

- 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.

80073-14

- 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". 80073-14 (cont.)

  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] 80073-15

- 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 80073-16

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."

80073-16 (cont.)

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.

80073-17

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.

80073-18

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

80073-19

- 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]

80073-19 (cont.)

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]

80073-20

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."

80073-21

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.

80073-22

- 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." 80073-22 (cont.)

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. 80073-23
- 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. 80073-24
- 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] 80073-25

- 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.

80073-25 (cont.)

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."

80073-26

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]

80073-27

- 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.

80073-27 (cont.)

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."

80073-28

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.

80073-29

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."

80073-30

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]

80073-31

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.

80070-32

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.

80073-33

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."

80073-34

Voltage Flicker [3.3.7]

- Comment: Voltage flicker or stability is not an environmental issue.
- Recommendation: This section should be deleted.

80073-35

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."

80073-36

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]

80073-37

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.

80073-37 (cont.)

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.

80073-38

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. 80073-39

Responses for Document 80073

80073-001: The level of environmental assessment, including whether an EA or an EIS is required for individual wind energy projects, will be determined at the Field Office level (see Section 2.2.3.1, Proposed Policies, 9th bullet). In certain instances, it may be determined that a tiered EA is appropriate in lieu of an EIS. No text change has been made to the document in response to your comment.

80073-002: As required by the Wind Energy Development Program proposed policies and BMPs, any wind energy development project proposed for BLM-administered lands must consider species of concern that are listed not only under the Endangered Species Act (ESA), but also those listed as sensitive by BLM and those listed as threatened, endangered, sensitive (or other comparable designations) by state agencies. The suggested revision would apply only to species listed under the ESA. No text change has been made to the document in response to your comment.

80073-003: The text has been revised to clarify that the monitoring program requirements will be established at the project level. The phrase "to the fullest extent possible throughout the life of the project" has been deleted.

80073-004: This BMP requirement has been deleted. This guidance has been retained as a suggested mitigation measure in Section 5.9.5.2.2.

80073-005: The corresponding BMP in Section 2.2.3.2.2 and the mitigation measure in Section 5.9.5.2.2 have been modified to include the condition "if site studies show that placing turbines there would pose a significant risk to raptors." Determinations of the significance of the potential impacts will be made at the site- specific level.

80073-006: The suggested revision would apply only to species listed under the ESA. The text, as written, applies to not only ESA-listed species, but also BLM-designated sensitive species and species listed by individual states (see definition for special status species in Chapter 10, Glossary). No text change has been made to the document in response to your comment.

80073-007: The identification of specific areas for exclusion from wind energy development or from the placement of facility structures, such as utility corridors and access roads, will be determined at the project level as part of the site- specific analyses or through local land use planning efforts with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the identification of exclusion areas, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this

process, the BLM will develop project-specific siting stipulations for incorporation into the POD. No text change has been made to the document in response to your comment.

80073-008: The text has been revised to require that facilities be designed to discourage their use as perching or nesting substrates by birds. A similar revision has been made for the BMP that incorporates this mitigation measure.

80073-009: The corresponding mitigation measure in Section 5.9.5.2.2 has been modified to include the condition "if site studies show that they would pose a high risk to species of concern." Determinations of the magnitude of the risk or significance of the potential impacts will be made at the site-specific level.

80073-010: The corresponding mitigation measure in Section 5.9.5.3.2 has been modified to include the condition "if site studies show that proposed facilities would pose a significant risk to avian or bat species of concern." Determinations of the significance of the potential impacts will be made at the site-specific level.

80073-011: The language is not specific to the Altamont Pass site. The adoption of such a mitigation measure would be appropriate at some sites and will be evaluated at the project level as part of the site-specific analyses. The mitigation measure in Section 5.9.5.4.3 has been reworded to add the phrase "to the extent local conditions will support this vegetation."

80073-012: The text has been deleted.

80073-013: Thank you for your comment. No text change has been made to the document in response to your comment.

80073-014: Section 3.3.5 has been modified to incorporate additional information, as appropriate.

80073-015: The bullet in the text is a generally accepted statement in the field of community noise. However, it is possible, depending on the specific project setting, for larger fluctuations of broadband noises to occur without objection from the community. Accordingly, a text change has been made to reflect part of comment.

80073-016: Thank you for your comment. No text change has been made to the document in response to your comment.

80073-017: The text has been revised in response to the comment.

80073-018: Design decisions will be made at a site-specific level in conjunction with stakeholder involvement and other environmental and cost-benefit

considerations. No text change has been made to the document in response to this comment.

80073-019: The suggested change has been made.

80073-020: This mitigation measure has been revised to clarify that burial of power collector lines is encouraged to the greatest extent feasible without adding to project-related habitat disturbance.

80073-021: The text referred to in the comment identifies measures deemed appropriate for project equipment associated with facility construction, operation, and decommissioning. These measures do not apply to private vehicles visiting the site, which is beyond the control of the BLM or the facility operators. The Wind Energy Development Program BMPs specify an operator-developed noxious weed and invasive species control plan. Specifics of the control plan will be developed on a site-specific basis and are beyond the scope of the PEIS. No text change has been made to the document in response to this comment.

80073-022: The delineation of the hazardous materials and wastes of concern would not be sufficiently addressed by the simple compliance statement. Although the amounts and types of hazardous materials present on the site, as well as the amounts and types of wastes expected, are relatively limited, the BLM wants to ensure that even though the hazardous material and waste issues appear insignificant, they are not treated as such. The BLM believes that providing this additional detail to its guidance beyond a simple, nonspecific performance requirement will ensure that the developer and operator give sufficient attention in the planning stages to the potential adverse impacts of hazardous materials and wastes associated with wind farm operation. No text change has been made to the document in response to this comment.

80073-023: The text has been revised, as appropriate, in response to your comment.

80073-024: The text has been revised, as appropriate, in response to your comment.

80073-025: The text has been revised, as appropriate, in response to your comment.

80073-026: It is agreed that wind farm developers and operators must identify and comply with all applicable FAA regulations and requirements; this is addressed in the 7th BMP bullet under Human Health and Safety, Section 2.2.3.2.2, Plan of Development Preparation. The decision regarding the color of lights is the jurisdiction of the FAA, although the BLM will make all relevant data available to the FAA to support its decision. The text regarding the use of white strobe lights with a minimum number of flashes per minute has been removed.

80073-027: The intent of this BMP is to encourage the burial of power collector lines to the greatest extent feasible without adding to project-related habitat disturbance. The BMP has been rewritten to clarify this.

80073-028: The text has been changed to indicate that substations may be as much as 5 acres (2 ha) in size.

80073-029: Many turbine manufacturers have incorporated component lifting capability directly into the turbine's design. However, for some turbines, separate lifting cranes may be needed. The text specifically indicates that "most" towers have sufficient installed lifting capacities to avoid the need for separate lifting equipment, implying that there may be occasions when separate lifting equipment is necessary. No text change has been made to the document in response to your comment.

80073-030: The text has been revised to clarify that all the laws and regulations discussed in Section 3.2 and listed in Appendix E may not apply to every wind project. Each project must be assessed, on the basis of its proposed activities, location, and other circumstances, against the pertinent federal and state laws and regulations to determine those that are applicable.

80073-031: The text has been revised to clarify that all the laws and regulations discussed in Section 3.2 and listed in Appendix E may not apply to every wind project. Each project must be assessed, on the basis of its proposed activities, location, and other circumstances, against the pertinent federal and state laws and regulations to determine those that are applicable.

80073-032: The text has been revised to clarify that depending on the activities, location, and circumstances, the construction of a wind energy project may be required to consider impacts on location populations, including the Executive Orders and state nuisances statutes.

80073-033: The text has been revised or clarified in response to your comment.

80073-034: Thank you for your comment. The text in Section 3.2 has been changed to indicate that if project facilities are located in wetland areas or adjacent to water bodies, they would be subject to all applicable statutory requirements and associated regulations. As stated in the Wind Energy Development Program proposed policies and BMPs, the design of all wind energy projects proposed for BLM-administered lands will be required to minimize or avoid such placements, especially if these areas are determined to represent sensitive or important habitats. Such determinations will be made on a site-specific, project-by-project basis.

80073-035: Section 3.3.7, Voltage Flicker, has been deleted from the PEIS.

80073-036: The text has been revised or clarified in response to your comment.

80073-037: Thank you for your comment. No text change has been made to the document in response to your comment.

80073-038: The text has been revised, as appropriate, in response to your comment.

80073-039: As specified in the Wind Energy Development Program proposed policies, if federal listed species are present in the project vicinity, the BLM will consult with the U.S. Fish and Wildlife Service (USFWS) as required by Section 7 of the Endangered Species Act of 1973 (ESA). The specific consultation requirements will be determined on a project-by-project basis.

Document 80074

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 3:06 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80074

BLM_Wind_Power_
EIS_Comments120...

Thank you for your comment, Heidi Youmans.

The comment tracking number that has been assigned to your comment is 80074. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 03:06:09PM CDT

Wind Energy EIS Draft Comment: 80074

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Comment Submitted:
The following letter of comment will be mailed via the U.S. Postal Service today.

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Montana Fish, Wildlife & Parks

Wildlife Division
1420 East 6th Ave
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Helena, MT 59620-0701

December 10, 2004

BLM Wind Energy Programmatic EIS Scoping
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

Dear EIS Team Members,

Montana FWP applauds BLM for conducting a programmatic analysis of potential wind energy development on BLM lands and we appreciate the opportunity to provide input. We have confined our comments to the wildlife portions of the analysis.

It is not realistic to expect that loss of wildlife habitat value and function as a result of conversion, disruption and fragmentation can be compensated for through mitigation measures. Therefore, the key to avoiding or eliminating impacts of wind power development on wildlife is site selection. An efficient approach to minimizing impacts to wildlife (in terms of time and expense and controversy) would be to pro-actively steer wind energy development toward sites with comparatively low wildlife habitat values. Selection of the best sites for wind power generation would be further enhanced by ruling out sites with known, outstanding wildlife values from consideration for wind power development. Otherwise, much time, effort, and money would be wasted trying to accomplish the impossible job of designing wind power developments at sites with obviously high and/or widely recognized wildlife values. In the long-term, public support of wind power generation as a wildlife-friendly, renewable source of power is dependent on wind power development on sites with comparatively low wildlife values, and therefore, relatively lower impacts on wildlife. For all of the aforementioned reasons we suggest an increased emphasis on pre-development planning and site selection including collection of baseline wildlife data. 80074-1

Areas of comparatively low wildlife habitat values that could be most suitable for wind power development include tilled agricultural fields, sites planted to exotic monocultures such as crested wheatgrass and areas where wildlife habitat values have already been compromised as a result of fragmentation. Criteria that could be used to delineate areas as unsuitable for wind power development on the basis of high wildlife values could include presence of threatened or endangered species and wildlife species deemed "of

concern" in Montana, sites with high wildlife species diversity and/or population densities and large blocks of contiguous, unfragmented wildlife habitat.

Another criterion that should be used to distinguish least suitable development sites from the most suitable sites is the distance of new transmission line required to connect the proposed development to the existing power distribution grid. Sites closest to existing transmission lines would be most suitable for development from a wildlife point of view. In order to minimize impacts to wildlife, new transmission lines should be located underground whenever possible and any new above-ground transmission lines (and other associated structures) should be located along existing roadways and in existing powerline corridors – as opposed to traversing unfragmented wildlife habitat.

We are surprised that the Wind Energy Programmatic EIS does not rely upon the 2003 FWS *Interim Guidance on Avoiding and Minimizing Wildlife Impacts from Wind Turbines* (http://www.fws.gov/r9dhcbfa/windenergy.htm) other than to include this document in a list of references on pages 3-32 through 3-34 - especially in light of the fact that BLM's 2002 *Interim Wind Energy Development Policy* did rely heavily upon on the precursor, 2002 FWS *Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers*. We believe that the pro-active emphasis of the 2003 FWS Guidance, including pre-development evaluation of wildlife habitat values and collection of baseline wildlife data to detect flying birds, bats and insect masses at the proposed site, are key to avoiding or minimizing impacts of wind energy development to wildlife. In addition to evaluating potential wildlife values at a targeted development site, the pre-development assessment process featured by the 2003 FWS Guidance would provide BLM a means of contrasting and ranking potential wind power development sites on the basis of potential threats that each site poses to wildlife. 80074-1 (cont.)

Chapter 2 Proposed Action and Alternatives

Page 2-4 and 2-5: Proactive selection of sites with the least impact to wildlife for wind power development would be facilitated by the use of evaluation processes embodied in the 2003 FWS Guidance. This could be accomplished by incorporating Elements of the 2003 FWS Guidance into the proposed "policy" measures (pages 2-6 through 2-9) and the "best management practices" (page 2-9 through 2-23). 80074-2

Pages 2-9 through 2-10: Pre-development surveys should include evaluation of the site (per the 2003 FWS Guidance) and collection of baseline wildlife data. Use of guy-wired structures should be avoided. This section could be improved by incorporating wildlife features identified in the 2003 FWS Guidance for consideration, including bat hibernacula, sensitive bird areas, bird migration routes and critical wildlife habitats. 80074-3

Pages 2-9 through 2-25: Qualifying language (including the phrases "should be," "to the extent feasible" and "wherever possible) incorporated in the listed "best management practices" make this section read more like a list of "nice considerations to follow if convenient to do so" rather than tangible "practices" (as defined on page 2-2). This qualifying language, combined with the impression that these best management practices 80074-4

come into play after a proposal has become an approved "project" that will go forward no matter what, leave us concerned that the proposed BMPs would be of limited utility for maintaining or mitigating negative impacts to wildlife values. 80074-4 (cont.)

Chapter 3 Site Monitoring and Testing Activities

Pages 3-1 and 3-2: Pre-development, baseline data on bird and bat use of a proposed development site is necessary to identify threats posed to birds, bats and rare, threatened and endangered species. When conducted during the proposal phase of a project, this type of information can be used to reduce impacts of the project to wildlife including adjustments in siting of the development or configuration of the turbines, or even to decide against development at the site if potential wildlife impacts are found to be excessive. An up-front investment in site assessment and baseline wildlife surveys reduces the potential for a scenario in which some or all turbines would ever have to be shut down during seasonal high wildlife use periods or re-located because of unforeseen, excessive wildlife mortality. 80074-5

Chapter 5 Potential Impacts and Analysis of Mitigation Measures

Figure 5.9-1 illustrates that the areas with medium to high potential for wind energy development in Montana are largely semi-arid grass and shrubland habitats within the Northwest Glaciated Plans and Northeast Great Plans ecoregions. Within those ecoregions we recommend that:

- Intact (unfragmented), functional grassland and sagebrush habitats should be avoided as sites for wind power development. These habitats have experienced substantial losses over the past 100 years with the result that wildlife species associated with these habitats have declined throughout their range. Many wildlife species "of concern" are associated with these habitats, the result of decades of habitat loss and fragmentation. Remaining blocks of grassland habitat, especially those over 4,000 acres in size, are of great biological value because of their functional nature for a wide host of native wildlife. Much of this habitat remains on BLM land because losses have been much higher on private lands. 80074-6

- Sagebrush/grassland habitats that support sage grouse and other sagebrush-dependent wildlife should be avoided as sites for wind power development. We recommend that the 5-mile buffer from the 2003 FWS Guidance be adopted by BLM to protect sage grouse breeding, brood rearing, and winter habitats.

- Intact wetland/grassland complexes that provide critically important habitat for breeding and migrating wetland birds (e.g., waterfowl, shorebirds, wading birds) should be avoided as sites for wind power development. The medium and high-wind potential areas along the border with Canada include some of Montana's highest wetland densities. Considerable effort and resources have been expended by state and federal agencies and non-governmental organizations to conserve these habitats because of their importance for waterfowl and shorebird

production. Remaining natural wetlands and wetlands constructed at great expense are too valuable to compromise. In addition, run-off from development sites should be avoided at all costs to reduce impacts to the nearby water resources.

We concur that full evaluation of the potential impacts listed on pages 5-36 and 5-37 can only be done at the local, site basis. The most unknown wildlife parameters here in Montana are the location, extent and site-specific features of migration routes used by migratory birds and bats. Unfortunately, there has never been a source of funding to obtain baseline data for the purpose of identifying migration routes and topographical features within migration corridors used by flying insects, bats and birds to gain lift and maintain flight elevation and speed. 80074-6 (cont.)

Page 5-37: Impacts of site monitoring and testing activities are described as being minimal. While this may be true in many areas, the impacts of site monitoring and testing could not be considered minimal in areas that are currently roadless since installation of test equipment generally requires road access. 80074-7

Page 5-42 Habitat Disturbance: The last sentence in this section describes forest interior birds and some gallinaceous birds as being especially affected by habitat fragmentation. This seems to downplay the impacts of habitat fragmentation in native grasslands and sagebrush/grassland habitats. Fragmentation is an impact that affects all wildlife habitats but has been most studied and reported in forested habitats. 80074-8

Page 5-43 Table 5.9.2-2: We are inclined to consider "disturbance of migratory movements" a long-term, rather than a short-term impact – especially in the case of migratory birds – and possibly bats. 80074-9

Page 5-44 and 5-45: Although much of the research on the impacts of noise on wildlife has been conducted on birds, there is increasing evidence that noise may impact other species that rely on vocalization for communication or navigation, including bats and frogs.

The statement that blast noise has no unusual effects on wildlife is not substantiated. Although wildlife can readily habituate to loud noises in their environment, the irregular, unpredictable nature of blasting during construction would be much more disruptive than regular and predictable sounds such as highway traffic. Sudden loud noises can cause birds of prey to rapidly exit their nests, potentially kicking out eggs or small chicks in the process. Blasting should be avoided during the nesting season for birds and especially within ½ mile of raptor nests. 80074-10

Page 5-46 Construction Effects on Wetland and Aquatic Biota: This section is very vague and does not define the types of wetlands to be avoided. Under the current system for delineating jurisdictional wetlands, many small depressional wetlands are not protected. Yet these seasonal wetlands provide important migration habitat for birds, especially in the prairie pothole region. These wetlands also provide important breeding 80074-11

sites for amphibians. Some ridges in eastern Montana feature "perched wetlands" that are also temporary in nature. Nationally, temporary wetlands have been identified as most impacted by decades of filling and draining. Turbines should not be positioned within the flight pathways used by birds to move to and among wetland habitats and associated transmission lines should not bisect wetland habitats. Here in Montana, the carcasses of birds killed in collisions with over-water transmission lines have been implicated in promoting high bird mortality due to botulism. 80074-11 (cont.)

The crossing of stream corridors by transmission lines and roads is yet another issue that needs to be addressed with more specific criteria including the need to mark over-strream lines to reduce bird strikes. In the case of stream crossings, the relative merits of a buried crossing versus an overhead crossing would need to be evaluated on a case-by-case basis, and would need to consider impacts on both fisheries and wildlife. 80074-12

Pages 5-47 and 5-48 Erosion and Runoff: The last paragraph indicates that projects would be subject to the CWA if 5 or more acres of wetlands were impacted by runoff. Again, the protection of *jurisdictional* wetlands would not protect many smaller, depressional wetlands that may be important breeding sites for amphibians. All wetlands that function as amphibian breeding sites should be protected from runoff, whether or not they are large enough to fall under the jurisdiction of the Clean Water Act. 80074-13

Page 5-51 Site Maintenance: In the case of a site that supports ground-nesting bird populations, mowing deemed to be necessary for "site maintenance" should be delayed until after August 15 to allow young birds to fledge. 80074-14

Page 5-61: The fact that many of the recorded bird fatalities are relatively common resident species points out the urgent need to avoid natural habitats of concern such as native prairie and sagebrush habitats. Few BLM lands in eastern Montana support populations of house sparrows or starlings, because those species are closely tied to human habitation. Therefore we would expect very low mortalities of these non-native species, but higher mortalities of native species including western meadowlarks and vesper sparrows. Several of our grassland bird species, such as the Sprague's pipit, have aerial courtship flights, which would make them more susceptible to mortality from turbines and transmission lines. 80074-15

Page 5-62: Even though an individual wind facility may cause few bird deaths, the cumulative impacts of many wind generating facilities across the nation could be significant. The same is true of bird deaths in oil sludge pits. Nationwide estimates of bird deaths in these pits were in the millions, even though individual pits were not causing significant mortality. Location of all wind generating facilities to minimize bird strikes will be critical to the successful avoidance of significant impacts on bird populations. 80074-16

Page 5-64: No one has established whether the relationship between raptor fatalities and rotor-swept area (RSA) is a linear relationship. 80074-17

Page 5-65: A buffer zone is suggested to protect nesting raptors, but no distance is suggested. We suggest a buffer zone of 1 mile around raptor nest sites. 80074-18

Page 5-68: We believe that insufficient information has been gathered to make any definitive conclusions on the impacts of any wind power project on bat populations. 80074-19

Page 5-69: Several species closely resemble the little brown bat and can be extremely difficult to distinguish from them. In Montana, both the Yuma myotis and Northern myotis are very difficult to distinguish from the little brown bat. Also, recent studies being conducted on the genetics of bats in the genus *Myotis* are indicating that the "little brown bat" may actually include three cryptic species. Evaluation of the impacts of wind projects on bats after they have been built should include daily searches for carcasses (10-day or 2-week search intervals commonly used tend to miss a lot of bat carcasses), and genetic testing should be conducted on all *Myotis* bats to verify the species identification. 80074-20

Page 5-70: More research needs to be done before it can be concluded that "bats generally do not forage above 25 m" since little data exists on the foraging altitudes for most bats. Foraging altitude may vary, depending on insect activity. 80074-21

Other general comments regarding bats: Little is known about bats in Montana. Multi-year, site-specific investigation is necessary to collect data required to evaluate impacts and plan wind developments to avoid impacts to bats. Therefore, absence of existing data on bats should not be interpreted as an absence of bats.

Studies done to date suggest that bat densities are higher in forested areas than in open, non-forested habitats. One can conclude that wind facilities located in forested areas, especially riparian forests, and other known or potential roosting habitat including cliffs, steep rocky slopes, badlands, rock formations, caves, mines, and buildings would pose the greatest threats to bats. Sites that feature water sources should be avoided, including wetlands, springs, creeks, and stock ponds. Since riparian habitats, wetlands, and cliffs are also important habitats for raptors and other birds, buffer zones around these habitats should be at least 1 mile, unless research demonstrates that a smaller buffer zone will be adequate in a specific situation. Larger buffer zones may be required in some circumstances (such as avoiding bat flyways between roosting sites and feeding areas over wetlands). 80074-22

Page 5-75: The most effective avenue to avoid or minimize detrimental impacts to threatened and endangered species is through pre-development site evaluation and collection of baseline wildlife data, per procedures outlined in the 2003 FWS Guidance. 80074-23

Page 5-76 through 5-84 Mitigation Measures: An increased emphasis on pre-development site evaluation and collection of baseline wildlife data per the 2003 FWS Guidance would reduce the reliance that the Wind Energy Programmatic EIS currently places on after-the-fact mitigation measures. Use of "qualifiers" (such as "to the extent practicable," and "should be") makes this section read as "things to consider – if convenient" rather than mitigation measures. In addition, terminology such as "near" (a 80074-24

bat colony) and "harassment" needs to be replaced with more specific language that can assist decision-making. Specific distances and other parameters needed in this section could be taken from the 2003 FWS Guidance, existing conservation plans, or developed by committees of experts. 80074-24 (cont.)

Collection of pre-development wildlife baseline data is key to avoiding development of wind energy in a manner/at sites that impact raptor species. We concur that sites occupied by colonial mammal species (pocket gophers, ground squirrels, prairie dogs) that serve as prey for raptors should be avoided. For the same reason, cover that supports rabbits should be removed. Any new above-ground power lines and other structures should be made raptor-safe. 80074-25

Thank you for the opportunity to comment.

Sincerely,

Don Childress

Don Childress
Administrator, Wildlife Division

Responses for Document 80074

80074-001: The siting of a wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including surveys to identify sensitive species, important habitats, and high wildlife use areas, will be conducted for any wind energy development project proposed for BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project- specific siting stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

The 2003 USFWS Interim Guidance was evaluated in the development of the policies and BMPs of the Wind Energy Development Program. The BLM and USFWS share a common objective in terms of minimizing potential impacts to wildlife from wind energy development activities. Many of the USFWS voluntary guidance recommendations are imbedded within the BLM's proposed policies and BMPs, reflecting consistent objectives and parallel approaches. However, because the USFWS guidance is interim and voluntary, it is inappropriate to adopt it wholly in the PEIS or in the proposed Wind Energy Development Program.

80074-002: The BLM and USFWS share a common objective in terms of minimizing potential impacts to wildlife from wind energy development activities. Many of the USFWS voluntary guidance recommendations are imbedded within the BLM's proposed policies and BMPs, reflecting consistent objectives and parallel approaches. However, because the USFWS guidance is interim and voluntary, it is inappropriate to adopt it wholly in the PEIS or in the proposed Wind Energy Development Program.

80074-003: The proposed Wind Energy Development Program includes a BMP that requires the avoidance of guy wires on permanent meteorological towers, and guy wires are not used in modern turbine designs. As discussed in the previous response, many recommendations of the 2003 USFWS Interim Guidelines are imbedded in the Wind Energy Development Program proposed policies and BMPs. However, it is inappropriate to fully adopt draft or interim guidance in the PEIS or in the proposed Wind Energy Development Program.

80074-004: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

80074-005: These activities are identified as BMPs to be implemented during the preparation of the Plan of Development. Section 5.9 provides extensive discussions on potential environmental impacts during each phase of a wind project. Section 5.9.5.1 presents possible mitigations of those impacts. Section 2.2.3.2.2 presents the BMPs that incorporate those mitigative actions, including baseline surveys.

80074-006: As required by the Wind Energy Development Program proposed policies and BMPs, site- and species-specific analyses, including habitat and wildlife surveys and the development of an appropriate monitoring program, will be conducted for any wind energy development proposed for BLM-administered lands. The scope and approach for these analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Regarding sage-grouse species, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into local, site-specific analyses. Exclusions of specific areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site- specific analyses are beyond the scope of the PEIS.

80074-007: The text states that, "in general," impacts would be minimal because clearing and grading activities to gain access and install monitoring equipment would be limited in most cases. However, the text further states that more extensive impacts could result if more extensive clearing and grading were needed. No text change has been made to the document in response to your comment.

80074-008: The text does not downplay the impacts of habitat fragmentation on wildlife, but rather broadly discusses habitat fragmentation impacts to wildlife. The sentence regarding forest interior species and gallinaceous birds was presented to provide examples of categories of wildlife that have specifically been shown to be adversely affected by habitat fragmentation. This sentence has been deleted.

80074-009: The short-term impacts identified are only for construction activities. Migrating birds and bats would be expected to avoid the construction area and continue their migratory movements. Because construction would not be a long-term activity, such activities would most likely be absent for the next occurrence of migratory species in the area. The effects of the completed, operating facility on migratory activities is discussed under operational impacts and does identify the potential for long-term, population-level effects. No text change has been made to the document in response to your comment.

80074-010: No text change has been made to the document in response to your comment. The text identifies a variety of possible adverse effects of noise on wildlife, and states that noise may affect foraging, mating, and nesting of wildlife, not just

birds. However, the vast majority of work has been conducted on birds, and the many studies of the effects of noise from military (weapons firing, aircraft overflights) and construction (blasting, heavy equipment excavation) activities have shown few long-lasting effects (see the cited literature reviews of Larkin 1996 and Manci et al., 1988). Numerous studies of nesting raptors have shown these birds to relatively quickly habituate to such noises, even to irregular heavy weapons firings. The proposed Wind Energy Development Program includes a BMP that requires blasting activities to be used only at specific times and at specific locations from sensitive wildlife or streams and lakes, as established by the BLM or other federal or state agencies.

80074-011: The exclusion or avoidance of specific habitats or locations, such as wetlands and bird and bat flight corridors, from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, such site-specific analyses, including the identification of siting restrictions and exclusions areas, will be conducted for any wind energy project proposed for BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project- by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80074-012: As required by the Wind Energy Development Program proposed policies and BMPs, all wind energy projects proposed for development on BLM-administered lands must be designed to minimize or mitigate impacts to wildlife, including minimizing the potential for bird strikes. Specific design requirements will be developed on a site-specific, project-by-project basis using site-specific analyses. The scope and approach for site-specific analyses, as well as aspects of the facility design will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

80074-013: Exclusions of specific areas from wind energy development will be determined at the project level and employing site-specific analyses. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including determinations of important ecological habitats, will be conducted for any proposed wind energy project on BLM-administered lands. The scope and approach for the site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and

local agencies, and interested stakeholders. Site-specific analyses and exclusions of important habitats are beyond the scope of the PEIS.

80074-014: This section addresses only operational impacts to vegetation, not wildlife. Potential impacts to wildlife from site maintenance activities are identified in Section 5.9.3.2.4. Because of the likely limited quality of the habitats that would be mowed, impacts to local wildlife are expected to be minor. No text change has been made to the document in response to your comment.

80074-015: The policies and BMPs that are part of the proposed Wind Energy Development Program include site- and species-specific studies to identify important and sensitive habitats, wildlife use areas, and the presence of listed species. These studies are intended to aid in the avoidance or minimization of design- and siting-related impacts to ecological resources. The scope and approach for these studies will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. No text change has been made to the document in response to your comment.

80074-016: We concur. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including surveys to identify areas to be avoided in the siting of a wind energy facility, will be conducted for any proposed wind energy development proposed for BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. In addition, several BMPs identify specific types of settings (wetlands and riparian habitats) that are to be considered during the development of the siting and design components of the POD. Through this process, the BLM will develop project-specific siting stipulations for incorporation into the POD.

80074-017: While we agree, raptor fatalities have been commonly reported using this metric. The PEIS makes no statements or predictions regarding a linear relationship between raptor mortality and RSA. No text change has been made to the document in response to your comment.

80074-018: The identification and specification of exclusion areas, such as buffer zones around raptor nests, from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the identification of raptor nests, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and

interested stakeholders. Through this process, the BLM will develop project-specific siting and design stipulations for incorporation into the POD. The identification of specific exclusion areas and their characteristics is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80074-019: The cited text makes no definitive conclusions on impacts to bats. It states that at one site, preliminary information suggests that population-level effects have not occurred. Following text states that effects on bat populations will vary by site and species, and that population-level effects may or may not occur. No text change has been made to the document in response to your comment.

80074-020: As required by the Wind Energy Development Program proposed policies and BMPs, species- and site-specific analyses will be conducted for any proposed project on BLM-administered lands. The BMPs also require the development of scientifically defensible monitoring programs to track environmental conditions, including wildlife mortalities. The scope and approach for these analyses, including the development of an appropriate monitoring program, will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Species- and site-specific analyses are beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80074-021: Comment noted and the text has been deleted.

80074-022: As required by the Wind Energy Development Program proposed policies and BMPs, site- and species-specific analyses, including the development of appropriate monitoring programs and identification of exclusion areas, will be conducted for any wind energy project proposed for BLM-administered lands. The scope and approach for site- and species-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Exclusions of any areas from wind energy development will also be determined at the project level as part of the site-specific analyses, or through local land use planning efforts, with opportunities for full public involvement. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

80074-023: As required by the Wind Energy Development Program proposed policies and BMPs, species-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for species- specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project- specific stipulations for incorporation

into the POD. The BLM and USFWS share a common objective in terms of minimizing potential impacts to wildlife from wind energy development activities. Many of the USFWS voluntary guidance recommendations are imbedded within the BLM's proposed policies and BMPs, reflecting consistent objectives and parallel approaches. However, because the USFWS guidance is interim and voluntary, it is inappropriate to adopt it wholly in the PEIS or in the proposed Wind Energy Development Program.

80074-024: The Wind Energy Development Program proposed policies and BMPs have been reworded in the Final PEIS to make them required elements of any wind energy development activity on BLM-administered land. These policies and BMPs require that site-specific and species-specific analyses be conducted for any proposed project on BLM-administered lands. The scope and approach for these analyses will be determined on a project-by- project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. The proposed Wind Energy Development Program does not rely on "after-the-fact" mitigation.

The BLM and USFWS share a common objective in terms of minimizing potential impacts to wildlife from wind energy development activities. Many of the USFWS voluntary guidance recommendations are imbedded within the BLM's proposed policies and BMPs, reflecting consistent objectives and parallel approaches. However, because the USFWS guidance is interim and voluntary, it is inappropriate to adopt it wholly in the PEIS or in the proposed Wind Energy Development Program.

80074-025: The BMPs of the Wind Energy Development Program require facilities to be designed to avoid or minimize impacts to wildlife. Design requirements will be developed on a site-specific, project-by project basis through the use of site-specific analyses. The scope and approach for site-specific analyses and subsequent siting considerations will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting and design stipulations for incorporation into the POD.

Document 80075

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 3:07 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80075

BLM_Wind_PEIS_comments_EMNRD_0

Thank you for your comment, Michael McDiarmid.

The comment tracking number that has been assigned to your comment is 80075. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 03:07:00PM CDT

Wind Energy EIS Draft Comment: 80075

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Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary
Tom Mills
Deputy Cabinet Secretary

Chris Wentz
Director
Energy Conservation and Management Division

Review Comments On BLM Draft PEIS
December 10, 2004

General Comments

- The New Mexico Energy, Minerals and Natural Resources Department (EMNRD) applauds this BLM initiative to encourage greater wind power development in the West. It complements one of our primary goals to encourage wind power development in New Mexico. One our primary means of encouraging the wind power industry is wind monitoring and collection of high quality data which we have provided to over 40 wind power developers.

- Wind power development offers important economic benefits that are addressed in the PEIS. EMNRD has commissioned and made available studies of the economic benefits of wind power development to local rural economies. We would be pleased to provide copies of these studies to BLM. The EMNRD economic analyses also utilized the IMPLAN input-output model that was utilized for the BLM analysis.

- The IMPLAN model allows the use of county-specific economic parameters to estimate "multiplier" effects, a measure of additional economic activity resulting from recirculation of money in the local economy. The results appear as "indirect" jobs and output. In the New Mexico study it was interesting to note that the counties analyzed had different multiplier effects; and that the cumulative state-wide economic impact was significantly greater than the sum of the counties' impacts, reflecting both benefits occuring in other parts of the state and crossover benefits between adjacent wind development counties. So, it was important to treat each county individually and to analyze state-wide impact with an integrated model. 80075-1

- Tourism may increase at certain wind energy facilities providing additional economic benefits. Although there seemed to be no quantitative studies of tourism at wind energy facilities available at the time EMNRD's study was performed, there is anecdotal evidence that wind energy facilities attract tourists. While very few people might travel long distances to visit a wind energy facility; it is more likely that travelers passing nearby may detour, visit, and remain in the locality longer to spend money. 80075-2

- Wind power development offers important environmental benefits, especially with regard to improvement of air quality, that are addressed in the PEIS. 80075-3

- The development of any energy technology poses some potential environmental impacts. The PEIS presents a very thorough analysis of the potential environmental impacts of wind power development. EMNRD has commissioned and made available studies of the potential 80075-4

environmental impacts of wind power in New Mexico. We would be pleased to provide copies of these studies to BLM. 80075-4 (cont.)

- EMNRD also has available for review and use by BLM considerable, high-quality data on wind speed monitoring and direction at various promising wind development sites throughout eastern New Mexico. These data were collected over the past few years as a result of installation and operation of seven meteorological towers by our agency. In addition, a high-resolution wind map of New Mexico was completed in 2003 and is available for your use. 80075-5

- In conjunction with the completion of this wind PEIS, it is important for BLM to ensure it has sufficient, qualified staff to timely review and process permit applications, environmental assessments and other regulatory documents for proposed wind facilities on its lands. We strongly encourage BLM to address such resource needs in its upcoming FY 2005-2006 budget request to Congress. 80075-6

Specific Comments

EMNRD offers the following detailed comments on the content of the PEIS:

- p. 1-1. There are approximately 500 MW of wind power installed on BLM land. It may be helpful to have a report on the environmental impact of these facilities and as well as an analysis of how this PEIS would have affected the development and outcome of those facilities. 80075-7

- p. 1-2. It is advisable to include in the scope transmission lines associated with wind power plants. Typically, siting transmission lines can be a more lengthy process than for the power plant. If the process is streamlined for wind power plants but not the associated transmission lines, then development may not be facilitated. 80075-8

- p. 2-2. The "Description of the Maximum Potential Development Scenario" refers to Table 5.13-1, which lists 1,060 MW total wind development for New Mexico by 2015, with only 108 MW on BLM land. However, there is a new initiative in New Mexico to explore the possibility of developing new transmission capability with the goal of generating and exporting 4,000 MW of wind power by 2015. If this transmission capacity is developed, it may result in much more development on BLM land. 80075-9

- Section 2.2.3.2.2 Plan of Development Preparation. Operators are required to perform certain surveys, reviews and evaluations. Guidance should be provided on the extent of these. 80075-10

- p.2-27. Notation MW/h should be MW (two places). 80075-11

- p. 3-12. Numerous laws and regulations are identified. BLM Wind Energy Development Program should provide specific guidance on how to comply with each of these requirements. 80075-12

- p. 5-48. In 5.9.2.4. "affects" should be "effects". 80075-13

- p. 5-60. Regarding waterfowl "incurring fatalities at wind energy developments", the example is presented that "none have been reported in Utah". But there are virtually no "wind energy developments" in Utah; only one small turbine (225 kw). So, the Utah example should not be used as an illustration on low fatalities.

80075-14

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Responses for Document 80075

80075-001: Thank you for your comment. We appreciate your input and participation in the public review process.

80075-002: While there may not be any quantitative evidence of tourism that is directly related to wind projects, as the commentor suggests, wind development may indeed lead to more tourist spending in an area as visitors add wind projects to other aspects of an area that might be visited. Measuring the impact of wind projects on tourism is problematic, with only anecdotal evidence of the impact. With the development of more wind resources, especially in the form of large-scale projects, it is possible that the significance of the impact of wind developments on tourism may become clearer.

80075-003: Thank you for your comment. We appreciate your input and participation in the public review process.

80075-004: Thank you for your comment. We appreciate your input and participation in the public review process.

80075-005: Thank you for your comment. We appreciate your input and participation in the public review process.

80075-006: The BLM is committed to full implementation of the proposed Wind Energy Development Program and will work within its budget to accomplish this.

80075-007: The BLM has incorporated available data regarding the impacts of existing wind energy development in the preparation of this PEIS and will continue to evaluate information of this nature as it becomes available. An evaluation of the effects the proposed Wind Energy Development Program would have on existing facilities would be interesting but is beyond the scope of the PEIS.

80075-008: Section 6.4.3 acknowledges that wind energy development on BLM-administered lands may require the construction of new transmission lines. Such construction is considered to be a separate but related activity and will require interagency cooperation and multidisciplinary environmental reviews. New text has been added to Section 6.3.4, to describe the existing and proposed rules and regulations governing wind project grid interconnections and transmission system upgrades. These regulations will be applicable to wind energy development projects on BLM-administered lands. Given the need for interagency cooperation regarding transmission line siting and approval, review of this issue is beyond the scope of the PEIS. The designation of new transmission corridors would be evaluated through either regional or local land use planning efforts, with opportunities for full public involvement. The potential impacts of transmission system interconnects or expansions that would be required by an individual wind energy project on BLM-administered lands

will be assessed as part of the site-specific analyses, with input from other federal, state, and local agencies, and interested stakeholders.

80075-009: The projected wind power development presented in Table 5.13-1 is based on results of the WinDS model analyses. These projections do not include existing capacity and are unlikely to correspond directly to specific initiatives underway or being considered. The purpose of the modeling efforts in this PEIS is to provide a general framework of possible development over the next 20 years, in order to assess the potential spatial, environmental, social, and economic impacts of implementing a Wind Energy Development Program for BLM-administered lands. The BLM recognizes that many factors can affect the accuracy of the projections, and, as discussed in Appendix B, a variety of factors will determine actual development levels. However, the MPDS and WinDS models employed in the PEIS are adequate for forecasting potential development levels over such a large geographic area and long, projected time frame. Greater accuracy in these forecasts would not likely result in changes to the requirements of the Wind Energy Development Program; that is, the proposed policies and BMPs would not be changed at this time. Under the proposed program, the BLM will employ adaptive management strategies to the oversight of wind energy development on BLM-administered lands, including any projects that may be proposed in New Mexico. The BLM will monitor the level of wind energy development into the future as well as the effectiveness of its policies and BMPs. If necessary, adjustments to the programmatic requirements will be made.

80075-010: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by- project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site- specific analyses are beyond the scope of the PEIS.

80075-011: The text has been revised in response to your comment.

80075-012: Compliance is the responsibility of the wind energy project proponent. Specific guidance on how to comply with applicable laws and regulations is available through the EPA and state environmental and siting regulatory bodies.

80075-013: The text has been revised in response to your comment.

80075-014: The Utah example has been removed from the text.

Document 80076

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 3:08 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80076

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EIS_comments_8...

Thank you for your comment, Jeff Miller.

The comment tracking number that has been assigned to your comment is 80076. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 03:08:05PM CDT

Wind Energy EIS Draft Comment: 80076

First Name: Jeff
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Attachment: C:\Documents and Settings\jmiller\My Documents\Altamont eagle kill\Other wind farms\BLM wind energy EIS comments.pdf

Comment Submitted:
CBD comments are attached

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

CENTER FOR BIOLOGICAL DIVERSITY

SAN FRANCISCO BAY AREA OFFICE

Protecting endangered species and wild places through science, policy, education, and environmental law

December 10, 2004

BLM Wind Energy Programmatic EIS
Argonne National Laboratory, EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

These comments are submitted on behalf of the Center for Biological Diversity on the Bureau of Land Management (BLM) Draft Programmatic Environmental Impact Statement (DPEIS) for wind energy development on BLM lands in the Western U. S. CBD is a non-profit organization that seeks to protect and restore the endangered species and wild places of North America and the Pacific through science, policy, education, citizen activism, and environmental law. CBD has been actively involved in attempts to reduce and mitigate for severe avian impacts from wind turbines at the Altamont Pass Wind Resource Area in the eastern San Francisco Bay Area. CBD supports the development of appropriately sited wind energy projects in the U. S. as an alternative to fossil fueled power plants, provided that such projects are operated and designed to prevent or minimize bird mortality.

We recommend that the BLM review the U. S. Fish and Wildlife Service (USFWS) *Interim Voluntary Guidelines to Avoid and Minimize Wildlife Impacts from Wind Turbines* (available at http://www.fws.gov/r9dhcbfa/wind) for siting, operating, and preventing/minimizing avian and other wildlife impacts at wind energy projects. Before adopting the final EIS, the BLM should adopt uniform guidelines or regulations to assure the prevention or minimization of avian impacts from new wind turbine construction and operation for all wind energy facilities on BLM lands. Examples of other guidelines include the Washington Department of Fish and Wildlife *Guidelines for Wind Energy Projects* (available at http://wdfw.wa.gov/hab/engineer/windpower/index.htm) 80076-1

One of the most glaring defects of the DPEIS is its failure to incorporate the data, results, and conclusions of *Developing Methods to Reduce Bird Mortality in the Altamont Pass Wind Resource Area*, a five-year study published earlier this year and sponsored by the California Energy Commission (CEC) and the National Renewable Energy Laboratory, of avian mortality at Altamont Pass, California ("CEC Study"). The CEC Study is available at http://www.energy.ca.gov/pier/final_project_reports/500-04-052.html. 80076-2

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The DPEIS should be revised to incorporate the CEC Study. In particular, the DPEIS's estimate of 488 annual raptor deaths nationwide (DPEIS at 5-57) is contradicted by the CEC Study, which found 881 to 1300 annual raptor deaths at Altamont Pass alone (CEC Study at 3). The data by Thelander (the CEC Study co-author) at DPEIS 5-63 are too low and need to be revised in light of his final results in the CEC Study. The data in Table 5.9.3-3 also need to be revised in light of the CEC Study. The DPEIS also lists Golden Eagle fatality rates at Altamont as 1 per 200 turbines (DPEIS at 5-64). The CEC Study, however, reports the annual Golden Eagle mortalities at Altamont as between 75 and 116 per year, or between 1 per 47 turbines and 1 per 72 turbines (based on 5400 turbines total at Altamont).

Moreover, the fact that the CEC Study shows that previous estimates of raptor deaths at Altamont, the most intensively studied wind farm in the world, were low by a factor of 2 to 3, suggests that the DPEIS's estimate of 20 raptor deaths nationwide at facilities other than Altamont, most of which have never been studied, is unreliable.

The DPEIS throughout uses mortality per turbine as the metric for measuring mortality. As the CEC study explains, mortality per megawatt is a much more useful and significant metric than mortality per turbine (CEC Study at Appendix A). The DPEIS should be revised to state mortality in terms of mortality per megawatt.

In addition, there is significant ongoing work at the Lawrence Livermore National Laboratory developing three-dimensional computer modeling of avian-wind turbine interactions. One of the scientists involved in this study is Shawn Smallwood, one of the co-authors of the CEC study. The DPEIS should be revised to incorporate the results of this work. 80076-2 (cont.)

The DPEIS relies on some studies that rely on outdated information (for example, Erickson et al. 2001, 2002) and data that have been determined by the CEC to not be scientifically valid (for example, mortality estimates by Curry and Kerlinger 2004). The DPEIS also downplays the risk of avian electrocutions although electrocutions are a significant mortality factor at other wind energy facilities.

The DPEIS also erroneously asserts that no American Kestrels have been killed by new wind turbines apart from Altamont, Tehachapi, San Gorgonio, and Foote Creek Rim (DPEIS at 5-63). The High Winds facility is a facility of 90 new turbines in Solano County, CA that went online starting in August 2003 and killed 32 kestrels in the first 11 months of operation (data attached).

The DPEIS does not adequately address avian impacts. We recommend that BLM review the American Bird Conservancy's *Wind Energy Policy* (available at http://www.abcbirds.org/policy/windenergy.htm) and the CEC study and include their recommendations for reducing and mitigating avian impacts before adopting the final EIS.

Wind energy production may affect birds through mortality from collisions with the turbine blades, towers, power lines, or with other related structures; electrocution on power lines; avoidance of wind turbines and the habitat surrounding them; and direct habitat impacts from the footprint of turbines, roads, power lines, and auxiliary buildings. The DPEIS does not adequately address these concerns. A more thorough review of recent data and literature on avian impacts from wind turbines should be conducted by BLM.

80076-2 (cont.)

CBD supports the American Bird Conservancy (ABC) recommendation that the BLM adopt the proposed action in the DPEIS which would implement a Wind Energy Development Program, establish Best Management Practices for wind energy authorizations, and amend a number of BLM land use plans **only if** it adopts and addresses the recommendations to reduce the risk of harm to avian species proposed by the ABC in their comment letter to the BLM on the DPEIS dated December 7, 2004.

These recommendations include:

- adopting the USFWS guidelines for siting, operating, and preventing/minimizing avian and other wildlife impacts;
- conducting pre-construction bird surveys and requiring siting review;
- requiring minimal lighting on structures;
- prohibiting the use of guy wires and lattice supports;
- requiring that wind turbine power lines be underground and that power lines comply with APLIC standards to prevent avian electrocutions and collisions;
- requiring habitat review and mitigation; and
- requiring scientifically valid sampling for avian and bat mortality.

80076-3

The CBD incorporates these comments of the ABC by reference. If the BLM does not adopt the recommendations to reduce the risk of harm to avian species proposed by the ABC, we recommend that alternative #3 be adopted, a limited wind energy development alternative, which would allow wind energy development only in limited, selected locations.

Sincerely,

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Document 80077 (attachment to Document 80076)

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 3:11 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80077

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Thank you for your comment, Jeff Miller.

The comment tracking number that has been assigned to your comment is 80077. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 03:11:10PM CDT

Wind Energy EIS Draft Comment: 80077

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Attachment: C:\Documents and Settings\jmiller\My Documents\Altamont eagle kill\Other wind farms\High Winds data.pdf

Comment Submitted:
addendum to CBD comments - data on High Winds facility kestrel mortality

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Number of Incidents per Species ***Montezuma Hills WRA***

High Winds Company

August 4, 2003 - June 28, 2004 Cumulative -

Species Name	Aug - Dec 2003 81 wind turbines	Jan - Jun 2004 90 wind turbines	Grand Total	
Birds (99)				
American Kestrel	23	9	32	
Red-tailed Hawk	8	2	10	3 incidental**
White-tailed Kite		2	2	1 incidental
Ferruginous Hawk		1	1	
Golden Eagle		1	1	
Turkey Vulture	1		1	
Ring-necked Pheasant		3	3	
Common Moorhen	1		1	1 incidental
American Coot		1	1	
Virginia Rail		1	1	
Sora	1		1	
Mourning Dove		2	2	
Barn Owl*		1	1	
White-throated Swift	1		1	1 incidental
Northern Flicker	1		1	
Western Wood-Pewee		1	1	
Unidentified *Empidonax* Flycatcher	1		1	
Warbling Vireo		1	1	
Horned Lark	2	8	10	
Ruby-crowned Kinglet	2		2	
European Starling	1	2	3	
Orange-crowned Warbler		1	1	
Yellow Warbler		1	1	
Townsend's Warbler	1	1	2	
Common Yellowthroat	1	1	2	
Unidentified Warbler	1	1	2	1 incidental
Lincoln Sparrow	1		1	
Western Meadowlark	2		2	
Red-winged Blackbird		2	2	
Brewer's Blackbird		2	2	
Unidentified Blackbird	1		1	
Unidentified Bird	2	4	6	
Bats (71)				
Hoary Bat	39	7	46	
Mexican Free-tailed Bat	17	5	22	1 incidental
Western Red Bat	3		3	
Grand Total	110	60	170	

* Found on "SITE" and was not associated with a wind turbine tower

** # incidental = # of individuals found incidentally and not during standardized surveys, included in the Grand Total for that species

Fatalities at High Winds, Solano County Wind Resource Area — August 4, 2003 through June 28, 2004

ID#	Date Reported	Structure	Species Name	Data Type	Distance 1(m)	Bird/Bat	Species Category
H04-050	06/02/04	6	American Kestrel	Standardized	38	A	Raptor
H03-001	08/04/03	7	American Kestrel	Standardized	21	A	Raptor
H03-061	10/12/03	7	American Kestrel	Standardized	26	A	Raptor
H03-096	11/18/03	7	American Kestrel	Incidental	17	A	Raptor
H03-088	11/13/03	9	American Kestrel	Standardized	6	A	Raptor
H03-089	11/13/03	9	American Kestrel	Standardized	39	A	Raptor
H03-062	10/12/03	11	American Kestrel	Standardized	65	A	Raptor
H04-009	02/11/04	14	American Kestrel	Standardized	40	A	Raptor
H03-005	08/17/03	15	American Kestrel	Standardized	45	A	Raptor
H03-077	10/30/03	18	American Kestrel	Standardized	59	A	Raptor
H03-103	12/15/03	23	American Kestrel	Standardized	58	A	Raptor
H03-109	12/30/03	28	American Kestrel	Standardized	33	A	Raptor
H03-079	11/02/03	30	American Kestrel	Standardized	17	A	Raptor
H03-080	11/02/03	30	American Kestrel	Standardized	35	A	Raptor
H04-052	06/07/04	30	American Kestrel	Standardized	16	A	Raptor
H03-002	08/07/03	31	American Kestrel	Standardized	55	A	Raptor
H04-002	01/13/04	31	American Kestrel	Standardized	31	A	Raptor
H03-091	11/16/03	33	American Kestrel	Standardized	54	A	Raptor
H04-040	05/07/04	33	American Kestrel	Standardized	27	A	Raptor
H04-006	01/26/04	34	American Kestrel	Standardized	34	A	Raptor
H03-068	10/17/03	35	American Kestrel	Standardized	17	A	Raptor
H03-092	11/16/03	44	American Kestrel	Standardized	54	A	Raptor
H03-098	12/03/03	44	American Kestrel	Standardized	36	A	Raptor
H03-105	12/17/03	44	American Kestrel	Standardized	10	A	Raptor
H04-001	01/08/04	46	American Kestrel	Incidental	9	A	Raptor
H04-007	01/28/04	53	American Kestrel	Incidental	3	A	Raptor
H03-084	11/04/03	54	American Kestrel	Standardized	26	A	Raptor
H04-003	01/16/04	55	American Kestrel	Standardized	35	A	Raptor
H03-086	11/05/03	60	American Kestrel	Standardized	35	A	Raptor
H03-094	11/18/03	61	American Kestrel	Standardized	31	A	Raptor
H03-099	12/04/03	61	American Kestrel	Standardized	54	A	Raptor
H03-100	12/04/03	63	American Kestrel	Standardized	23	A	Raptor
H04-045	05/25/04	72	Ferruginous Hawk	Standardized	49	A	Raptor
H04-060	06/28/04	72	Golden Eagle	Standardized	20	A	Raptor
H03-101	12/08/03	1	Red-tailed Hawk	Standardized	39	A	Raptor
H03-102	12/08/03	2	Red-tailed Hawk	Standardized	3	A	Raptor
H03-063	10/15/03	10	Red-tailed Hawk	Incidental	55	A	Raptor
H03-108	12/30/03	22	Red-tailed Hawk	Standardized	21	A	Raptor
H03-104	12/15/03	26	Red-tailed Hawk	Standardized	21	A	Raptor
H03-081	11/02/03	31	Red-tailed Hawk	Standardized	26	A	Raptor
H03-082	11/02/03	39	Red-tailed Hawk	Standardized	43	A	Raptor
H03-093	11/17/03	55	Red-tailed Hawk	Standardized	31	A	Raptor
H04-028	04/04/04	76	Red-tailed Hawk	Standardized	38	A	Raptor

Fatalities at High Winds, Solano County Wind Resource Area — August 4, 2003 through June 28, 2004

ID#	Date Reported	Structure	Species Name	Data Type	Distance 1(m)	Bird/Bat	Species Category
H04-011	02/13/04	83	Red-tailed Hawk	Standardized	38	A	Raptor
H03-048	10/05/03	30	Turkey Vulture	Standardized	84	A	Raptor
H04-022	03/17/04	55	White-tailed Kite	Standardized	63	A	Raptor
H04-012	02/20/04	59	White-tailed Kite	Standardized	78	A	Raptor
H04-021	03/12/04	Site	Barn Owl	Incidental		A	Owl
H04-005	01/21/04	16	American Coot	Standardized	35	A	Non-Raptor
H04-017	03/07/04	15	Brewer's Blackbird	Standardized	59	A	Non-Raptor
H04-013	02/28/04	43	Brewer's Blackbird	Standardized	64	A	Non-Raptor
H03-028	09/19/03	21	Common Moorhen	Standardized	73	A	Non-Raptor
H04-051	06/03/04	10	Common Yellowthroat	Incidental	112	A	Non-Raptor
H03-056	10/10/03	63	Common Yellowthroat	Standardized	66	A	Non-Raptor
H03-097	11/25/03	19	European Starling	Standardized	18	A	Non-Raptor
H04-049	05/27/04	27	European Starling	Standardized	29	A	Non-Raptor
H04-004	01/18/04	62	European Starling	Standardized	17	A	Non-Raptor
H04-055	06/16/04	3	Horned Lark	Standardized	15	A	Non-Raptor
H04-034	04/19/04	10	Horned Lark	Standardized	43	A	Non-Raptor
H04-039	05/06/04	17	Horned Lark	Standardized	30	A	Non-Raptor
H04-024	03/25/04	20	Horned Lark	Standardized	6	A	Non-Raptor
H04-029	04/07/04	24	Horned Lark	Standardized	12	A	Non-Raptor
H03-110	12/30/03	32	Horned Lark	Standardized	34	A	Non-Raptor
H04-037	04/26/04	38	Horned Lark	Standardized	1	A	Non-Raptor
H03-106	12/17/03	50	Horned Lark	Standardized	10	A	Non-Raptor
H04-041	05/10/04	84	Horned Lark	Standardized	31	A	Non-Raptor
H04-042	05/10/04	86	Horned Lark	Standardized	15	A	Non-Raptor
H03-046	10/05/03	22	Lincoln Sparrow	Standardized	67	A	Non-Raptor
H04-033	04/18/04	5	Mourning Dove	Standardized	3	A	Non-Raptor
H04-044	05/11/04	54	Mourning Dove	Standardized	72	A	Non-Raptor
H03-059	10/12/03	2	Northern Flicker	Standardized	36	A	Non-Raptor
H04-020	03/12/04	43	Orange-crowned Warbler	Standardized	52	A	Non-Raptor
H04-038	05/06/04	2	Red-winged Blackbird	Standardized	33	A	Non-Raptor
H04-053	06/10/04	49	Red-winged Blackbird	Standardized	70	A	Non-Raptor
H04-031	04/10/04	1	Ring-necked Pheasant	Incidental	6	A	Non-Raptor
H04-025	03/28/04	25	Ring-necked Pheasant	Standardized	48	A	Non-Raptor
H04-030	04/07/04	37	Ring-necked Pheasant	Standardized	3	A	Non-Raptor
H03-050	10/09/03	36	Ruby-crowned Kinglet	Standardized	75	A	Non-Raptor
H03-055	10/10/03	57	Ruby-crowned Kinglet	Standardized	36	A	Non-Raptor
H03-041	09/26/03	60	Sora	Standardized	41	A	Non-Raptor
H03-033	09/23/03	35	Townsend's Warbler	Standardized	58	A	Non-Raptor
H04-043	05/11/04	51	Townsend's Warbler	Standardized	7	A	Non-Raptor
H04-010	02/11/04	25	Unidentified Bird	Standardized	49	A	Non-Raptor
H03-107	12/21/03	64	Unidentified Blackbird	Standardized	68	A	Non-Raptor

Fatalities at High Winds, Solano County Wind Resource Area — August 4, 2003 through June 28, 2004

ID#	Date Reported	Structure	Species Name	Data Type	Distance 1(m)	Bird/Bat	Species Category
H03-008	09/03/03	19	Unidentified *Empidonax* Flycatcher	Standardized	65	A	Non-Raptor
H04-014	03/05/04	8	Unidentified Passerine	Standardized	63	A	Non-Raptor
H03-029	09/19/03	23	Unidentified Passerine	Standardized	59	A	Non-Raptor
H03-052	10/09/03	38	Unidentified Passerine	Standardized	54	A	Non-Raptor
H04-054	06/10/04	55	Unidentified Passerine	Standardized	42	A	Non-Raptor
H04-059	06/22/04	87	Unidentified Passerine	Standardized	25	A	Non-Raptor
H04-056	06/17/04	14	Unidentified Warbler	Standardized	31	A	Non-Raptor
H03-035	09/26/03	51	Unidentified Warbler	Standardized	59	A	Non-Raptor
H04-058	06/22/04	86	Virginia Rail	Standardized	63	A	Non-Raptor
H04-047	05/27/04	20	Warbling Vireo	Standardized	70	A	Non-Raptor
H03-004	08/17/03	13	Western Meadowlark	Standardized	49	A	Non-Raptor
H03-012	09/07/03	35	Western Meadowlark	Standardized	40	A	Non-Raptor
H04-046	05/27/04	20	Western Wood-Pewee	Standardized	41	A	Non-Raptor
H03-003	08/17/03	44	White-throated Swift	Standardized	33	A	Non-Raptor
H04-048	05/27/04	21	Yellow Warbler	Standardized	57	A	Non-Raptor
H03-026	09/16/03	4	Hoary Bat	Standardized	14	C	Bat
H03-087	11/13/03	4	Hoary Bat	Standardized	5	C	Bat
H03-060	10/12/03	7	Hoary Bat	Standardized	34	C	Bat
H03-007	09/03/03	9	Hoary Bat	Standardized	76	C	Bat
H04-016	03/05/04	10	Hoary Bat	Standardized	17	C	Bat
H03-027	09/19/03	15	Hoary Bat	Standardized	37	C	Bat
H04-035	04/19/04	18	Hoary Bat	Standardized	30	C	Bat
H03-078	10/30/03	19	Hoary Bat	Standardized	13	C	Bat
H03-009	09/03/03	21	Hoary Bat	Standardized	59	C	Bat
H03-065	10/17/03	21	Hoary Bat	Standardized	18	C	Bat
H04-036	04/19/04	21	Hoary Bat	Standardized	13	C	Bat
H03-010	09/03/03	24	Hoary Bat	Standardized	35	C	Bat
H04-057	06/17/04	26	Hoary Bat	Standardized	60	A	Bat
H03-049	10/05/03	31	Hoary Bat	Standardized	15	C	Bat
H03-031	09/23/03	33	Hoary Bat	Standardized	17	C	Bat
H03-011	09/03/03	34	Hoary Bat	Standardized	49	C	Bat
H03-032	09/23/03	34	Hoary Bat	Standardized	63	C	Bat
H03-076	10/28/03	37	Hoary Bat	Incidental	11	C	Bat
H03-013	09/07/03	39	Hoary Bat	Standardized	59	C	Bat
H03-014	09/07/03	41	Hoary Bat	Standardized	46	C	Bat
H03-015	09/07/03	44	Hoary Bat	Standardized	40	C	Bat
H03-069	10/18/03	44	Hoary Bat	Standardized	18	C	Bat
H03-016	09/07/03	46	Hoary Bat	Standardized	44	C	Bat
H03-070	10/18/03	46	Hoary Bat	Standardized	35	C	Bat
H03-034	09/23/03	47	Hoary Bat	Standardized	19	C	Bat
H03-017	09/07/03	48	Hoary Bat	Standardized	39	C	Bat
H03-053	10/09/03	50	Hoary Bat	Standardized	35	C	Bat
H03-054	10/09/03	50	Hoary Bat	Standardized	23	C	Bat
H03-036	09/26/03	51	Hoary Bat	Standardized	58	C	Bat

Fatalities at High Winds, Solano County Wind Resource Area — August 4, 2003 through June 28, 2004

ID#	Date Reported	Structure	Species Name	Data Type	Distance 1(m)	Bird/Bat	Species Category
H03-073	10/18/03	55	Hoary Bat	Standardized	45	C	Bat
H03-038	09/26/03	57	Hoary Bat	Standardized	26	C	Bat
H03-018	09/11/03	58	Hoary Bat	Standardized	62	C	Bat
H03-040	09/26/03	58	Hoary Bat	Standardized	26	C	Bat
H03-042	09/27/03	61	Hoary Bat	Standardized	31	C	Bat
H03-095	11/18/03	62	Hoary Bat	Standardized	53	C	Bat
H03-021	09/11/03	63	Hoary Bat	Standardized	55	C	Bat
H03-057	10/10/03	63	Hoary Bat	Standardized	45	C	Bat
H03-074	10/21/03	63	Hoary Bat	Standardized	63	C	Bat
H03-043	09/27/03	65	Hoary Bat	Standardized	41	C	Bat
H03-058	10/10/03	67	Hoary Bat	Standardized	17	C	Bat
H03-075	10/21/03	67	Hoary Bat	Standardized	44	C	Bat
H03-025	09/16/03	78	Hoary Bat	Standardized	6	C	Bat
H03-006	08/26/03	79	Hoary Bat	Standardized	18	C	Bat
H04-019	03/12/04	86	Hoary Bat	Standardized	7	C	Bat
H04-032	04/12/04	86	Hoary Bat	Standardized	26	C	Bat
H04-027	04/04/04	88	Hoary Bat	Standardized	65	C	Bat
H04-008	02/08/04	3	Mexican Free-tailed Bat	Standardized	17	C	Bat
H04-015	03/05/04	9	Mexican Free-tailed Bat	Standardized	27	C	Bat
H03-064	10/17/03	20	Mexican Free-tailed Bat	Standardized	12	C	Bat
H03-047	10/05/03	24	Mexican Free-tailed Bat	Standardized	0	C	Bat
H03-067	10/17/03	31	Mexican Free-tailed Bat	Standardized	30	C	Bat
H03-090	11/16/03	31	Mexican Free-tailed Bat	Standardized	22	C	Bat
H03-030	09/23/03	33	Mexican Free-tailed Bat	Standardized	20	C	Bat
H03-072	10/18/03	51	Mexican Free-tailed Bat	Standardized	18	C	Bat
H03-083	11/04/03	51	Mexican Free-tailed Bat	Standardized	39	C	Bat
H03-037	09/26/03	56	Mexican Free-tailed Bat	Standardized	43	C	Bat
H03-085	11/04/03	57	Mexican Free-tailed Bat	Standardized	30	C	Bat
H04-023	03/17/04	57	Mexican Free-tailed Bat	Standardized	12	C	Bat
H03-039	09/26/03	58	Mexican Free-tailed Bat	Standardized	28	C	Bat
H03-019	09/11/03	59	Mexican Free-tailed Bat	Standardized	28	C	Bat
H03-020	09/11/03	60	Mexican Free-tailed Bat	Standardized	20	C	Bat
H03-022	09/11/03	64	Mexican Free-tailed Bat	Standardized	20	C	Bat
H03-023	09/11/03	64	Mexican Free-tailed Bat	Standardized	48	C	Bat
H03-024	09/11/03	67	Mexican Free-tailed Bat	Standardized	35	C	Bat
H03-044	09/28/03	67	Mexican Free-tailed Bat	Standardized	12	C	Bat
H03-045	09/28/03	70	Mexican Free-tailed Bat	Standardized	0	C	Bat
H04-018	03/12/04	85	Mexican Free-tailed Bat	Standardized	5	C	Bat
H04-026	03/29/04	87	Mexican Free-tailed Bat	Standardized	14	C	Bat
H03-066	10/17/03	23	Western Red Bat	Standardized	44	C	Bat
H03-051	10/09/03	37	Western Red Bat	Standardized	43	C	Bat
H03-071	10/18/03	50	Western Red Bat	Standardized	40	C	Bat

Responses for Document 80076

80076-001: The Wind Energy Development Program proposed policies and BMPs identified in the PEIS were developed following review of the USFWS interim voluntary guidance and other similar guidelines. The policies and BMPs identify those issues that need to be addressed for each individual wind energy project and specify that site-specific analyses will be conducted for each project. The scope and approach for these analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. These policies and BMPs have been reworded in the Final PEIS to make them required elements of any wind energy development activity on BLM-administered land.

The BLM and USFWS share a common objective in terms of minimizing potential impacts to wildlife from wind energy development activities. Many of the USFWS voluntary guidance recommendations are imbedded within the BLM's proposed policies and BMPs, reflecting consistent objectives and parallel approaches. However, because the USFWS guidance is interim and voluntary, it is inappropriate to adopt it wholly in the PEIS or in the proposed Wind Energy Development Program.

80076-002: The document has been revised to include the CEC study, which was released too late in the Draft PEIS preparation process to be incorporated. In addition, the text related to the 488 raptor deaths and that stating that there have not been any American kestrel mortalities has been deleted. The Thelander discussion on page 5- 63 has been revised to indicate that the mortality estimate is for a specific time period, and the text on page 5-64 discussing golden eagle mortality at the Altamont Pass WRA has been revised to incorporate the results in the CEC study.

Because most published mortality estimates are reported on a per turbine basis, no change has been made to the presentation of mortality metrics in the PEIS.

Because the avian-wind turbine model discussed in the comment is in development, its inclusion in the document would not be appropriate. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, which may include the modeling of avian-turbine interactions, will be conducted for any wind energy project proposed for BLM-administered lands. The scope and approach for site- specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. The identification of site-specific analyses and their methods are beyond the scope of the PEIS.

The PEIS does not downplay the risk of avian electrocutions, which is discussed elsewhere in the document in Section 5.9.3.2.1.

80076-003: Most of the recommendations suggested in this comment have already been incorporated into the proposed Wind Energy Development Program as discussed in the PEIS. Detailed discussions of each recommendation are provided in response to the ABC comment document (# 80050).

Document 80078

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 3:14 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80078

RENEWABLE_ENE
Y_ON_PUBLIC_LA

Thank you for your comment, Ivan Weber.

The comment tracking number that has been assigned to your comment is 80078. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 03:13:50PM CDT

Wind Energy EIS Draft Comment: 80078

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Comment Submitted:
Thank you for considering the long-overdue development of renewable energy on public lands under BLM administration. Please consider the following comments, submitted without a great deal of time to review the particulars of the PEIS, but with a great deal of background and depth of commitment to renewables, of which wind generation is but one of several that are feasible, as urgent measures to curb global climate change and regional impacts of fossil fuel combustion. My comments are, as a consequence, 'programmatic,' themselves.

1. Wind resources are spottily dramatic throughout the American West, but are probably of less significance in their potential productivity than solar resources, especially on BLM lands.
2. Synergistic renewable energy developments should be kept in mind, as where solar, geothermal or bioenergy development on nearby public or private lands may 'push over the feasibility threshold' a potential wind or solar energy project that might not meet criteria for development otherwise. There may be locations on BLM lands that could offer attractive renewables development potential PACKAGES if wind AND solar are considered in combination. Wind will typically 'want' to happen near ridges or in east-west valleys, and solar on flat valley floors or on south-facing slopes --- enormous candidate areas come to mind, surely comprising tens of millions of acres in Western states. Together, they are, or soon will be, feasible on a scale that will surprise nearly everyone. An example of a superb solar development site is on the lands surrounding and south of Glen Canyon Dam, directly west of Page, AZ. This area could produce more solar energy than the Dam hydroelectric generators now do, and do it functionally forever. Optically-concentrated solar PV could multiply that productivity several times, and continue to add multiples as technology improves. This is a window into true "energy independence." Please don't be too narrow in the thinking that goes into a given site evaluation. Please do not restrict the PEIS analysis to wind, especially not in world-class solar country. (The West is intermittent wind country, unlike the Midwest.) 4. It is critical to keep in mind that

80078-1

solar-PV power is 'peak,' by virtue of its nearly exact match to the power demand daily cycle. This makes solar energy much, much more valuable than 'as-happens' wind resource occurrence. Sometimes wind is 'peak,' but generally not; therefore it is 'base' power. 80078-1 (cont.)

5. Development can 'leap-frog' to extend feasibility relative to transmission. Both wind and solar are extremely quick to engineer and to put into productive operation, where reasonably near transmission facilities. Once built, the farthest extremes of these 'power farms' present the nearest point for the next farm beyond. Feasibility may thus be extended into highly productive areas by strategic construction of power transmission to gather harvested power.

6. The process proposed by the PEIS is acceptable, on the face of it, but can be improved by some 'systems' integration into models of rural economic development and 'distributed power' generation and consumption. These alterations may lead, in many areas, to identification of feasible wind generation locations that are not within the proximity parameters of BLM's analysis, thereby excluding them from consideration, when in fact they could provide power to communities and facilities that are too far from major transmission lines to have been considered by the PEIS process. 80078-2

7. Transmission lines used as viable conveyances of wind power should, as a consequence of the preceding, be evaluated based on their potential for contributions based on this distributed power model.

8. Wind classifications shown on different maps vary for given locations. These need to be reconciled. For example, the map for Utah wind potential on your website (a wonderful resource, by the way) shows the Oquirrh Mountains, near Salt Lake City, to be of a differenct wind class from the map one gets from the Utah Energy Office website. These need to be reconciled, if necessary by additional resource assessment. 80078-3

9. The Oquirrh Mountains serve as a great example of synergistic opportunities, as well. Kennecott Utah Copper has reportedly been evaluating wind development potential on its properties, primarily (but not entirely) on the east flank of the range. Most of the west flank is owned by BLM, probably encompassing lands where orogenic uplift winds would furnish moderately attractive wind development sites, especially near the ridge above an area previously proposed as a Wilderness Study Area (WSA). TOGETHER, the lands of the Oquirrh Mountains surely would be far more attractive than either holding would be, considered separately. This is especially true considering the extensive transmission system on Kennecott's properties. If one also considers extensive solar development potential, then factors of magnitude may be applied, probably enabling the Oquirrh Mountains to produce more than 2,000 or even 3,000 MW. 80078-4

10. Wilderness areas and WSAs are to be avoided, categorically, EXCEPT where energy generation potential is at the very highest. This reviewer believes that global warming is the greatest single threat to ecosystems of all types, including human, and particularly to high-country western forest and seasonally wet meadow habitats. Stating this as clearly as possible: Renewable energy is the top priority of our time, as well as avoidance of further carbon-based energy dependence. 80078-5

11. Human aesthetics must, regretably, be suppressed in importance as global climate change becomes more and more clearly challenging. Still, avoiding placement of wind generators and solar panels in the most critical viewsheds (e.g., views from Highway 12 over Boulder Mountain) --- keeping in mind that tourism is currently our largest industry --- is obviously important. In areas near towns and cities, however, which are the major power demand centers, renewable energy should be more assertively developed (which also holds true for State School and Institutional Trust Lands). 80078-6

12. Avian mortality is likely not to be insurmountable as a problem except where there are seasonal raptor migrations, as in Utah "West Desert" ranges, possibly even some spots in the Oquirrhs. Choice of generator can alleviate most of these concerns, opting for very large/slow blade speed units, and facing the inevitability of their being visible from the surrounding urban areas. 80076-7

13. Noise should not be a concern in most areas due to remoteness of most candidate locations. There may be a valley locations, such as along the Fremont River in Wayne County, that have scattered settlements where generators would be placed. Again, choice of generator models and types may make a difference. 80078-8

14. People who live nearby must be thoroughly educated in the potential impacts of climate change, following up on the report, "Preparing for a Changing Climate: Rocky Mountains/Great Basin Region," produced by USU. The choice must not be made prettier than it actually is, either for the presence of renewable energy generators, on the one hand, or, on the other, for the potential impacts of a warming climate, with wildfires, smothering smoke, loss of snowpack for water storage, increased flashfloods and mudslides, loss of wildlife habitat, and so forth. Tell it like it's likely to be. 80078-9

15. On the other hand, local preferences, alone, must not be allowed to dictate what is done or to block an important project (50 MW or more).

Summary:
I personally think that productive wind generators, PV panels, Stirling Dishes, solar-thermal collector arrays, heliostats, and so forth, are fascinating and downright beautiful insofar as they offer a path to staving off climate change, regional haze, forest macronutrient overloading, air contaminant transport, and acid deposition impacts. Invest now! We've diddled around far, far too long on this matter to justify further delay by allusions to mythical 'market' forces. Energy and global/regional climate change form a realm too heavily skewed by the politics of carbon fuels to allow 'market' evaluations to determine much of anything. In fact, there's just about nothing 'free' about this alleged 'free market' of ours. What's a stable climate worth? Insurance companies are getting interested in this question. So should timber companies, states dependent on tourism, cities and towns dependent on air relatively free from wildfire smoke, and urban areas that will experience profound increases in summer ozone (smog) formation due to a greater number of hours above ozone synthesis temperature thresholds: all should be interested beyond interested: They should be clamoring for BLM renewable energy development, now. Not someday in the future. Now.

80078-10

Let's do it! If you don't have the appropriation from Congress for at least 500 MW of wind generation investment by the end of 2005, then BLM and Congress will not have done their collective jobs.

Attached is an article I wrote for the current issue of the Utah Sierra Club newsletter, the Sierran, urging participation in the PEIS review process and trying to stimulate discussion among environmental advocates of this critical issue. I do not speak for the Sierra Club, and I'm sure you'll encounter people with reservations about the process, as much out of distrust for BLM and Federal and State agencies as out of suspicion of renewable energy technologies. This is a critical nexus for trust. Trust can and must be earned by pro-active analysis, planning, investment and development for the public good, fully mindful of the variables inherent in this game. It is a game that must be played, however pejorative some may regard the gamelike attributes of this program. The PEIS is on the right track and, if it neither suspends NEPA nor abuses its privilege, it stands to do an enormous service not just for communities, regions, and the nation, but for the planet as a whole. Please be in touch if we may offer assistance.

Gratefully,
Ivan Weber
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Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

RENEWABLE ENERGY ON PUBLIC LANDS? BLM wind energy 'PEIS' asks for public comment on whether, where, where not and other questions.

This is a question we've neglected. We need to talk.

The true cost of carbon: We've paid the premium for convenient hydrocarbon energy, all along, in human health impacts, urban air quality degradation, regional haze, acid rain, direct fossil fuel extraction impacts, roads where no roads would otherwise be, boom-and-bust local economies --- on and on.. Under the second Bush administration, oil has even taken us to war in the Middle East, likely costing US taxpayers hundreds of billions of dollars over the decade since the 2003 invasion of Iraq, and more than a thousand US lives. Stimulating almost universal fears of 'terrorism' that one could argue are side-effects of oil dependence, America's carbon empire threatens to spread far and wide, employing 'preemptive war' doctrines and other policies invented and invoked by the current Oil Patch Presidency to justify whatever seems expedient for the carbon-glutonous mega-corporations that prop up the Republican Congress and the Presidency. When public funds made precious by economic slowdown, compounded by some of the most devastatingly regressive economic policies of our times, are diverted to the machinery of war over oil on the far side of the world, the true cost of our carbon economy begins to emerge for even the most myopic of our citizenry, if not our leadership. Mix $50/barrel crude, $2+/gallon gasoline and diesel for $2.10/gallon and rising, nationally, and the critical public eye turns to our energy paradigm again, for the first time since the mid-'70s. Money talks.

Global climate change screams: Despite the Bush administration's refusal of the Kyoto Protocol, worldwide agreement may be given binding force if Russia endorses the pact, as now appears likely. Science supporting global warming veracity has snowballed as glaciers and ice sheets have melted, and a landmark analysis of climate change implications for the Rocky Mountain/Great Basin region has warned of dire consequences for our own region, especially for water resources and water as a 'carrying capacity' constraint. Loss of snowpack-as-storage, increased wildfires, forest and range plant community shifts toward Southwestern floral assemblages, rapid onset of desert conditions

where semi-desert has historically prevailed, mudslides, flashfloods, and possible Great Salt Lake level fluctuations (both down and up) beyond the range of historical variability: These and other effects may imply future costs of carbon dependent economies far beyond our ability to "get used to it," in the words of President Dubya. But money talks. Soaring oil prices may, at long last, stimulate investment in energy conservation, efficiency of equipment, buildings and industrial processes, and even in such juggernaut-like destroyers as industrial agriculture's use of petroleum-derived chemicals.

Government leadership? Ain't that one uh them 'oxymormons'? It's always hard to say what's driving the Bureau of Land Management. Still, BLM has recently posted a very elaborate and extensive "programmatic environmental impact statement" (PEIS) for wind energy development on BLM's 260 million+ acres of public lands. This may be the slipstream of a critical discussion at the 2002 Western Governors' Association conference in Salt Lake City. Using GIS mapping , BLM applied basic site-appropriateness parameters to propose wind energy development locations for further screening. Combined with electrical power grid information, a spotty pattern was identified through areas with both sufficient wind and sufficient proximity to the power grid (25 miles each way, as a general rule). Of Utah's 23 million acres of BLM lands, only a very small percentage was identified as potentially worth further study --- still a very significant potential resource. Although the environmental community was underrepresented at the WGA conference, there was constructive discussion with BLM's Kathleen Clarke. One of a series of scoping meeting s was also held in SLC last November.

The Utah School and Institutional Trust Lands Administration (SITLA) was interested, and has since acted on that interest to explore wind energy as a sustainable revenue stream for schools --- a lesson worth teaching to our children. Just as federal government agencies have quietly led the charge toward highly energy efficient buildings, it seems appropriate that federal agencies take the lead toward a renewables-based economic future.

No more 'bird-o-matic': Obviously, screening criteria beyond wind and transmission feasibility need to be applied, with caution. The PEIS website summarizes those considerations very well. Wind generator technology has improved very dramatically in the past 20 years, becoming more dependable, more efficient, safer, less vulnerable to mechanical failure, less costly, less noisy and less prone to cause avian mortality. Far larger than in the past, generators are higher and use blades that are enormously longer. Geared down by many factors, blades move comparatively slowly, greatly reducing bird kills. By reducing or eliminating perching and nesting opportunities, wind generator structures further cut avian mortality by reducing the attraction for raptors to be in harm's way. Still, it may not make sense to place wind generators in critical migratory bird pathways, especially areas seasonally frequented by raptors. This realization should be balanced by visualization of a landscape altered by climate change impacts if we fail to shift away from carbon energy.

Eyesore, or delight? In view areas, wind generators may not be appropriate, though many of us argue that they beat looking at smokestacks. The same is true of solar-photovoltaic arrays, such as those at Dangling Rope Marina or Rainbow Bridges National Park; solar-thermal installations like the SEGS projects in southern California; 'Dish Stirling' parabolic trough concentrators; or other developing forms of solar energy. For example, to some, there may be beauty in the prospect of seeing the lands around Page, Arizona's Glen Canyon Dam covered with thousands of acres of solar PV panels, IF this is conducive to dam decommissioning AND the consequent "green" energy can replace all the dam's power output in daylight hours, producing valuable 'peak' energy in the bargain (which solar PV does).

What's possible that is also sustainable? Are there not, among Utah's Colorado Plateau and Great Basin canyons, plateaus, valleys and ridges, *some certain, identifiable* BLM lands on which 1) wind resources are adequate AND 2) transmission grids are nearby AND 3) bird mortality for a given generator technology is low AND 4) viewsheds are not unacceptably impaired AND 5) generator noise not likely to be excessive? Are we at the point at which we are sufficiently concerned about

global climate change, urban air quality, regional haze, regional acid deposition, and other consequences of burning fossil fuels to need to think this through, talk this through? It seems that way, doesn't it --- especially when other renewable energy forms are also considered against the burgeoning evidence of fossil fuels' disastrous portents?

Wind PEIS comments: Please review the programmatic EIS, most easily accessed at the following URL: http://www.windeis.anl.gov/eis/index.cfm. Comments are solicited in accordance with instructions at http://www.windeis.anl.gov/involve/index.cfm until December 10, 2004. The web-based materials are extensive and thorough, providing links of great utility for understanding the state of wind generation today. These are not your father's windmills, and this is not your father's planet. Perhaps, through taking this step responsibly, we can turn it part way back that direction.

Responses for Document 80078

80078-001: As stated in Chapter 1, the National Energy Policy recommends that the Department of the Interior work with other federal agencies to increase renewable energy production on public lands. The BLM has focused on wind energy development in this PEIS, in part, in response to the number of ROW applications it has received. The BLM issued a policy designed to encourage solar power development on public lands in October 2004; information about this policy can be obtained at http://www.blm.gov/nhp/news/releases/pages/2004/pr041021_solar.htm.

80078-002: Restrictions on future wind energy development will be primarily limited to those identified in the proposed policies and BMPs (e.g., exclusions from specific areas or where impacts cannot be mitigated adequately). If developable wind resources exist on lands other than those identified in the MPDS, they will be considered available for development provided they do not conflict with the requirements of the proposed policies and BMPs.

80078-003: Thank you for your comment. It will be passed on to the researchers at the National Renewable Energy Laboratory who created these wind resource maps.

80078-004: As noted in our response to your second comment, if developable wind resources exist on lands other than those identified in the MPDS, they will be considered available for development provided they do not conflict with the requirements of the proposed policies and BMPs.

80078-005: As stated in Section 2.2.3.1, Proposed Policies, all Wilderness Areas and WSAs will be excluded from wind energy development.

80078-006: The proposed BMPs require public involvement regarding potential visual impacts of wind energy development.

80078-007: As required by the Wind Energy Development Program proposed policies and BMPs, site- and species-specific analyses, including the identification of seasonal bird migration activities and patterns, will be conducted for any proposed project on BLM-administered lands. The scope and approach for these analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting and design stipulations for incorporation into the POD. No text change has been made to the document in response to your comment.

80078-008: Thank you for your comment.

80078-009: Thank you for your comment.

80078-010: Thank you for your comment.

Document 80079

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 3:34 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80079

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s_on_DEIS-FINAL...

Thank you for your comment, Mike Chiropolos.

The comment tracking number that has been assigned to your comment is 80079. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 03:33:52PM CDT

Wind Energy EIS Draft Comment: 80079

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Comment Submitted:
Comments are attached in Adobe Acrobat (.pdf) format and were also sent today via first-class mail.

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

CALIFORNIANS FOR WESTERN WILDERNESS • CENTER FOR NATIVE ECOSYSTEMS • DEFENDERS OF WILDLIFE • JACKSON HOLE CONSERVATION ALLIANCE • POWDER RIVER BASIN RESOURCE COUNCIL • SAGEBRUSH SEA CAMPAIGN • SAN JUAN CITIZENS ALLIANCE • SOUTHERN UTAH WILDERNESS ALLIANCE • THE WILDERNESS SOCIETY • WESTERN RESOURCE ADVOCATES WYOMING OUTDOOR COUNCIL •

December 10, 2004

Sent via first-class mail, postage pre-paid.

BLM Wind Energy Programmatic EIS
Argonne National Laboratory, EAD/900
97900 S. Cass Avenue
Argonne, IL 60439

Re: Wind Energy Development Draft Programmatic EIS
PUBLIC COMMENTS

Dear Reviewers:

Thank you for this opportunity to comment on the Wind Energy Development Draft Programmatic EIS ("Wind DPEIS"). The undersigned commentors are actively involved in energy issues currently facing the Interior West, and they remain vitally interested in the government's commitment to developing wind energy resources on lands administered by the Bureau of Land Management (BLM).

We applaud the BLM's interest in developing and initiative in examining renewable sources of energy. The dual purposes of the DPEIS are to assess the environmental, social, and economic impacts of wind energy development in the western states, and to evaluate alternatives to determine best management approach for mitigating impacts and facilitating wind energy development. DEIS at 1-1. We feel that this EIS is a strong first step toward developing renewable energy sources on our federal lands. We also feel that it is important that "green power" such as wind energy development also be green on the ground, as bad planning or inappropriate siting will set the cause back for this renewable resource by eroding public support for wind. Smart decision-making and project siting – including protection of habitat and special places – is in everybody's best interests. 80079-1

In developing the FEIS and implementing its recommendations, we urge the BLM to work closely with the visionary Governors who are positioning the Interior West to move beyond the fossil fuel economy and its associated boom and bust cycles, by calling for a speedier transition to a sustainable energy economy. These local leaders, such as New Mexico Governor Bill Richardson, are deeply and genuinely committed to establishing an energy economy that will serve the region long after fossil fuels supplies are exhausted. The Western Governors' Association recently approved a resolution calling for 30,000 megawatts of clean energy and

renewable power production to be built in the region by 2015, and calling for increasing energy efficiency in the region 20% by 2020. Several of these Governors are, at the same time, raising questions about the impacts of gas drilling on wilderness-quality landscapes, wildlife, water, and other vital resources. These actions by western governors show a commitment to developing clean energy resources in the West, and they demonstrate that the political will exists to capitalize on the West's wind resources. Simply put, these elected officials present a significant opportunity to move forward the proposals contained in this EIS and need to be listened to. 80079-1 (cont.)

As we said in scoping comments, the BLM should bear in mind the importance of continued popular support for wind energy development. At least as much as the economic and technology issues, the future of wind energy development depends on its continued perception as an environmentally-friendly and renewable power source with minimal environmental impacts. Accordingly, BLM must ensure that wind projects are carefully designed and sited to reduce and mitigate impacts, by assuring full public participation throughout the planning process. A poorly sited or designed project with highly-publicized negative impacts could unnecessarily set back the cause of renewable energy generation from public lands. Therefore, we encourage BLM to err on the side of caution with regard to the siting, design, and public involvement with respect to wind energy development projects. 80079-2

While we applaud the BLM's efforts with regard to regional planning of wind energy development, we also encourage the BLM to undertake a similarly comprehensive regional EIS that looks at oil, natural gas, and coal exploration and development on federal lands of the Interior West. The impacts from fossil fuel development and power plants are generally greater than those associated with wind, making a compelling case for a broader Programmatic EIS. The emphasis in the National Energy Policy on natural gas production in the Rockies region establishes an urgent need for such a region-wide programmatic look that analyzes the various combinations of energy sources to determine which makes the most sense – economically, socially, and ecologically – for the West and the nation. 80079-3

The Final Programmatic EIS Must Ensure that Existing Legal Requirements and Planning Processes are neither Undermined nor Ignored.

The Interior West possesses an abundance of wind energy potential that can make a significant contribution to the region's electric resource mix. Good wind areas, found on approximately 6% of the land in eleven Western states, could supply more than five times the region's current electricity consumption.[1] Wind resources are a clean energy source and provide an excellent opportunity for the West to reduce its reliance on environmentally-harmful fossil fuels such as coal and natural gas. Wind energy affords the benefit of a cleaner environment because, as opposed to fossil fuel combustion, wind generation and transmission produces no air emissions that endanger public health, results in no greenhouse gas emissions which contribute to global warming, and requires very limited water use. If developed and sited properly, wind energy has fewer and less significant impacts to land, air, and water than fossil fuel extraction and combustion. Wind energy offers the opportunity to shift the balance of energy development on public lands from high-impact fossil fuel technologies that create boom-bust economic cycles 80079-4

[1] See *Renewable Energy Atlas of the West*, available at www.energyatlas.org, at 8.

to lower-impact, sustainable technologies that make lasting economic contributions to local communities.

That said, wind energy projects should be treated the same as any other proposed use of federal lands, subject to thorough, site-specific analysis and public participation. All laws and regulations applicable to other projects on the federal lands must be complied with, including the National Environmental Policy Act, the Federal Land Policy and Management Act, the Endangered Species Act, the Migratory Bird Treaty Act, and other federal laws. Importantly, the BLM may not use this Programmatic EIS to avoid the duties of site-specific analysis that attach to individual wind energy development projects, such as the requirements to consider a reasonable range of alternatives, to analyze the direct, indirect, and cumulative impacts of each of these alternatives, and to solicit and respond meaningfully to public input. Moreover, whether the BLM is considering wind, oil and gas, coal, or other energy development, the agency is required to heed the letter and spirit of the provisions in FLPMA that provide for the "multiple-use and sustained yield" and the avoidance of "unnecessary and undue degradation" of public lands, which means that the level of energy development – even wind energy development – must be compatible with other uses of the federal lands and cannot result in marked degradation of healthy functioning ecosystems.

80079-4 (cont.)

a. The Final EIS Should Ensure that Project-Level NEPA Analyses Are Sufficiently Thorough and Site-Specific.

The DEIS provides that the level of environmental assessment that will be required for individual wind power projects will be determined at the Field Office level, may be limited to an environmental assessment (EA) and may tier off of the Programmatic EIS for potential environmental impacts. DEIS at 2-7. This direction, however, is inconsistent with NEPA's requirement for BLM to consider the direct, indirect, and cumulative impacts of a project. 40 C.F.R. §1508.8. To the extent the BLM purports to authorize tiering to this Programmatic EIS for "issues and concerns" associated with specific wind energy development proposals, see DEIS at 2-7, such tiering is proper only where the analysis of impacts in this EIS is sufficiently site-specific and detailed. This broad, regional programmatic impact statement cannot substitute for the detailed analysis of direct, indirect, and cumulative impacts required under NEPA.

80079-5

The assessment of environmental impacts set out in Section 6 of the DEIS is necessarily general due to the regional nature of this analysis, identifying the typical impacts of a wind energy development project (as described in Section 3) on various resource values. However, the 11-state study area included in the PEIS is widely diverse in terms of topography, wildlife and plant species, climate and amount of existing development. All potential sites will be characterized by unique resources, uses, impacts and public concerns. As a result, the impacts analysis in the Programmatic EIS will likely be insufficient to satisfy NEPA's directive to consider the impacts of a particular proposal. A substantial site-specific analysis of the impacts resulting from a particular wind development proposal should be conducted pursuant to NEPA.

In Section 2.2.3 and Section 6.1.2, BLM commits to requiring incorporation of best management practices (BMPs) into Plans of Development and Right-of-Way (ROW) grants as stipulations. Additional mitigation measures will be applied, also as stipulations, "to address

site-specific and species-specific issues." PEIS, p. 2-6. We support BLM's commitment to incorporating both the standard BMPs set out in Section 2.2.3.2 and site-specific measures as stipulations in the Plan of Development and/or ROW grant, such as those discussed in Section 5 of the PEIS.

In order for BLM to rely on mitigation of environmental impacts when considering a specific proposal, NEPA requires that BLM make a firm commitment to the mitigation measures, discuss the mitigation measures in sufficient detail to ensure that environmental consequences have been fairly evaluated, and fully assess their effectiveness at the proposed project location. Thus the effectiveness of the BMPs and mitigation measures set out in this Programmatic EIS will depend on the context of the project location. For example, the likelihood of successful restoration of vegetation will be significantly reduced in dry areas populated by desert grasslands, which are sensitive to disturbance and have shallow topsoil. The BMPs and mitigation measures identified in this Programmatic EIS are an important first step toward minimizing adverse environmental impacts from wind energy projects, and they will be helpful in providing general guidance to land managers. Nonetheless, the FEIS should clarify that in the context of a specific wind energy development proposal, mitigation measures incorporated as stipulations must be carefully tailored to site-specific conditions and rigorously analyzed as to the likelihood that they will reduce environmental impacts in the context of the wildlife, vegetation, land type and other site-specific characteristics. 80079-5 (cont.)

We also recommend that the FEIS advise land managers that an EIS may well be required for analyzing the impacts of individual wind energy development projects. Any commercially viable wind energy project is virtually certain to have the potential for significant environmental impacts, because the long-term nature the project and the substantial potential adverse impacts to wildlife, habitat, vegetation, open landscapes and other uses and users of the public lands. Commercial wind farms will have a large footprint and require a substantial support infrastructure. In light of the long-term presence of a wind energy project, public participation in reviewing and commenting on BLM's analysis and decisions is especially important. In the rare situation where BLM determines that an EIS may not be required, BLM should mandate that EAs for wind energy development projects be subject to meaningful public review and comment. NEPA requires that the public have an opportunity to review and comment on an EA where the EA is addressing a new or unusual resource use or may be subject to scientific or public controversy. 40 C.F.R. § 1501.4(2); see also CEQ's *Forty Most Asked Questions*, 46 Fed. Reg. at 18037. Wind energy is a new use that meets this standard. Because of the potential harm to avian and bat species alone, in no case will the siting of even a single turbine be appropriate for consideration as a categorical exclusion.

b. The Final EIS Should Ensure that Land Use Plan Amendments to Accommodate Wind Energy Projects Include Public Participation and Consideration of Environmental Impacts.

In the DEIS, the BLM commits to amending certain land use plans (LUPs) to adopt provisions of the Wind Energy Development Program and to identify land available or unavailable for wind energy development. DEIS at 2-7. BLM also states that an EA may be sufficient for approval of a wind power project. 80079-6

We commend BLM's acknowledgement that amendment of existing LUPs will be necessary where developable wind resources are potentially located. See DEIS Appendix C. Such an LUP amendment is required for a change in resource uses and change of decisions from the current plan, such as permitting wind energy development. See 43 C.F.R. §1610.0-5(b), §1610.5-5; BLM *Land Use Planning Handbook*, H-1601-1, Section VII.B. These proposed amendments include adoption of the proposed programmatic policies and BMPs and identification of specific areas where wind energy development would not be allowed. It is important that such LUP amendments be subject to thorough public review and comment, as they represent a change from historic land management direction and could serve to allow the long-term presence of wind energy projects. 80079-6 (cont.)

The BLM should also direct in the FEIS that, where a land use plan will be amended to accommodate a wind energy development proposal, not only will the standard BMPs from this Programmatic EIS apply but also specific additional mitigation measures must be evaluated for Plans of Development and ROW grant stipulations for the area. Further, as discussed above, in the context of a plan amendment, the analysis of environmental consequences of wind energy development should not simply tier off the discussion of BMPs or the mitigation measures contained in the Programmatic EIS. Rather, the Programmatic FEIS should clarify that the potential mitigation associated with various stipulations that might be mandated in a LUP amendment must be fully analyzed in the context of the area-specific landscape and other conditions in which the mitigation measures will actually be applied.

The Final Programmatic EIS Must Ensure Proper Siting of Wind Energy Projects.

Wind energy projects, as with all other types of development, are not appropriate for all public lands. As the BLM acknowledges, some federal land areas must be off-limits to wind energy projects. The DEIS provides that BLM will not permit wind energy development where it is "incompatible with specific resource values." DEIS at 2.6. We agree with and support BLM's recognition that wind energy development and its associated infrastructure is incompatible with and should be excluded from the specially-designated areas identified, including National Landscape Conservation System areas (National Monuments, National Conservation Areas, Wilderness Areas, and Wilderness Study Areas) as well as Areas of Critical Environmental Concern. We propose that BLM add to this list Native American sacred sites, citizen-proposed wilderness areas, areas of critical habitat, and habitats important for imperiled species. Finally, we urge BLM also to recognize that wind energy development and its associated infrastructure is incompatible with and should be excluded from areas that are designated or proposed for management to protect wilderness characteristics, and to recognize the impacts of wind energy development and its infrastructure to such areas as part of any analysis of environmental consequences. 80079-7

The April 2003 "no more wilderness" settlement does not affect BLM's obligation to value wilderness character or its ability to protect it, including in management designations which would also merit exclusion of wind energy development. BLM has not only claimed that it can continue to protect wilderness values, but has also committed to doing so. The Instruction Memoranda (IMs) 2003-274 and 2003-275, which formalize BLM's policies concerning 80079-8

wilderness study and consideration of wilderness characteristics in the wake of the settlement, contemplate that BLM can continue to inventory for and protect land "with wilderness characteristics," such as naturalness or the ability to provide opportunities for solitude or primitive recreation, through the planning process. The IMs further provide for management that emphasizes "the protection of some or all of the wilderness characteristics as a priority," even if this means prioritizing wilderness over other multiple uses.[2] As applied to this EIS, BLM's policies for wind energy development should also require a specific assessment of the potential impacts of wind energy development to lands with wilderness characteristics, whether or not these lands are already designated for management to protect wilderness characteristics or have been identified by the agency or the public for consideration for further protection.

80079-8 (cont.)

A thorough analysis of a reasonable range of alternatives will be absolutely essential to the proper siting of wind projects. We can envision scenarios where factors such as avian migration corridors, Native American sacred sites, or important wildlife habitat would counsel against selection of the exact site initially proposed by the project proponent, but there might be lands in the vicinity with equal potential for wind production that would avoid the unacceptable impacts of the proposed site. In such scenarios, comprehensive analysis of multiple siting alternatives would allow the project to proceed without causing undue harm, whereas narrowly construing the range of alternatives would result in poor decision making. NEPA's requirement that agencies study a reasonable range of alternatives was designed to resolve controversy and to balance competing public needs. We recommend that the FEIS advise land managers of the importance of thoroughly evaluating a reasonable range of alternatives when presented with a proposal for a particular wind energy development project.

80079-9

Moreover, meaningful involvement by state, tribal, and local governments, other agencies, and the public will generally require at least a 90-day comment period for a commercial wind farm. This is a relatively short period when compared to proposed projects with a duration of several decades. The benefits of comprehensive analysis and public review will pay off in future dividends: good siting and design decisions will minimize controversy and attendant delays and will ultimately result in successful and commercially-viable projects that enjoy strong public support. We recommend that the FEIS advise land managers to provide for 90-day comment periods for consideration of commercial wind farms.

80079-10

With respect to visually sensitive areas, VRM Class I and II objectives are, respectively, to "preserve" or "retain" the existing character of the landscape. Siting decisions for wind energy projects can be modeled on provisions of the Surface Mining Control and Reclamation Act "designating areas unsuitable for surface coal mining." See 30 U.S.C. §1272.[3] Federal wind

80079-11

80079-12

[2] The BLM Arizona State Office has formalized this guidance by providing for a land use allocation called "Management for Wilderness Characteristics." See AZ- IM-2004-021. Similarly, the recently-released Draft RMP/EIS for the Roan Plateau (prepared by BLM's Glenwood Springs Field Office in Colorado) includes managing certain areas to protect wilderness characteristics as a priority over other uses. *See*, 69 Fed.Reg. 68970. Further, in the Draft RMP/EIS for the Price Resource Area in Utah, the BLM included lands outside Wilderness Study Areas that have or are likely to have wilderness characteristics in the analysis of potential impacts. *See, e.g.,* pp. 4-21 – 4-22, 4-480 – 4-484.

[3] The National Academy of Sciences recommended policies to maintain healthy ecosystems and protect wilderness quality lands from oil and gas leasing and development in *Land Use Planning and Oil and Gas Leasing on Onshore Federal Lands* (1989). Specifically, the NAS study (at 115) recommended that, prior to leasing, other

projects should also ensure compliance with local zoning laws and land-use regulations. Moreover, siting should avoid incompatible land uses. Wind farms are most appropriately located where there are existing compatible land uses, such as agriculture. Initial site evaluation will be an important aspect of the planning process. Western Resource Advocates has published the *Renewable Energy Atlas of the West: A Guide to the Region's Resource Potential (2002,* www.energyatlas.org) that provides baseline data and maps showing the potential for wind and other renewable energy sources in the West.

80079-12 (cont.)

New road construction is also a concern with respect to new wind energy projects, including both wind farms and associated transmission capacity. New road construction and major improvements (such as paving and widening two-track dirt routes) should be minimized and existing routes relied on where possible. Best management practices on everything from road location to grading and maintenance should be required to minimize erosion, sedimentation of surface waters, forage losses, invasive species and habitat disruption. The measures in the DEIS for "traffic management plans" and road construction are a good start, see DEIS at 2-13 and 2-18, although more specific measures should be included in the FEIS to ensure that new roads are in fact minimized and, where they are necessary, are built in the most environmentally-protective manner possible. For example, the admonition in the DEIS to use existing roads "to the extent possible," see DEIS at 2-18, is not particularly helpful in guiding future transportation decisions. The BLM's "Gold Book" of Surface Operating Standards for Oil and Gas Exploration and Development might provide helpful guidance for the proper siting and construction of roads associated with wind energy development.[4]

80079-13

Transmission issues are another important aspect of wind energy development. Projects should be sited to take advantage of existing transmission capacity, minimize power loss during transmission, and minimize the construction of new transmission infrastructure. The *Renewable Energy Atlas of the West* is a useful resource for transmission planning in the Interior West, as it inventories resources in reference to existing infrastructure, such as transmission lines and substations.

80079-14

We encourage the BLM to include in the Final Programmatic EIS clear and enforceable standards to guide future siting decisions that make clear that wind energy projects are inappropriate and should not be authorized in the areas set forth above. We urge BLM to include in the Final EIS enforceable standards for visually sensitive areas in order to "preserve" or "retain" the existing character of the landscape. We urge BLM to adopt standards applicable to road construction, including best management practices for road location, grading, and maintenance. Finally, we urge BLM to include standards that will guide the use of existing transmission capacity and minimize the construction of new transmission infrastructure.

80079-15

resources should be analyzed to determine whether oil and gas development can be regulated to control its impacts on other values to acceptable levels, with such stipulations as the planning process indicates are required to protect those other values. We urge BLM to adopt these recommendations for its fluid minerals program.

[4] See www.mt.blm.gov/oilgas/operations/goldbook/GoldBook.pdf at 12-20.

The Final Programmatic EIS Must Consider Specific Resources and Impacts.

Specific resources and impacts that should be considered for individual wind power projects include:

1. The FEIS should provide for the thorough consideration of wildlife and wildlife habitat, with special attention to any threatened, endangered or other special-status species and essential wildlife migration corridors. The FEIS should also provide adequate buffers for certain habitat such as nest and lek locations. Moreover, the FEIS should accord full protection to vital winter range which is shrinking across the West. 80079-16

2. The FEIS should ensure the thorough consideration of plants and plant habitat where wind energy development projects are to be considered, with special attention to any threatened, endangered or other special status species as required by law. 80079-17

3. The FEIS should provide for the thorough evaluation of impacts to avian species -- especially migratory birds, raptors and bats -- and important flyways and raptor concentration areas. The FEIS should ensure that project siting and design minimize bird and bat mortality. The FEIS should include standards that ensure that projects are sited to avoid key migration routes of both birds and bats. The FEIS should also ensure through adoption of a BMP that the siting and design of turbines, supports, and associated powerlines avoid creating perching opportunities for birds. Raptors, for example, use human-made perches to prey on prairie-nesting species such as the prairie chicken, a species that has seen adverse impacts from such towers in recent years. In this regard, columns are generally better than lattice towers, and power lines should be buried to avoid both perching and electrocution. See DEIS at 2-18. Also, the FEIS should include standards to ensure that turbines are not placed on escarpment edges, as well as standards to ensure that the sweep point of the blades of any wind development project is higher than the apex of nuptial flights for birds in the area. Finally, we urge the BLM to carefully consider the potential impacts to birds and bats and the mitigation measures suggested in research conducted by Western EcoSystems Technology, Inc. See www.west-inc.com/wind_reports.php. 80079-18

4. The FEIS should provide for the thorough consideration of the visual environment, including scenic view-sheds, and establish specific standards to guide siting with respect to viewsheds. The BMPs with regard to Visual Resources in the DEIS should be retained or strengthened. See DEIS at 2-12. 80079-19

5. The FEIS should ensure that the agency's consideration of wind energy development projects complies with the National Historic Preservation Act (NHPA), including its requirements that all tribes and tribal organizations that may have an interest in the area are consulted and a cultural resources management plan is developed where necessary. The FEIS should ensure that the requirement that the agency protect culturally important sites and archeology is made clear. One way of doing so would be for the FEIS to make clear that the consideration of a proposed wind energy 80079-20

project is an "undertaking" within the meaning of the NHPA. See 16 U.S.C. §470f. The DEIS's discussion of Cultural Resources in Chapter 4 and the BMPs for consultation and cultural resource protection should be retained or strengthened. See DEIS at 4-50 and 2-14, respectively. 80079-20 (cont.)

6. To avoid creating an aural nuisance, the FEIS should limit decibel levels to acceptable standards, and it should establish an acceptable distance for the siting of wind energy projects from the nearest residences or recreational use areas. The direction in the DEIS that stationary construction equipment such as compressors and generators "should be located as far as practicable from nearby residences," see DEIS at 2-20, is insufficient to guide future siting decisions. The FEIS should establish minimum setbacks, along with specific standards to describe instances when the setbacks may be found to be inappropriate. 80079-21

7. In our scoping comments, we requested that the DEIS thoroughly consider electro-magnetic interference. The DEIS mentions the conflicting science as to the adverse health effects of exposure to electro-magnetic fields, and then simply states that more research is needed. DEIS at 3-18. The DEIS's statement that definitive data is not available does not appear to satisfy the BLM's duties of disclosure. See 40 C.F.R. 1502.22 (imposing procedural duties with respect to incomplete information). 80079-22

8. The FEIS should direct land managers making wind energy project siting decisions to thoroughly consider the proximity of potential wind energy projects to areas such as and National Parks and Wilderness Areas. BLM officials should carefully weigh public comments on wind energy projects near these specially-designated areas and consult with agency officials responsible for the management and protection of National Parks and Wilderness Areas. 80079-23

The Final EIS Should Discuss Energy Self-Sufficiency, Ensure Adequate Comprehensive Monitoring, and Evaluate the Economic and Ecological Tradeoffs Resulting From Wind Energy Development

The FEIS should provide that the agency will evaluate and consider wind energy projects with an eye toward maximizing power production from the resource and minimizing the environmental impacts of its development. In doing so, the FEIS should evaluate the role of wind power generally in achieving a greater measure of energy self-sufficiency in the Interior west and in reducing our reliance on imported fuels. Moreover, the FEIS should provide that once built, wind energy development projects will be rigorously monitored and evaluated in order to minimize that projects' impacts as well as to improve the siting and design of future projects. We support adequate funding for monitoring, maintenance, evaluation, and conduct of scientific studies relating to wind energy development projects. 80079-24

The FEIS should also include a comparative analysis of the costs and impacts associated with wind versus the region's increased reliance on coal. Wind energy development does not occur in a vacuum, and in light of the fact that several new coal-fired power plants have been proposed across the West, the BLM should look at the comparative regional costs and benefits of 80079-25

developing these two resources. Wind energy is a free, renewable resource and a source of clean, non-polluting electricity. The FEIS should include and thoroughly discuss comparative data on wind energy's tradeoffs, including its offset of fossil fuel consumption, the land and water impacts of fossil fuel development, the emissions from conventional power plants, and greenhouse gases associated with fossil fuels. Accordingly, the FEIS should thoroughly discuss and evaluate the energy conservation and greenhouse gas potential of each alternative discussed, as required by the Council on Environmental Quality regulations implementing NEPA. See 40 C.F.R. §1502.16(e), (f).

80079-25 (cont.)

The BLM Should Prepare a Similar Regional Programmatic EIS Examining Region-Wide Natural Gas Development

The BLM's preparation of the Programmatic EIS analyzing wind energy development on a region-wide basis calls into question the BLM's failure, to date, to prepare a regional Natural Gas Programmatic EIS on the impacts of implementing the National Energy Policy on federal lands in the Rocky Mountain states of the Interior West (Montana, Wyoming, Colorado, Utah, and North Dakota). Most of the reasons that a Programmatic EIS to discuss and evaluate wind energy development is a good idea apply with equal or greater force to the need for a Natural Gas Programmatic EIS.

For example, the National Energy Policy targeted selected BLM Resource Management Plans across the region as "Time-Sensitive Plans" requiring urgent revision to facilitate stepped-up exploration and development of natural gas. Ever since the BLM began implementing the National Energy Policy in the Rockies, leasing, seismic exploration, and drilling projects have surged. BLM, however, has neglected to study the cumulative impacts of this new natural gas activity across the region.[5] Even within mineral basins, BLM has violated NEPA by arbitrary bifurcating its planning efforts according to state lines or administrative boundaries – for example within the San Juan and Power River basins, or in the Red Desert/Great Divide region. In light of the fact that Western watersheds, airsheds, and migration corridors do not follow the same administrative boundaries as BLM Resource Areas, the BLM has not adequately collected or studied the cumulative impacts of its new natural gas policies and the new natural gas policies on a regional or even sub-regional basis. Conservationists have articulated comprehensive, regional visions for the ecologically-linked lands in the Interior West, and we encourage the BLM to do the same.[6]

80079-26

BLM and other federal agencies have taken concrete steps to facilitate natural gas development in the Rockies, such as preparing time-sensitive plans, promulgating new policies, directives, and Instruction Manuals, and forming the inter-agency Rocky Mountain Energy Council. The public, however, was not allowed to participate in the formation of the National Energy Policy and it was never made subject to public review or comment. In fact, the

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[5] See *Drilling in the Rocky Mountains: How Much and at What Cost?*, The Wilderness Society, presented at 2004 North American Wildlife and Natural Resources Conference.

[6] See *Southern Rockies Wildlands Network VISION: A Science-Based Approach to Rewilding the Southern Rockies*, a publication of the Southern Rockies Ecosystem Project, Denver Zoo, and Wildlands Project (July 2003). See also *Heart of the West Conservation Plan*, a spatial analysis by the Wild Utah Project of the relative importance of various wildlife habitat cores and linkages throughout the Wyoming Basins Ecoregion (Spring, 2004).

administration has continued to stonewall in the face of public efforts to obtain the release of government documents associated with the development of the National Energy Policy. Should the BLM act proactively to programmatically address the regional impacts and alternative strategies to meet the projected increases in energy demand, it could reduce public controversy and assist with analysis when approving specific projects.

80079-26 (cont.)

Thank you for this opportunity to comment on the Draft Programmatic EIS for wind energy development. We look forward to continued participation in this process. Should you have any questions or concerns, please do not hesitate to contact us at the address below.

Sincerely,

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Dan Randolph
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P.S.

The contact information for the submitter of these comments is:

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I will furnish contact information for other signatories who wish to be on the contact list to receive information, updates, and documents as this Programmatic EIS proceeds.

Responses for Document 80079

80079-001: Thank you for your comment. We appreciate your input and participation in the public review process.

80079-002: Thank you for your comment.

80079-003: Section 6.4.2 provides a brief discussion of the impacts of wind energy development as opposed to other sources of energy with respect to land area disturbance, air quality, water use, and waste generation. A comprehensive analysis of other energy sources compared with wind energy is beyond the scope of the PEIS.

80079-004: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by- project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site- specific analyses are beyond the scope of the PEIS.

80079-005: Thank you for your comment. The PEIS states in several locations, for example, at Section 1.2, 5th paragraph, that the combined effects of location-specific and project-specific factors cannot be fully anticipated or addressed in a programmatic analysis and that such effects must be evaluated at the project level. The PEIS states at Section 2.2.3.1, 9th bullet, that additional NEPA analysis, tiered from the PEIS, as well as public involvement, will be required for individual site-specific project proposals. The PEIS further states at Section 2.2.3.1, 13th bullet, that entities seeking to develop a wind power project on BLM-administered lands shall develop a project- specific POD that incorporates all proposed BMPs and, as appropriate, the requirements of other, existing and relevant BMP mitigation guidance. Additional mitigation measures will be incorporated into the POD and into the project-specific ROW authorization as project stipulations, as needed, to address site-specific and species-specific issues. As stated in the PEIS at Section 2.2.3.1, 11th bullet, a CX may be applicable to the issuance of short- term ROWs or land use authorizations applicable to some site monitoring and testing activities. In no case would a CX be appropriate for wind farm construction and operation.

80079-006: The scope of the proposed land use plan amendments identified in Appendix C is limited to the adoption of the Wind Energy Development Program proposed policies and BMPs and the identification of a limited number of additional exclusion areas. The BLM has determined that the PEIS process adequately meets the NEPA requirements for public review of these proposed amendment changes. As required by the proposed policies and BMPs, site-specific analyses,

including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. The scope and appropriate level of site-specific NEPA analyses will assess local conditions and site-specific environmental impacts and will support the development of project- specific stipulations.

80079-007: Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

80079-008: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. These analyses will be conducted in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Consideration will be given to land use issues, including consideration of the wilderness characteristics of the lands.

80079-009: The evaluation of alternative wind energy development sites involves interactions between industry and the BLM regarding possible sites prior to submittal of a ROW application for development. These interactions often serve to screen out sites that are unsuitable for development for a variety of reasons. This PEIS further supports the identification of appropriate sites for development. Once a site has been selected, both on the basis of the environmental screening process and the presence of economically developable wind energy resources, the alternatives under consideration are essentially limited to the proposed action to develop the site and the no action alternative. The key questions in the project-specific NEPA analyses for the proposed action address the project site configuration and micrositing considerations and development of an appropriate monitoring program and appropriate, effective mitigation measures. As stated in the 9th bullet under Section 2.2.3.1, Proposed Policies, the project-specific NEPA analyses will include analyses of monitoring program requirements and appropriate mitigation measures.

80079-010: Thank you for your comment. No text change has been made to the document in response to your comment.

80079-011: As stated in the 1st bullet under Section 2.2.3.1, Proposed Policies, the proposed Wind Energy Development Program will exclude wind energy development from a number of locations on BLM-administered lands. Many of the excluded areas (e.g., areas that are part of the National Landscape Conservation System) are considered to be visually sensitive areas. These exclusions are similar to the provisions of the Surface Mining Control and Reclamation Act designations.

80079-012: Section 5.10.5 lists mitigation measures related to potential land use impacts. The 1st bullet under the General heading of Section 2.2.3.2.2, Plan of Development Preparation, states that consultation will occur with appropriate agencies, property owners, and other stakeholders early in the site-specific planning process to identify potentially sensitive land use issues, rules that govern wind energy development locally, and land use concepts specific to the region. Exclusion of specific areas from wind energy development will be determined at the project level as part of the site-specific analyses.

80079-013: The minimization of roads and incorporation of BLM standards, including those in the Gold Book (RMRCC 1989), are already required under the proposed BMPs for developing the POD (see Section 2.2.3.2.2, Plan of Development Preparation, General, 6th bullet, and Roads, 1st bullet).

80079-014: The BLM will require the use of designated transmission corridors, when possible and appropriate, to reduce the need for additional transmission to carry wind energy generation to the existing transmission grid. The Renewable Energy Atlas is one type of resource the BLM will use in making decisions on new transmission infrastructure for a new wind energy project.

80079-015: The Wind Energy Development Program proposed policies and BMPs, as listed in the Final PEIS, establish concrete minimum mitigation standards. The language on these proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land. Specific to protection of visual resources, proposed BMPs will require consultation with the public during the planning process and integration of the wind project facilities with the surrounding landscape (see the Visual Resources heading, Section 2.2.3.2.2, Plan of Development Preparation). In addition, proposed BMPs require that existing utility corridors be utilized (see the 6th bullet under the General heading, Section 2.2.3.2.2, Plan of Development Preparation).

80079-016: As required by the Wind Energy Development Program proposed policies and BMPs, species-specific analyses, including those of listed species and important habitats, will be conducted for any wind energy project proposed for BLM-administered lands. The scope and approach for species-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this

process, the BLM will develop project-specific stipulations for incorporation into the POD. Regarding sage-grouse species, existing BLM guidance on the management of sage-grouse and sage- grouse habitat will be incorporated into local, site-specific analyses. Species-specific analyses are beyond the scope of the PEIS.

80079-017: As required by the Wind Energy Development Program proposed policies and BMPs (see Sections 2.2.3.1 and 2.2.3.2), species-specific analyses (including monitoring programs and preconstruction surveys) will be conducted for any proposed project on BLM-administered lands. The scope and approach for species-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. In addition, a BMP has been added to Section 2.2.3.2.2, Plan of Development Preparation, under the Wildlife and Other Ecological Resources heading, stating that the BLM shall prohibit the disturbance of any population of a federal listed plant species.

80079-018: An evaluation of the impacts to avian species and bats is discussed in Section 5.9.2.2 and especially in Section 5.9.3.2.3.

The Wind Energy Development Program proposed policies and BMPs (see Section 2.2.3) identify requirements for identifying and avoiding important habitats (e.g., bat roost sites) and sensitive areas (e.g., wetlands), and for identifying and evaluating the presence and status of ecological resources and wildlife activity in the proposed area. As required by the Wind Energy Development Program proposed policies and BMPs, site- and species-specific analyses will be conducted for any wind energy project proposed for BLM-administered lands. The scope and approach for these analyses, which include predesign and preconstruction surveys, will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting and design stipulations for incorporation into the POD. The description of species- and site-specific analyses as well as project-specific design and siting stipulations is beyond the scope of the PEIS.

80079-019: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

80079-020: The PEIS assumes that all applicable environmental laws, including the National Historic Preservation Act, will be followed during a wind energy development project. Thank you for your comment.

80079-021: Many factors (including size and type of noise sources, meteorological conditions, topography, etc.) play a role in determining the sound levels at the

receptor locations. Accordingly, it is inappropriate to regulate sound levels at their source location only and/or to establish fixed minimum setbacks for situations that differ from project to project. Site-specific analyses will be conducted in conjunction with input from other federal, state, and local agencies, and interested stakeholders. The development of appropriate buffer zones for sensitive receptors (e.g., residences, schools, hospitals, etc.) will be evaluated in this process.

No text change has been made to the document in response to your comment.

80079-022: Exposures to extremely low frequency electric and magnetic fields (EMF) were considered in Section 3.3.3. This summary attempted to convey the current state of the science regarding EMF, including conflicting results and confounding factors. A setback for wind turbine generators from residences and occupied buildings that is sufficient for noise and shadow flicker should also reduce EMF exposures.

80079-023: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. These analyses will be conducted in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Consideration will be given to surrounding land use issues, including public concerns regarding proximity of a proposed project to a specific area such as a National Park or Wilderness Area.

80079-024: A variety of economic factors, to be assessed by the wind energy development industry, will drive the pace of wind energy development and the location of specific wind power projects in the western United States.

The BLM is committed to full implementation of the proposed Wind Energy Development Program, elements of which require the incorporation of adaptive management strategies and comprehensive monitoring programs at all wind energy development sites (see Section 2.2.3.1, Proposed Policies, last bullet, and Section 2.2.3.2.2, Plan of Development Preparation, General, 7th bullet). The application of adaptive management strategies will ensure that programmatic policies and BMPs be revised as new data regarding the impacts of wind power projects become available. The source for a significant portion of the new data is likely to be the required site- specific monitoring programs that will evaluate environmental conditions at a site through all phases of development. A key requirement for the site-specific monitoring programs is the requirement that monitoring observations and additional identified mitigation measures be incorporated into standard operating procedures and project-specific BMPs.

80079-025: As is stated in the Executive Summary (page ES-1) and in Chapter 1 of the PEIS, the purpose of the PEIS is "to assess the environmental, social, and

economic impacts of wind energy development on BLM-administered land." A cost-benefit analysis of wind energy development would likely have included a regional analysis of the comparative economic and environmental costs of wind energy development compared with other forms of electricity generation, and conservation measures. Such an analysis would likely also have included impacts of wind development on fossil fuel consumption, land and water resources, and emissions from conventional power plants, and the impact on greenhouse gases. Although the analysis undertaken for the PEIS used a wind development scenario that takes into account some of these factors, in particular power generation capital costs, fossil fuel prices, and transmission line issues, the analysis is limited specifically to those environmental and economic impacts that result from wind energy developments on BLM-administered land. The analysis of impacts on comparative power generation costs, and environmental and economic impacts that emanate from other forms of electricity generation are beyond the scope of the analysis undertaken for the PEIS.

80079-026: Your comment addresses issues that are beyond the scope of the PEIS, the mission and responsibilities of the BLM, and/or the defined programmatic scope of the proposed Wind Energy Development Program. We appreciate your input and participation in the public review process.

Document 80080

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 3:49 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80080

BLM_WIND_PEIS_
12-04_80080.doc ...

Thank you for your comment, James Mosher.

The comment tracking number that has been assigned to your comment is 80080. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 03:48:58PM CDT

Wind Energy EIS Draft Comment: 80080

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Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

1). Avoidance of impacted areas by breeding birds. Evidence suggests prairie grouse avoid disturbed areas, especially those with a proliferation of tall structures.

2). Additional impact of support infrastructure. All wind power developments will come with a complete set of powerlines, roads, etc. These will substantially increase the overall size of the project area.

3). Lack of empirical data guiding siting decisions and mitigation measures. No one has had a chance to experimentally manipulate areas and examine the response of prairie grouse. Thus, all decisions on siting and mitigation are based on what largely amounts to opinion and guess work.

4). Lack of concern about environmental impacts. This stuff is being sold to the public as "green energy" but there is no free lunch. Wind power advocates should be open about potential impacts. This may force them to think more realistically about environmental costs and appropriate mitigation.

5). Direct and indirect mortality. Direct from birds colliding with structures, including fences, powerlines, etc. Indirect from providing additional perch sites for predators.

To Whom It May Concern:

The North American Grouse Partnership (NAGP) welcomes the opportunity to comment on the Bureau of Land Management's (BLM) draft Programmatic Environmental Impact Statement (DPEIS) for wind energy development on BLM lands in the western United States. We believe that commercial wind power development on public lands is an issue of great importance to the future of many species of raptors and grassland and shrubland-dependent wildlife, especially North American grouse. Because public lands often provide the last vestiges of expansive, unfragmented rangeland on which prairie grouse depend for survival, the nature of content of BLM's final PEIS is of great interest to NAGP and its growing membership.

NAGP is a non-profit organization whose mission is to promote the conservation of grouse and the habitats necessary for their survival and reproduction. Our membership spans all of North America, with Chapters engaged in conservation projects and many local working groups addressing grouse management issues.

After reviewing BLM's DPEIS, NAGP offers qualified support for the proposed alternative to establish an overarching programmatic document that guides wind power development on all BLM lands. However, we provide this comment with multiple caveats, discussed later, that relate to the specific content of particular sections of the DPEIS.

80080-1

The other alternatives proposed, i.e. "no action" and "no new projects", do not reflect the interests of NAGP and what we believe is in the best interest of grouse conservation nationwide. Specifically, the "no action" alternative would allow wind power

development projects to proceed, but all direct and indirect impacts to grouse and other wildlife species of concern would have to be repeatedly debated on a case-by-case basis. Apart from creating a greater work load for NAGP leadership to "reinvent the wheel" to guarantee basic resource conservation on each and every project, this alternative would allow inconsistencies among projects throughout the country. NAGP realizes, as the DPEIS indicates, that regardless of whether a programmatic BLM document exists or not, specific wind projects and the Resource Management Plan amendments required to facilitate them will allow ample opportunity for NAGP input related to site-specific and species-specific concerns.

80080-1 (cont.)

The "limited wind energy development" alternative would only allow currently pending or proposed wind development projects to proceed, and would prohibit any new projects on BLM lands in the future. The NAGP wants to emphasize that we do not unilaterally oppose wind power development on public lands. In fact, we believe that expanding and facilitating the adoption of alternative energy sources in the U.S. is important to our collective future. We are firm in the opinion that wind power development, when properly sited, monitored and researched, is not exclusionary to wildlife conservation.

Our specific comments related to sections of the DPEIS are as follows:

The DPEIS states (Section 1.2) that "The analysis conducted in preparation of this PEIS was based on current, available, and credible scientific data. Programmatic policies and BMPs incorporated into the BLM's proposed Wind Energy Development Program are based on an interpretation of these scientific data and decisions on relevant mitigation requirements. Direct and indirect impacts of wind energy development on the environment, social systems and the economy, as discussed at the programmatic level, have been evaluated. Cumulative impacts associated with the proposed action have also been evaluated." The DPEIS further states that " . . . . this PEIS identifies the range of potential impacts and identifies relevant mitigation measures."

80080-2

The NAGP questions the accuracy of these statements. First, substantial scientific interest and credible input from grouse experts across the country have been generated on the subject of wind turbine placement in sensitive grouse habitats over the last 2-3 years. In fact, the American Wind Energy Association (AWEA) now recognizes that habitat fragmentation, and not collision, is a principle concern determining wind project siting. However, throughout the DPEIS, little if any discussion is given to potential for serious indirect impacts to prairie grouse and other grassland-dependent species. The potential impacts due to habitat fragmentation are so severe and so well-recognized that one state (KS) went so far as to put a moratorium on any future wind developments in key grouse areas. Yet, this DPEIS gives almost no discussion to the degree of risk to prairie grouse, especially Sage Grouse.

This DPEIS neither adequately identifies the range of potential impacts nor has the ability to identify relevant mitigation measures. Lacking the comprehensive research to substantiate this claim, NAGP's position is that programmatically-approved commercial wind projects should not be allowed to proceed throughout this nation's public lands.

80080-3

Ample opportunities to conduct and review the necessary research are currently available on private lands. 80080-3 (cont.)

Concerning the cumulative effects of all future projects on BLM lands, the DPEIS indicates that the maximum possible extent of future wind energy development over the next 20 years could exceed 20 million acres, or nearly 9 percent of the total BLM land area in the west. NAGP is concerned that these acreage estimates are based on the actual footprint of the wind facilities, and not inclusive of the immediate surrounding habitats that will likely be indirectly affected via habitat abandonment and avoidance due to structural habitat fragmentation. Greater clarification on the potential acreage impacted is needed in the final document, and we recommend that BLM include, at a minimum, a 1-mile radius of impact surrounding each turbine. 80080-4

In table 2.2.1-1, the DPEIS identifies the total amount of "potentially developable land", and then identifies the "total economically developable land". The NAGP cannot provide comments on these acreage figures because the DPEIS does not identify how these areas are determined. This needs clarification in the final PEIS. We strongly caution, however, that the "variety of factors e.g., economic, social, and political that are beyond BLM's control or influence . . . "could markedly change over the next 20 years. If anything, the demand for domestic, renewable energy sources will increase, rather than decrease, BLM's current projected acreage estimate. This DPEIS alludes otherwise, which we believe is an inaccurate portrayal. 80080-5

In section 2.2.3.2.2., the Plan of Development Preparation, the DPEIS requests that operators conduct surveys for federally and/or state-protected species of concern, including special status plant and animal species, within the project areas and design the project to minimize or mitigate the impact to these resources. The NAGP has two specific comments regarding this section. First, it has been our observation that few wind developers allow adequate time or resources to properly survey potential development areas pre-construction. Often time, they will allocate a few thousand dollars over the course of two weeks to determine presence/absence. This is woefully insufficient to determine the direct, indirect, and cumulative impacts to grouse populations. Further, too much emphasis is given to temporally avoiding disturbance of "mating grounds", presumably prairie grouse leks. Even a cursory investigation into grouse ecology reveals that disturbance during the lekking period is not the primary concern – it's habitat fragmentation throughout individual birds' home ranges year round that is the ultimate problem. Merely shutting down site construction for the 2-week peak of lekking activity does almost nothing to protect the species in the vicinity long term. While leks are an easy location to determine presence or absence of grouse species, far too much emphasis is placed on temporal lek protection as a substitute for proper landscape level planning to avoid, minimize, and mitigate resulting habitat fragmentation of the wind structures. 80080-6

Along those same lines, throughout the entire DEPIS document, especially in regard to wildlife and ecological concerns, BLM repeated indicates that they will minimize and mitigate resource impacts. As stated earlier, this task cannot be carried out without the comprehensive research data that is currently lacking. However, our issue is that, in 80080-7

conflict with almost all other guidance for federal activities, BLM's DPEIS does not suggest to first "avoid" impacts. Clearly, there will be a large number of proposed wind development sites where construction is simply not appropriate due to overwhelming ecological concerns. We urge the authors to incorporate the words "avoid, minimize, and mitigate", in that specific order, where direct and indirect impacts are likely.

80080-7 (cont.)

In this same section, the DPEIS appears to have made several significant oversights relative to wildlife impacts. First, it says nothing about the potential for removing wind turbines should post-construction impact exceed those predicted. Given that grouse experts have voiced a near-concensus opinion that the indirect impacts to grouse could be severe, NAGP's position is that a removal stipulation should be required for all new facilities that are constructed on BLM lands. Especially if BLM's primary intention for drafting this programmatic document is to hasten construction without adequately quantifying direct, indirect, and cumulative impacts, the NAGP strongly requests that stipulations be in place to reverse unforeseen and unacceptable damages to natural resources. Likewise, until an adequate and thorough research base is established, BLM should include in this section the requirement that adequate pre and post-construction research be funded by the developers on all wind projects installed within occupied grouse habitats.

80080-8

Under section 2.2.3.2.3 – Construction, the DPEIS will require that operators restore the site to "natural habitat' post construction. Again, the NAGP emphasizes that the greatest concern with wind power development is the structural habitat fragmentation from the tower itself, and not the soil disturbance on the construction pad. This type of habitat degradation can neither be minimized nor restored. This section gives no treatment to the issue of greatest potential risk to wildlife.

80080-9

Responses for Document 80080

80080-001: Thank you for your comment. We appreciate your input and participation in the public review process.

80080-002: The PEIS is a programmatic document. Sage-grouse is only one group of biota that could be affected by wind energy development. To fully address individual groups and species is beyond the scope of this document. As required by the Wind Energy Development Program proposed policies and BMPs, species-specific analyses will be conducted for any wind energy project proposed for BLM-administered lands. The scope and approach for species-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Regarding sage-grouse species, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into local, site-specific analyses. Species-specific analyses are beyond the scope of the PEIS.

80080-003: The PEIS does not approve specific wind energy projects. As required by the proposed Wind Energy Development Program proposed policies and BMPs, species-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for species-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Regarding sage-grouse species, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into local, site-specific analyses.

80080-004: The amount of land likely to be disturbed by wind energy turbine construction will depend on the size and specific location of the turbine.

As discussed in Section 2.2.1 and Appendix B, the 20-million acre (8-million ha) estimate reflects the amount of lands on which developable wind resources exist (Class 3 or higher) and is not defined on the basis of the footprint of individual turbines. The results of the WinDS model indicate that a much smaller portion of lands will be economically developable (160,100 acres [64,750 ha]) when various constraints are modeled. Again, the acreage estimate of economically developable lands reflects the total acreage where the wind resource is present — not just the footprint of turbines and related facilities. As stated in the introductory text to Chapter 5, the BLM acknowledges that the area of impact may be greater for some resources than for others. The area of potential impact for some resources may extend beyond the project area (facility boundary). Consideration was given to those potential impacts as relevant to specific resources.

80080-005: Section 2.2.1 and Appendix B explain how the number of acres of potentially developable lands and the number of acres of economically developable lands are calculated.

The purpose of the modeling efforts in this PEIS is to provide a general framework of possible development over the next 20 years, in order to assess the potential spatial, environmental, social, and economic impacts of implementing a Wind Energy Development Program for BLM-administered lands. The BLM recognizes that a variety of factors will determine actual development levels and agrees that many of these factors will change over the next 20 years. However, the MPDS and WinDS models employed in the PEIS are adequate for forecasting potential development levels over such a large geographic area and long, projected time frame. Greater accuracy in these forecasts would not likely result in changes to the requirements of the Wind Energy Development Program; that is, the proposed policies and BMPs would not be changed at this time. Under the proposed program, the BLM will employ adaptive management strategies to the oversight of wind energy development on BLM-administered lands. The BLM will monitor the level of wind energy development into the future as well as the effectiveness of its policies and BMPs. If necessary, adjustments to the programmatic requirements will be made.

80080-006: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including preconstruction surveys, will be conducted for any proposed project on BLM-administered lands. The scope and approach of the site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Regarding sage-grouse species, existing BLM guidance on the management of sage-grouse and sage-grouse habitats will be incorporated into local, site-specific analyses. Site-specific analyses are beyond the scope of the PEIS.

80080-007: The language in the BMPs has been changed, where appropriate, to include the term "avoid (if possible)."

80080-008: As required by the Wind Energy Development Program proposed policies and BMPs, site- and species-specific analyses, including pre- and postconstruction surveys and monitoring programs, will be conducted for any wind energy project proposed for BLM-administered lands. The scope and approach for the site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Regarding sage-grouse species, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into local, site-specific analyses. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site- specific analyses are beyond the scope of the PEIS.

In addition, the BLM is committed to full implementation of the proposed Wind Energy Development Program, elements of which require the incorporation of adaptive management strategies and monitoring programs at all wind energy development sites (see Section 2.2.3.1, Proposed Policies, last bullet, and Section 2.2.3.2.2, Plan of Development Preparation, General, 7th bullet). The application of adaptive management strategies will ensure that programmatic policies and BMPs will be revised as new data regarding the impacts of wind power projects become available. The source for a significant portion of the new data is likely to be the required site-specific monitoring programs that will evaluate environmental conditions at a site through all phases of development. A key requirement for the site-specific monitoring programs is the requirement that monitoring observations and additional identified mitigation measures be incorporated into standard operating procedures and project-specific BMPs.

80080-009: The PEIS discusses habitat fragmentation in Section 5; see particularly Section 5.9.3.2. Regarding sage- grouse species, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into local, site-specific analyses. Species-specific analyses are beyond the scope of the PEIS.

Document 80081

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 3:54 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80081

Thank you for your comment, John Robison.

The comment tracking number that has been assigned to your comment is 80081. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 03:54:05PM CDT

Wind Energy EIS Draft Comment: 80081

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BLM Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue, Argonne, IL 60439

December 10, 2004

RE: Comments for DPEIS on Wind Energy Development on BLM lands

To Whom It May Concern:

Thank you for the opportunity to provide comments for BLM's DPEIS for National Wind Energy Program and Policy. The Idaho Conservation League has a long history of involvement with both habitat protection and energy development. As Idaho's largest statewide conservation organization, we represent members who care deeply about both protecting wildlife habitat and encouraging renewable energy supplies.

Our comments on the PDEIS and our original scoping comments are attached below.

John Robison
Conservation Associate

Ketchum Field Office: PO Box 2671, Ketchum, ID 83340 208.726.7485 Fax 208.726.1821 Moscow Field Office: PO Box 9783, Moscow, ID 83843 208.882.1010 Fax 208.883.7755

Idaho Conservation League comments for DPEIS on Wind Energy Development on BLM lands

Insufficient range of alternatives

We are concerned that the DPEIS overlooks an important middle-ground alternative. The DPEIS focuses on Maximum Potential Development Scenario, a Limited Development Scenario, and a No Action Alternative with no programmatic oversight. While we appreciate the fact that the Maximum Potential Development Scenario determined Wilderness Study Areas and other sensitive areas to be off limits to development, the BLM is overlooking another set of possibilities.

The PEIS needs to analyze a "Medium Potential Development Scenario" alternative that analyzes the effects under slightly more restrictive screening requirements. For example, this moderate alternative might consider only areas rated for Class 5-7 Condition Winds and the area must be accessible, and have transmission lines, among other criteria.

The PDEIS incorrectly states that the "proposed action, therefore, would provide a comprehensive approach for ensuring that environmental impacts would be minimized to the greatest extent possible" (PDEIS 2-30). There is a direct correlation between the extent of wind development and environmental impacts: "The amount of habitat that would be disturbed would be a function of the size of the proposed wind energy project…"(PDEIS 5-41). A Medium Potential Development Scenario would certainly minimize environmental impacts to a greater degree and might still offer the majority of economic benefits of the proposed alternative. Instead of analyzing (and encouraging) the maximum possible development and disturbance, this alternative could result in potentially far fewer environmental costs. As such, the BLM has an obligation to analyze this alternative. 80081-1

The PDEIS incorrectly states, "No other alternatives were suggested during the scoping process." Other alternatives should have been developed as a result of the scoping process (see ICL's scoping comments below for example). The PDEIS implies that all comments received espouse maximum development instead of a more reasonable, moderate development, as described in ICL's letter.

Categorical exclusions

The BLM should NOT utilize existing Categorical Exclusions for issuing short-term ROWs for wind energy testing. Wind development is significantly different from previous CX's as described in DOI Department Manual 516, Chapter 11, Sec. 11.5, E(19)(DOI 2004) because these proposals do not entail rehabilitating the land to its original condition and the environmental effects are potentially much more damaging than the original authorizations. 80081-2

Monitoring

While the PDEIS mentions monitoring programs, it does not describe the need for long-term, baseline monitoring before project consideration. The proposed monitoring starts during construction. We are concerned that long-term pre-project monitoring is needed for species such as sage grouse which may be adversely affected by not only the construction but also the continued existence of structures. 80081-3

Cultural resources

The PDEIS mentions avoidance of culturally sensitive areas as one of several mitigation measures. The PDEIS should stress that avoidance of these areas is the preferred method to avoid adverse impacts to cultural resources.

80081-4

BLM Wind Energy Programmatic EIS Scoping
Argonne National Laboratory EAD/900
9700 S. Cass Avenue, Argonne, IL 60439

December 17, 2003

RE: Scoping comments for National Wind Energy Program and Policy

To Whom It May Concern:
Thank you for the opportunity to provide scoping comments for BLM's National Wind Energy Program and Policy. The Idaho Conservation League has a long history of involvement with both habitat protection and energy development. As Idaho's largest statewide conservation organization, we represent members who care deeply about both protecting wildlife habitat and encouraging renewable energy supplies.

Investing in properly sited renewable energy generation, such as wind power, can protect the environment, promote economic development, diversify the power system and keep the region economically competitive. Wind projects have the great benefit of not degrading air, water, and fisheries impacts, as do these other power resources.

The impact of wind power largely depends on the location of the project and the specific technologies employed in the final development. While the conservation community supports renewal energy, we are concerned that the Bush Administration will "streamline" regulations for wind power as it has with oil and gas development. We want to ensure that facilities are properly sited to reduce conflicts with wildlife, recreationists, and communities.

Our comments are attached below. Please keep us on the mailing list to receive the DEIS and all other documents related to this proposal.

Sincerely,

John Robison
Conservation Associate

Idaho Conservation League scoping comments for National Wind Energy Program and Policy

Need for substantive PEIS

Idaho is rated 14th in the nation for wind power potential and current wind project applications on BLM lands cover over 26,000 acres, often overlapping with critical habitat for sage grouse and other wildlife. Energy companies are currently given maps of wind potential without adequate information about migratory pathways for birds and bats, habitat needs of sensitive species, or locations of cultural resources in these areas. Sensitive areas and migratory pathways need to be identified and designated of limits before projects. Environmental protections in land use plans and sensible timelines to approve projects need to be developed and maintained.

We are concerned that current Resource Management Plans recommendations for wind development are not objective. For example, the draft plans for the Bruneau RMP contain information only on high wind areas and distance to transmission lines, and nothing on sensitive species.

To serve as another example, the Browns Bench project on the Lower Snake River District is not a suitable location for wind development because this area also serves as key habitat for sage grouse.

We thought that the BLM had already received direction when a conflict of this type arises. The Interim Wind Energy Development Policy regarding Right-of-Way-Management issued by the United States Department of Interior Bureau of Land Management on October 16, 2002 states that "Negative impacts can be minimized by avoiding special management areas with land use restrictions, avoiding major avian migration routes and areas of critical habitat for species of concern, establishing siting criteria to minimize soil disturbance and erosion on steep slopes, utilizing visual resource management guidelines to assist in proper siting of facilities, avoiding significant historic and cultural resource sites, and mitigating conflicts with other uses of the public lands."

Despite our recommendations to exercise caution, the Jarbidge Field Office authorized the Renewable Energy System's application to construct anemometers in this location. A wind-turbine operation is a foreseeable action stemming from the investigation and we believe that an EIS was warranted before issuing a Right of Way. Proceeding ahead with the testing can serve no useful purpose since full development of this site cannot occur.

We believe that the Programmatic EIS needs to do a better job of providing direction when situations like this arise. By taking this big picture look, the BLM can help locate wind power projects in locations where there is a sufficient and steady wind supply and environmental concerns can be more easily addressed. Unless the BLM is able to better advise wind energy companies on suitable locations, the wind companies will continue to expend time and energy pursuing projects in environmentally unacceptable locations, adding to costs and delaying the development of much-needed alternative energy supplies.

Sage grouse
Wind-swept ridges may serve as strongholds for sage grouse, which has been identified by the BLM as a "sensitive species." Sage grouse habitat has been severely fragmented and reduced through a variety of land management practices, including overgrazing and road construction. Sage grouse avoid tall structures such as anemometers, turbines, and transmission lines. The presence of anemometers, turbines, and roads will decrease the suitability of these sites for sage grouse. Key habitat areas such as this need to be protected from further degradation and the PEIS needs to clarify factors making sites inappropriate for any aspect of a wind energy project.

The proliferation of wind projects throughout Idaho could degrade sage grouse habitat enough to warrant listing this species. Petitions have already been submitted to list sage grouse as a threatened species. The impacts of such a listing would have severe ramifications on land management activities throughout Idaho, from grazing to recreation.

Additional studies
More studies are needed on the effects of wind infrastructure on sensitive species. For example, sage grouse actively avoid overhead structures because of associations with raptors but no studies have been conducted on the effect of wind turbines on this sensitive species.

In addition, the Programmatic EIS needs to examine the cumulative effects of wind energy development on neotropical migrants, raptors, bats, mule deer, pronghorn, predators, and ground squirrels.

Noxious weeds
The most cost-effective way to deal with noxious weeds is to protect strongholds of native vegetation from activities which either spread noxious weeds directly or create suitable habitat by removing native vegetation and disturbing the soil. As with any ground disturbing activity, anemometer and turbine construction is likely to provide a vector for weed infestations. The PEIS needs to analyze what steps will be taken to minimize and mitigate for this effect. The PEIS should evaluate the following measures: (1) avoiding entry to areas of intact native vegetation, (2) requiring construction only under dry conditions, (3) requiring equipment wash operations before entering the construction site, and (4) promptly re-seeding disturbed areas with native seed.

Recreation and Visual Quality Standards
The PEIS needs to recognize that wind power structures and infrastructure are inconsistent with many viewsheds and visual quality standards for recreationists. The location and magnitude of roads, transmission lines, and support facilities should minimize environmental impacts to sensitive species, cultural resources, and viewsheds.

Conclusion

Wind projects are important to the region's environment and economy. We support wind projects that have taken the necessary steps for proper siting, developing, operation and maintenance. We feel that the BLM has already rushed ahead, as with the Browns Bench project, by approving projects in inappropriate locations for this type of development. We hope that the Programmatic EIS will help prevent this from happening again.

Responses for Document 80081

80081-001: The PEIS meets the requirements of the CEQ regulations for analysis of alternatives by evaluating a set of alternatives that present a range of options. Scoping was conducted, as required, to identify the range of alternatives to be considered. Comments received during the scoping process did not identify any additional alternatives. Specifically, comments submitted by the Idaho Conservation League did not define an alternative for evaluation; instead, they suggest that a number of things be evaluated to ensure that facilities are properly sited to reduce conflicts with wildlife, recreationists, and communities. The PEIS considers each of those suggestions.

The proposed Wind Energy Development Program would establish policies and BMPs designed to minimize and mitigate the impacts of wind energy development. Evaluation of a "Medium Potential Development Scenario" would be unlikely to result in a different proposed action because the BLM would still seek to develop the best management alternative for wind energy development.

80081-002: The CX identified in the PEIS would be applicable only to site monitoring and testing activities, for authorizations of up to 3 years. The CX specifically requires that the proposal "includes rehabilitation to restore the land to its natural or original condition." If extensive site disturbance is anticipated at a specific location as a result of site monitoring and testing, the CX would not be applicable.

80081-003: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program (see Section 2.2.3.2.2, Plan of Development Preparation, General heading, 7th bullet), will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. These consultations will provide an adequate opportunity for assessing the need for and developing requirements for baseline monitoring. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD.

80081-004: The text has been changed to state that avoidance is the preferred mitigation.

Document 80082

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 3:57 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80082

CNPS_comment_let
ter_on_Wind_En...

Thank you for your comment, Ileene Anderson.

The comment tracking number that has been assigned to your comment is 80082. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 03:56:39PM CDT

Wind Energy EIS Draft Comment: 80082

First Name: Ileene
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Zip: 95816
Country: USA
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Privacy Preference: Don't withhold name or address from public record
Attachment: C:\Documents and Settings\COLLIER\Desktop\Wind Energy PDEIS\CNPS comment letter on Wind Energy DPEIS.pdf

California Native Plant Society

December 10, 2004

Ray Brady
Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 South Cass Avenue
Argonne, IL 60439

RE: Comments on the Draft Programmatic Environmental Impact Statement (DPEIS) on wind Energy Development on BLM Lands in the Western United States.

Dear Ray Brady,
The California Native Plant Society (CNPS) is a non-profit organization of more than 10,000 laypersons and professional botanists organized into 32 chapters throughout California. The mission of the California Native Plant Society is to increase understanding and appreciation of California's native plants and to conserve them and their natural habitats, through education, science, advocacy, horticulture and land stewardship. Our members and chapters work closely with a variety of State and Federal agencies to manage and conserve rare and common botanical resources in California. While our expertise is with the flora of California, the basic principles of our comments are applicable throughout the project area.

The CNPS does not support the development of wind energy projects in Areas of Critical Environmental Concern (ACEC's), because many ACEC's have been identified as areas that are important/essential for maintaining/protecting resources. By eliminating wind energy projects in the ACEC's you prevent the fragmentation that will occur as part of the proposed action. As you know, fragmentation is takes multiple tolls on the integrity of ecosystems (Debinski and Holt 2000, Kruess and Tscharntke 1994, Saunders et al. 1991). Fragmentation is documented to reduce fecundity among herbaceous plant species (Baur and Erhardt 1995), decrease interactions between plants and pollinators (Townsend and Levey 2002), reduce the opportunity for propagules dispersal (Haddad 1999). All of these issues result in reduced genetic variation, and therein the ability of plants (and animals) to adapt to inevitable environmental change (Noss et al. 1997). Coupled with that is the toll that inbreeding takes: reduction in survivorship, fecundity and longevity (Noss et al 1997). 80082-1

In California, many of the ACEC's, especially in relatively new BLM Land Management Plans, are established to maintain ecosystem function, provide refugia for a variety of rare species, and are important conservation components of Habitat Conservation Plans under the Endangered Species Act. Therefore, they must be areas where wind development is precluded. We request that you add ACEC's to the list of specific lands on which wind energy development would not be allowed.

Thank you for the opportunity to submit these comments and we look forward to continued cooperative efforts to maintain the world-class biodiversity of the California Flora on our public lands.

Sincerely

Ileene Anderson
Southern California Regional Botanist
California Native Plant Society
2707 K Street, Suite 1
Sacramento, CA 95816

Dedicated to the preservation of California native flora

cc: CNPS State Office
David Chipping, CNPS Conservation Director

References:

Baur, B. and A. Erhardt. 1995. Habitat Fragmentation and Habitat Alterations: Principal Threats to Most Animal and Plant Species. GAIA 4: 221-226.

Debinski, D.M. and R. D. Holt. 2000. A Survey and Overview of Habitat Fragmentation Experiments. Conservation Biology 14 (2): 342-355.

Haddad, N.M. 1999. Corridor and Distance Effects on Interpatch Movements: a Landscape Experiment with Butterflies. Ecological Applications 9: 612-622.

Kruess A. and T. Tscharntke. 1994. Habitat Fragmentation, Species Loss and Biological Control. Science 264: 1581-1584.

Noss. R., M.A. O'Connell and D.D. Murphy. 1997. The Science of Conservation Planning. Habitat Conservation under the Endangered Species Act. Island Press, Washington DC.

Saunders, D.A, R.J. Hobbs, and C.R. Margules. 1991. Biological Consequences of Ecosystem Fragmentation: A Review. Conservation Biology 5: 18-32

Towsend, Patricia A. and Douglas J. Levey. 2002. Effect Of Habitat Corridors On Plant-Pollinator Interactions. Society for Conservation Biology 16th Annual Meeting – Planning and Reserve Design Session. July 18 2002

Response for Document 80082

80082-001: The BLM acknowledges the role and importance of habitat fragmentation on ecological resources and the need to avoid wind energy development in areas where it would be incompatible with specific resource values. The Wind Energy Development Program proposed policies specify that the BLM will not issue ROW authorizations for wind energy development on lands that are incompatible with such values, and these lands include ACECs (see Section 2.2.3.1).

Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses that will aid in the identification of potential exclusion areas will be conducted for any proposed project on BLM-administered lands. The scope and approach for these site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting stipulations for incorporation into the POD. The identification of site-specific exclusion areas is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

Document 80083

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 4:12 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80083

wind_farm_DEIS_cmt_80083.doc (...

Thank you for your comment, Doug Heiken.

The comment tracking number that has been assigned to your comment is 80083. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 04:11:19PM CDT

Wind Energy EIS Draft Comment: 80083

First Name: Doug
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Attachment: C:\Documents and Settings\Doug Heiken\My Documents\!nSnych\Comments\BLM comments\wind farm DEIS cmt.doc

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

DATE: 10 December 2004

FROM:
Oregon Natural Resources Council
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Eugene OR 97440
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Klamath-Siskiyou Wildlands Center
PO Box 102
Ashland OR 97520
541-488-5789

TO:
BLM Wind Energy Programmatic EIS Scoping
Argonne Nat'l Lab EAD/900
9700 S. Cass Ave.
Argonne IL 60439
Fax 866-542-5903
http://windeis.anl.gov/involve/comments/index.cfm

Subject: Comments on Wind Energy Programmatic DEIS

Dear BLM:

Please accept the following comments from Oregon Natural Resources Council (ONRC) and Klamath Siskiyou Wildlands Center (KSWC) concerning the programmatic DEIS for wind energy development on public lands in the western U.S. ONRC represents over 7,000 members who support our mission to protect and restore Oregon's wildlands, wildlife, and waters as an enduring legacy. We seek to permanently protect Oregon wild forests, protect and restore essential habitat for native species, and protect and restore the Klamath Basin from the headwaters to the sea. ONRC has been extensively involved in efforts to inventory BLM and Forest Service roadless areas so they can be conserved and protected as wilderness someday.

ONRC's main concerns are:

0. The BLM should use the EIS process to adopt concrete and enforceable mitigation requirements that are known to reduce impacts of wind projects on wildlife, water quality, roadless/wilderness areas, scenic values, native plant habitat, etc. 80083-1

1. LET'S START WITH A COMPREHENSIVE NATIONAL ENERGY POLICY: This EIS should be deferred until the government first prepares an EIS for a sensible national energy policy. ONRC supports sustainable energy development, but it needs to be in a context of sound planning and foresight. In that regard, energy conservation should be the highest priority. New production can be considered, but wind power is not without serious environmental impacts and must be very carefully considered and appropriately limited. 80083-2

ONRC and KSWC strongly support conservation and alternative energy development. Less dependence on fossil fuels generally and foreign oil can help the global climate and help avoid unnecessary spilling of blood for oil. Wind energy projects that are carefully located and carefully designed can be a small part of the overall energy policy. 80083-2 (cont.)

2. ROADLESS AREAS: Areas of public lands without roads have special characteristics that must be given special consideration in the EIS. Unroaded areas greater than about 1,000 acres, whether they have been officially inventoried or not, provide valuable natural resource attributes that must be protected. Please consider each of the roadless area characteristics identified in 36 CFR 294.11—

> *Roadless area characteristics.* Resources or features that are often present in and characterize inventoried roadless areas, including:
> (1) High quality or undisturbed soil, water, and air;
> (2) Sources of public drinking water;
> (3) Diversity of plant and animal communities;
> (4) Habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land;
> (5) Primitive, semi-primitive non-motorized and semi-primitive motorized classes of dispersed recreation;
> (6) Reference landscapes;
> (7) Natural appearing landscapes with high scenic quality;
> (8) Traditional cultural properties and sacred sites; and
> (9) Other locally identified unique characteristics.

80083-3

Wind projects require roads and permanent modification of the environment in ways that conflict with roadless values. One of the BMPs should be an exclusion of wind projects form roadless areas >1,000 acres.

3. AVOID SPECIAL AREAS: Please exclude special areas from wind development. In Oregon these places include but are not limited to: Steens Mtn, Hart Mtn, Abert Rim, Blue/Wallowa Mtns, Siskiyou Mtns, Winter Rim, all designated wilderness areas, wilderness study areas, Coast Range ridge tops, and roadless areas >1,000 acres. 80083-4

4. BIRD MORTALITY: Wind farms are a well-known cause of bird mortality, especially for raptors. Please fully disclose impacts to birds on a species-specific basis, with special emphasis on raptors, migratory birds, and other species of conservation concern.

   a. Please do not allow wind development in bird migration corridors.
   b. Areas of low visibility such as the foggy south coast of Oregon should also be avoided.
   c. Areas where prey species occur should also be avoided to prevent attracting birds of prey into turbine danger zones.
   d. Leks and other sage grouse habitat must be avoided, because these birds avoid areas with trees and other large vertical structures.
   e. Do not build fences because they will harm birds and other wildlife.

80083-5

DEIS page 5-57 estimates "33,000 bird fatalities per year from the estimated 15,000 operating wind turbines." This seems like an exceedingly low estimate. Is this based exclusively on direct evidence of mortality, or does this estimate account for birds that might collide with the towers and fall too far from the towers to be readily counted? What about birds that die and are picked up by scavengers before they are counted?

The DEIS also uses a crude and insensitive indicator of bird-turbine conflicts, i.e., based solely on the number of turbines. The FEIS should add factors to account for the location of the turbines with respect to migration corridors and regions of low visibility (fog), and the design of the turbines and towers and lights. Also, please clearly distinguish between birds species such as native seabirds and raptors vs. starlings and Asian rock doves. 80083-5 (cont.)

Given that many bird fatalities occur during inclement weather (DEIS p 5-61), places such as the Oregon Coastal region, the Columbia River Gorge, and mountainous regions such as Steens Mtn, where wind is typically mixed with clouds and rain should be excluded from wind farm consideration.

Another way to minimize raptor collisions is to locate wind farms away from sites with abundant raptor prey, such as meadow areas often located on and near ridge-tops in forested areas, and the rock formations often located near ridge-tops in eastern Oregon.

5. BAT MORTALITY: Bats use ridge tops disproportionately for both roosting and travel. As a group, bats are a declining resource that play critical ecological roles such as insect control. The EIS must explain the impacts to bats on a species-specific basis. Some ground-roosting or ground-foraging bats will also be adversely affected by wind developments.

   Bats sometimes use crevices in the ground to roost. Wind projects should avoid rocky areas with suitable crevices in known bat habitat and bat surveys should be required before wind projects are approved. Bats also forage in meadows in forested areas, so wind projects should avoid forest meadows often located on ridgetops in Oregon. 80083-6

6. TOWER LIGHTING: Lights are thought to be an attractant to migratory birds that causes increase mortality. The adopted BMPs should require short towers that do not trigger FAA lighting requirements. 80083-7

7. WILDLIFE DISTURBANCE: The EIS should consider how wind farms will displace wildlife through industrialization of remote areas formerly used mostly by wildlife. 80083-8

8. INVASIVE WEEDS: Construction, roads, power line right-of-ways will all cause extensive ground disturbance and act as a vector for invasive plant species. Weeds are a "slow motion explosion" that will be one of the biggest environmental problems of the future. Since wind farms will be located in windy sites, weeds that are wind-dispersed, and there are many will be a particularly serious concern. 80083-9

9. SERVICE ROADS: Roads constructed and maintained to facilitate wind energy development will cause serious adverse impacts including: 80083-10

a. Hydrology— converting subsurface to surface flow and increasing peak storm flows;

b. Erosion/Sedimentation— ditches and road surfaces are subject in mobilizing soil particles and delivering them to streams;

c. Weeds— continuous disturbance and linear topology means that road are serious weed vectors; native plant communities will altered;

d. Habitat— wildlife will be disturbed and displaced;

e. Soils— compaction and displacement reduce soil productivity and act as a barrier to movement of subterranean wildlife;

f. Disease— wind development, especially roads, in SW Oregon will spread *Phytophthora lateralis*, a root disease which is fatal to rare and endemic Port Orford Cedar trees.

80083-10 (cont.)

10. SCENIC IMPACTS: Ridge top locations are often visible for tens of miles. Scenic impairment as observed from roadless area and wilderness areas, recreation areas, and scenic highways are of special concern. 80083-11

11. TRANSMISSION CORRIDORS: Construction of transmission corridors necessary to connect wind farms to the existing grid will require, roads, ground disturbance, scenic blight, and exacerbate all of the above effects and must be considered as a connected and cumulative impact of wind farms. 80083-12

12. FIRE: There is a well- recognized need to restore fire to the western landscapes. The presence of wind farms will make fire restoration more difficult or impossible. The EIS must address this conflict. The discussion of fire on pages 5-52 and 5-53 mention that fire frequency has increased thereby contributing to the cheatgrasss problem. While this phenomena is true, the DEIS fails to recognized that there are other parts of the west that are experiencing less frequent fire due to human fire suppression efforts. There is a need to reintroduce fire in many areas and building wind farms could put valuable infrastructure in the path of prescribed fire. We can't let wind farms stand in the way of restoration of natural fire regimes. The DEIS should discuss how this conflict will be mitigated. 80083-13

13. ECONOMIC FACTORS: Please disclose and consider economic factors including:
    a. the future price of electric power;
    b. the wide range alternative ways that future demand might be met, including investments in energy conservation. 80083-14

14. OFFSHORE ISSUES: As Jane Lubchenko has observed, "our oceans are in crisis." Any offshore wind developments should be developed only after a fully functional set of marine reserves are established to conserve bird, fish, and other marine species. 80083-15

15. CONCRETE AND ENFORCEABLE STANDARDS: All the above issues must be carefully considered in the programmatic EIS. The EIS should propose concrete and enforceable standards to ensure that the values recognized above are conserved and protected. 80083-16

16. LEGAL REQUIREMENTS: Please disclose and consider the full suite of legal requirements such as FLPMA, ESA, MBTA, CWA, and resource management plans, including the Northwest Forest Plan. Do not amend any Standards & Guideline of the 80083-17

Northwest Forest Plan. The Northwest Forest Plan is the bare minimum legal protection for several listed and special status species. Any reduction in protection for old-growth or aquatic species would require consideration within the context of the entire Northwest Forest Plan.

80083-17 (cont.)

Sincerely,

/s/

Doug Heiken

Responses for Document 80083

80083-001: The Wind Energy Development Program proposed policies and BMPs, as listed in the Final PEIS, establish concrete minimum mitigation standards. The language on these proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

Operators will be required to comply with the terms and conditions of the ROW authorization. The POD, containing project-specific stipulations (including required mitigation measures), will be appended to the ROW agreement. Failure to comply could result in termination of the ROW authorization.

80083-002: Your comment addresses issues that are beyond the scope of the PEIS, the mission and responsibilities of the BLM, and/or the defined programmatic scope of the proposed Wind Energy Development Program. We appreciate your input and participation in the public review process.

80083-003: Items (1) – (8). As required by the Wind Energy Development Program proposed policies and BMPs, site- specific analyses will be conducted for any proposed project on BLM-administered lands. The proposed polices and BMPs in Section 2.2.3.1, Proposed Policies, and Section 2.2.3.2, Proposed BMPs, ensure adequate consideration of the resources identified in these items and must be applied to all wind energy development projects on BLM-administered land. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

Item (9) and Last Paragraph. Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. These processes will provide adequate opportunity for identification of local exclusion areas and areas with unique characteristics. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders.

80083-004: Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will

be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

80083-005: A species-by-species account would not be practicable nor is it necessary. The PEIS presents bird mortality numbers and estimates that have been reported by others. This information is presented in a manner that indicates that avian mortality does occur at wind facilities. The PEIS does discuss impacts to raptors, a group that has been shown to be particularly impacted by wind facilities.

The Wind Energy Development Program proposed policies and BMPs identify a number of siting considerations (such as the avoidance of landscape features that are attractive to raptors) to be incorporated into the POD for any wind energy project proposed for BLM-administered lands. As required by the Wind Energy Development Program proposed policies and BMPs, site- and species-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for species-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific design, siting, and monitoring stipulations for incorporation into the POD. The identification of site- and species-specific analyses is beyond the scope of the PEIS.

Text has been added to indicate that because of different study designs, the results are not necessarily comparable across facilities and may be underestimating actual mortality levels. However, it is also important to note that regardless of the differences in facility design, size, and siting, and potential monitoring design differences, the data to date do not indicate continual, large-scale mortalities or population-level effects.

80083-006: The PEIS presents potential impacts to biota and habitats that may be incurred as a result of wind energy development on BLM-administered lands. Because of the great diversity of habitats, species, and environmental conditions that are found on BLM-administered lands in the 11 western states encompassed by this programmatic EIS, species-specific impact analyses are not possible. As required by the Wind Energy Development Program proposed policies and BMPs, site- and species-specific analyses will be conducted for any proposed project on BLM-administered lands. The scope and approach for these analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Exclusions of specific habitats and wildlife use areas from wind energy development will also be determined at the project level as part of the species- and site-specific analyses, or through local land use planning efforts with opportunities for full public involvement. Through this process, the BLM will develop

project-specific design, siting, and monitoring stipulations for incorporation into the POD. Site- and species- specific analyses are beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80083-007: The intent of the BLM is to not place restrictions on development on the basis of design features in this PEIS. Design criteria will be evaluated at the project level to address issues such as potential impacts to migratory birds.

80083-008: Section 5.9.3.2.6 of the PEIS discusses potential impacts to wildlife from increased access to surrounding lands.

80083-009: As required by the Wind Energy Development Program proposed policies and BMPs, operators are required to develop a plan for the control of noxious weeds and invasive species. The development of these plans will occur at the site-specific level and are beyond the scope of the PEIS.

80083-010: The Wind Energy Development Program includes a BMP that requires the development of a road siting and management plan that incorporates existing BLM standards regarding road design, construction, and maintenance (see Section 2.2.3.2.2).

In addition, the Wind Energy Development Program proposed policies and BMPs require that site- and species- specific evaluations be conducted for any wind energy project proposed for BLM-administered lands. The intent of these evaluations is to identify siting, design, and operational stipulations that would avoid, minimize, or mitigate potential impacts to hydrology, water quality, wildlife, and other resources. The policies and BMPs also require that noxious weed and invasive species control plans be developed for any proposed wind energy development. The scope, approach, and details of these evaluations and plans will be determined on a project-by- project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting, design, and operation stipulations for incorporation into the POD.

No text change has been made to the document in response to your comment.

80083-011: Such concerns would be addressed during site-specific evaluations, determined through input from other federal, state, and local agencies, and interested stakeholders.

80083-012: Section 6.4.3 acknowledges that wind energy development on BLM-administered lands may require the construction of new transmission lines. Such construction is considered to be a separate but related activity and will require interagency cooperation and multidisciplinary environmental reviews. The designation of new transmission corridors on BLM-administered lands will occur as a result of interagency consultations, not as a result of a

unilateral decision by the BLM. Any such designations would be evaluated through either regional or local land use planning efforts, with opportunities for full public involvement. The potential impacts of transmission system interconnects or expansions that would be required by an individual wind energy project on BLM-administered lands will be assessed as part of the site-specific analyses, with input from other federal, state, and local agencies and interested stakeholders.

80083-013: Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including evaluations of the compatibility of a wind energy project with fire regime restoration activities, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. No text change has been made to the document in response to your comment.

80083-014: As is stated in the Executive Summary (page ES-1) and in Chapter 1 of the PEIS, the purpose of the PEIS is "to assess the environmental, social, and economic impacts of wind energy development on BLM-administered land." A cost-benefit analysis of wind energy development would likely have included a regional analysis of the comparative economic and environmental costs of wind energy development compared with other forms of electricity generation, and conservation measures. Such an analysis would likely also have included impacts of wind development on fossil fuel consumption, land and water resources, and emissions from conventional power plants. Although the analysis undertaken for the PEIS used a wind development scenario that takes into account some of these factors, in particular power generation capital costs, fossil fuel prices, and transmission systems issues, the analysis is limited specifically to those environmental and economic impacts that result from wind energy developments on BLM-administered land. The analysis of impacts on comparative power generation costs, and environmental and economic impacts that emanate from other forms of electricity generation are beyond the scope of the analysis undertaken for the PEIS.

80083-015: Your comment addresses issues that are beyond the scope of the PEIS, the mission and responsibilities of the BLM, and/or the defined programmatic scope of the proposed Wind Energy Development Program. We appreciate your input and participation in the public review process.

80083-016: The Wind Energy Development Program proposed policies and BMPs, as listed in the Final PEIS, establish concrete minimum mitigation standards. These proposed policies and BMPs have been reworded in the Final PEIS to make them required elements of any wind energy development activity on BLM-administered land.

Operators will be required to comply with the terms and conditions of the ROW authorization. The POD, containing project-specific stipulations (including required mitigation measures), will be appended to the ROW agreement. Failure to comply could result in termination of the ROW authorization.

80083-017: The FLPMA applies to all public lands, including those covered under the Oregon and California Grant Lands Act of 1937 (O&C Act) (43 USC 1702). The proposed amendments to BLM land use plans in Oregon and Washington, listed in Appendix C, neither authorize nor suggest any amendment or compromise of the Northwest Forest Plan. In addition, Appendix E already includes the FLPMA, the CWA, the MBTA, and the ESA. However, Table E-2 has been revised to add the O&C Act and the Northwest Forest Plan, as a special policy overlay developed by Presidential direction.

Document 80085

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 4:45 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80085

Thank you for your comment, Ken Crane.

The comment tracking number that has been assigned to your comment is 80085. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 04:44:29PM CDT

Wind Energy EIS Draft Comment: 80085

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December 3, 2004

BLM Wind Energy Programmatic EIS
Argonne National Laboratory, EAD/900
9700 S. Cass Avenue
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Re: Comments on the Draft Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States

The Idaho State Department of Agriculture (ISDA) appreciates the opportunity to comment on the Draft Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States (DEIS). One of the primary goals of the Rangeland Management Program of the ISDA is to provide support and expertise to Idaho livestock producers in rangeland planning and practices on both state and federal lands. Our comments are directed to this end; to ensure the best available range science is used as related to wind energy development and the development of the Final EIS.

In general, the DEIS is a thorough evaluation of the environmental impacts of wind energy development. There are some revisions and additions ISDA proposes the Bureau of Land Management (BLM) make to the DEIS that fall within the scope of the proposed action.

Chapter 2: Proposed Action and Alternatives

2.2.3.1 Proposed Policies

ISDA is pleased to see that under the proposed policies section, livestock grazing is included in the list of land use practices that will, to the extent possible, not be prevented by wind energy projects. We also appreciate the BLM's willingness to "incorporate management goals and objectives specific to habitat conservation" for the potential impacts wind energy projects may have on sage-grouse habitat, as well as other species of concern. Sage-grouse habitat management and livestock grazing are at the forefront of the current range issues and will be addressed later in this letter. 80085-1

2.2.3.2.2 Plan of Development Preparation

ISDA endorses the DEIS's incorporation of adaptive management strategies in the monitoring program and Best Management Practices (BMPs) for the proposed action. This will give the BLM the necessary flexibility if management strategies need to be changed. However, the DEIS does not specify a time frame for how long these monitoring programs will need to continue into each project. The language used, such as "environmental conditions" and "each environmental resource" is also vague in what the monitoring plan will be required to monitor. We recommend giving a specific length of time monitoring should occur, and identify which "conditions" and "resources" should be monitored, in order to avoid confusion in the Final EIS. Specific, comprehensive-monitoring plans will be critical in measuring the success of habitat restoration efforts following disturbances. 80085-2

We support the BLM's proposed BMPs for the proposed action to minimize potential adverse impacts of wind energy development, especially the incorporation of "scientifically rigorous avian…surveys." We also endorse the designs of facilities to reduce perching and nesting by raptors and ravens in order to mitigate predation on sage-grouse. 80085-3

The BMPs for noxious weeds and pesticides are incomplete. The DEIS, under the sub-heading "Noxious Weeds and Pesticides," states, "Operators should 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*." (Italics added for emphasis) IDSA feels operators must be required to develop a plan to control weeds resulting from new project activities. New infestations of invasive species have great potential to negatively affect the resource and plans must be in place for immediate control. Additionally, this statement does not recognize the possibility of new infestations from disturbances away from the site, such as new roads and transmission line right-of-ways (ROWs). ISDA recommends that this BMP recognize the possibility of new weed infestations on newly constructed roads and ROWs. Also, vehicles and other construction equipment should not only be washed prior to arrival at the project site, as outlined in the BMP, but after leaving the site, too, if noxious weeds are present. The principles of Integrated Weed Management (IWM) should also be incorporated into the BMP's. IWM will be discussed in more detail below. 80085-4

2.2.3.2.3 Construction

ISDA supports the BLM's plan to use weed-free grasses, forbs, and shrubs in all areas of disturbed soil. 80085-5

Chapter 4: Affected Environment

4.3.2 Surface Water

The Programmatic Draft DEIS states, "The presence of both permanent and ephemeral surface water bodies would need to be assessed at the project level, along with…water use by both humans and wildlife…" This statement neglects to mention livestock as water users. Permanent and ephemeral surface water bodies on BLM land are critical to livestock management and distribution and must be recognized as such in the Final EIS. 80085-6

4.7.1 Management of BLM-Administered Lands

ISDA is concerned about the lack of attention the DEIS gives to livestock grazing as a major use of BLM land. The first sentence of this section only mentions, "cattle grazing" while not recognizing other types of livestock grazing. We suggest changing the phrase to read, "livestock grazing." 80085-7

Also, when listing BLM's management responsibilities under the multiple-use framework, livestock grazing isn't included with energy and mineral development, and timber sales as a commercial activity. The BLM administers 18,000 grazing permits on 160 million acres of its land. Grazing should receive more attention and be listed with the other commercial activities because its prominence as a major use of public lands. 80085-8

5.9.2.1.1 Direct Injury of Loss during Clearing, Grading, and Facility Construction

This section is somewhat confusing as it contradicts itself with two different claims. The DEIS states, "Impacts to vegetation along transmission lines and staging areas would be temporary, with vegetation expected to regenerate following completion of construction activities." The last sentence of this section then says, "Nevertheless, it could take several years for temporarily affected areas to recover…and some types of habitat *may never fully recover from disturbances*." (Italics added for emphasis) Please clarify exactly what type of impacts these temporary activities will have on soil and vegetation. 80085-9

5.9.2.1.4 Introduction of Invasive Species

ISDA appreciates the BLM's attention to the potential problems invasive vegetation will present as a result of construction activities associated with wind energy development. However, the list of adverse effects from invasive species is incomplete as are the mitigation measures outlined. 80085-10

The BLM must analyze the potential negative impacts of wildfire due to increased invasive species in disturbed areas. Wildfire and conversion of native shrub-steppe ranges to annual grasses are listed as the primary threats to a number of sensitive plant and animal species. Failure to address this issue would be a significant over-site.

Another adverse affect of invasive species is economic in nature. ISDA estimates the direct cost of noxious weeds on Idaho's public and private lands at an annual amount of $300 million. Unsuccessful mitigation of new invasive vegetation species infestations will increase these costs. 80085-11

The DEIS recognizes that "establishment of invasive vegetation may be limited by early detection and subsequent eradication of the plants." Early detection, however, is only one part of Integrated Weed Management (IWM). ISDA supports and recommends integrating the use of IWM into the mitigation measures for invasive vegetation in the DEIS. IWM is the use of all available and feasible weed control techniques in an organized, coordinated, and mutually supportive manner. Idaho's Strategic Plan for Managing Noxious Weeds states:

"[IWM] is the best method for reducing the ecological, economic and social impacts of noxious weed on the state's human and natural resources. To accomplish this, the supporters and cooperators will incorporate resources, priorities and strategies of federal, state, and county agencies into a unified approach to halt or slow the spread of noxious weeds across Idaho (pp. 3-4)." 80085-12

The IWM principles should also be incorporated into the BMPs as outlined in Chapter 2.

5.9 Ecological Resources

Pg. 5-72 Compatibility of a Wind Energy Development Project and Gallinaceous Birds

Though the DEIS does acknowledge that energy-related facilities should be located away from active leks and sage-grouse habitat, when possible, there is not a specific distance mentioned. ISDA recommends incorporating the recommendations in Connelly et al. (2000) that energy related facilities should be located greater than 3.2 km from active leks whenever possible. 80085-13

ISDA also believes that the suggested mitigation measures are lacking in protecting sage-grouse against any adverse impacts from wind energy development. Except for the very general BMP guidelines to develop a monitoring plan in Chapter 2, there are no specific measures within the DEIS to monitor sage-grouse population and habitat vegetation when sage-grouse habitat is disturbed through development. Monitoring should be a critical component of the mitigation measures, especially at the project site, and where new roads and ROWs are constructed. Monitoring should also occur in areas that are rehabilitated, and where mitigation measures take place at off-site locations to offset unavoidable sage-grouse habitat alteration and reduction at the project site. This recommendation is supported by the U.S. Fish and Wildlife Service (2003). Specific monitoring schemes should be incorporated into the adopted adaptive management strategies regarding wind energy development as outlined in section 6.1.2 of the DEIS. 80085-14

5.9.5 Mitigation Measures

The DEIS does not adequately address mitigation measures for the impact of OHV use.

As properly acknowledged in section 6.4.1.10 of the DEIS, OHV use will increase in wind energy development project areas, especially when new access roads and transmission line ROWs are built and maintained. The presence of OHVs will increase the spread of noxious weeds, disturbance to wildlife, potential increase in fire starts, and soil compaction and erosion. With the increased OHV use, it will be difficult for ranchers with livestock grazing permits to follow their livestock management plans, through gates being left open, fences cut, and livestock harassed. 80085-15

ISDA recommends the BLM acknowledge these impacts in the Final EIS and develop measures to mitigate OHV use in these areas. For example, signing, gating, and increased enforcement.

5.9.5.3.5 Mitigating Establishment of Invasive Vegetation

This section, as well as all other phases of wind energy development, should include the Integrated Weed Management (IWM) principles as outlined above. 80085-16

Aside from inspecting and cleaning construction equipment that may have entered invasive species infestations, all personnel vehicles, shoes, and clothing should be inspected and cleaned as well.

5.10 Land Use

In this section, there is a lack of discussion on the impacts, both direct and cumulative, that wind energy development can have on livestock grazing on BLM administered lands. ISDA understands that wind energy, in the long term, may create only a small ecological footprint and can be compatible with land uses such as livestock grazing, however, we believe that it could potentially have a much larger impact than the DEIS acknowledges.

The DEIS assumes that for each wind turbine tower, only an acre or less of land is impacted. The DEIS does not take into consideration new or improved roads and it assumes that habitat disturbed during construction will be rehabilitated successfully. New roads and failed rehabilitation projects will permanently reduce the forage base on BLM grazing allotments. In the example given in the DEIS on pg. 5-85, only 118 out of 7,000 acres of rangeland in the project area were permanently impacted. This example does not break down the impacts on a per allotment basis. 188 acres of forage lost on a grazing allotment of less than 7,000 acres could have a significant impact on how that allotment is managed; especially if the acreage of lost forage due to new roads and failed restoration projects are taken into consideration. Additionally, there is no analysis of the potential increase in fire starts and subsequent loss of forage and disruption of grazing allotment management. These impacts should be acknowledged in the Final EIS. 80085-17

On pg. 5.57, the DEIS acknowledges that cattle will cluster around turbines. The DEIS does not take into account the impact this could have on management of grazing allotments and the subsequent costs that may be incurred because of it. In order to keep livestock from congregating around the towers, new range improvements may need to be built, such as fences. Or, the permittee may need to employ additional help in herding livestock away from turbines to keep them from overgrazing the area. ISDA recommends the BLM acknowledge the potential increased cost that ranchers may incur because of wind energy development and the potential impacts from cattle that cluster around turbines in the Final EIS. 80085-18

Chapter 6: Analysis of the Proposed Action and Its Alternatives

6.4 Cumulative Impacts

The DEIS, in this section, acknowledges that land uses like livestock grazing "...would generally be compatible..." The DEIS, however, fails to recognize some important cumulative impacts that wind energy development could potentially have on livestock grazing on public lands.

Livestock management has already changed significantly on public lands because of the decline in sage-grouse populations. Ranchers have made major concessions and have incurred substantial costs in changing their operations in order to better preserve sage-grouse populations and habitat. This has happened in spite of the lack of direct evidence that livestock have contributed to sage grouse population decline (Connelly et al. 2000). For example, ranchers have had to invest in new fences and have changed grazing systems in order to better protect breeding and brood-rearing sage-grouse habitat. 80085-19

Sage grouse need large tracts of contiguous, undisturbed areas of high-quality habitat during their four distinct seasonal periods. Wind turbines energy development, as acknowledged in the DEIS, could have a potential impact on sage-grouse populations by fragmenting these large tracts of habitat through increased presence of invasive species, increased incidence of wildfire, and increased human activity. More research is needed to determine the impact wind energy development will have on sage-grouse (USFWS 2003). If sage-grouse habitat is altered by wind energy development, the trickle-down effect will require ranchers who hold BLM grazing permits to make even more concessions and will incur greater operating costs. The BLM must recognize these cumulative impacts in the Final EIS.

80085-19 (cont.)

Again, we appreciate the opportunity to provide comments and suggestions to the DEIS. If there are any questions, please feel free to contact Kevin Wright at (208) 736-3073.

Sincerely,

John Chatburn
Deputy Administrator
Division of Animal Industries
ISDA

Literature Cited

Connelly, J.W., et al., 2000, "Guidelines to Manage Sage Grouse Populations and Their Habitats," *Wildlife Society Bulletin* 28(4):967985.

USFWS (U.S. Fish and Wildlife Service), 2003a, *Interim Guidelines to Avoid and Minimize Wildlife Impacts from Wind Turbines*, U.S. Department of the Interior, Wind Turbine Siting Working Group, Washington, D.C. Available at http://www.fws.gov/r9dhcbfa/wind.pdf. Accessed October 29, 2004.

Responses for Document 80085

80085-001: Thank you for your comment. We appreciate your input and participation in the public review process.

80085-002: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by- project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. The site-specific analyses will address which resources and conditions should be monitored at a given site, as well as appropriate monitoring time frames.

80085-003: Thank you for your comment.

80085-004: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land. The BMPs require development of a noxious weed and invasive species control plan and an integrated pest management plan for any wind energy project proposed for BLM-administered lands, and these plans would apply to all project-related activities, including new access roads and transmission line ROWs. The methods and tools specified in the plans will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific noxious weed and pesticide use plans stipulations for incorporation into the POD. Site-specific details for these plans are beyond the scope of the PEIS.

80085-005: Thank you for your comment.

80085-006: The text has been revised to specify use by humans, livestock, and wildlife.

80085-007: The suggested editorial change has been made.

80085-008: Livestock grazing has been added to the list of commercial activities under BLM's multiple use framework in Section 4.7.1. Livestock grazing is one of the commercial use activities included in Table 4.7.1-2.

80085-009: The types of impacts would be the destruction and injury of vegetation, and habitat reduction or degredation. These impacts are discussed in the text in Section 5.9.2.1 and identified in Table 5.9.2-1. No text change has been made to the document in response to your comment.

80085-010: The PEIS discusses the potential impacts of fire on vegetation and wildlife in Sections 5.9.3.1.6 and 5.9.3.2.8, respectively. No text change has been made to the document in response to your comment.

80085-011: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific plans for the control of noxious weeds and invasive species will be required for all wind energy development projects proposed for BLM-administered lands. The scope and approach for these plans will be determined on a project- by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. The description of site-specific plans is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80085-012: As required by the Wind Energy Development Program proposed policies and BMPs, plans for controlling noxious weeds and invasive species will be required for any wind energy development project proposed for BLM-administered lands. The scope and approach for this plan will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific noxious weed and invasive species control plan stipulations for incorporation into the POD. Because the Wind Energy Development Program proposed in this document would apply to BLM-administered lands in 11 western states, it would be inappropriate to specify an individual state's requirements for the entire program. As stated above, individual state programs would be considered on a site- by-site basis as appropriate. No text change has been made to the document in response to your comment.

80085-013: The identification of specific buffer zones will be developed at the project level as part of the site-specific analyses. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of specific buffer areas, will be conducted for any proposed project on BLM- administered lands. The need for and specifications of any buffer zones will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. The specification of buffer zone dimensions is beyond the scope of the PEIS.

80085-014: As required by the Wind Energy Development Program proposed policies and BMPs, species-specific analyses, including monitoring programs, will be conducted for any proposed wind energy project on BLM-administered lands. The scope and approach for species-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Regarding sage-grouse species,

existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into local, site-specific analyses. Site-specific analyses are beyond the scope of the PEIS.

80085-015: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands. The issues associated with potential increased OHV use in the vicinity of the project would be identified and addressed as part of the site-specific analyses.

80085-016: As required by the Wind Energy Development Program proposed policies and BMPs, noxious weed and invasive species control plans will be required for any wind energy project proposed for BLM-administered lands. The scope and methods identified in these plans will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, project-specific control plans will be developed for incorporation into the POD. While the BMPs discuss some general measures such as vehicle cleaning, detailed descriptions of the measures to be included in the control plans are beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80085-017: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses (including impacts on livestock grazing) will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. As appropriate, stakeholders would include those individuals holding leases for grazing allotments. Site-specific analyses are beyond the scope of the PEIS.

80085-018: Generally, clustering around structures by livestock (or wildlife) is for relief from heat, inclement weather events, or insects. There is no evidence that livestock will overgraze the areas immediately around turbines. No text change has been made to the document in response to your comment.

80085-019: A new BMP has been inserted in Section 2.2.3.1, Proposed Policies, to ensure that site-specific NEPA analyses will identify and assess any cumulative impacts that are beyond the scope of the cumulative impacts addressed in the PEIS. Additional analyses of the short-term and long-term cumulative impacts on livestock grazing and habitat alteration for sensitive species such as the sage-grouse may be necessary for some sites.

Document 80086

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 5:11 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80086

Kristi_DuBois_wind_comments_80...

Thank you for your comment, Kristi DuBois.

The comment tracking number that has been assigned to your comment is 80086. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 05:11:06PM CDT

Wind Energy EIS Draft Comment: 80086

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Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

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December 10, 2004

BLM Wind Energy Programmatic EIS Scoping
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

Dear Wind EIS Team:

Thank you for your tremendous efforts in preparing this programmatic EIS on wind power development for BLM lands. In the EIS you mentioned that you were taking comments on places that should not be developed for wind power generation. Most of my comments are directed at that concept.

I use BLM lands in Montana to view wildlife, hunt, take photographs, hike, and camp. Public lands are very important to me and to many others who can't afford to own our own private ranches. It is extremely important to me that these lands be managed properly to maintain proper ecological functioning as wildlife habitat, in a natural or semi-natural state. At the same time, I consider the development of wind power to be an important aspect of reducing our dependence on fossil fuels. My primary concerns with wind power development are 1) impacts on wildlife and 2) aesthetic impacts (in terms of a natural-looking landscape for photography). Since BLM lands vary widely in their values to wildlife, the selection of locations that minimize impacts to wildlife is a critical aspect of wind development on public lands. Many BLM lands are small, isolated parcels surrounded by private land. These types of parcels, when surrounded by croplands, oil fields, or other developments are the preferred locations for wind development. BLM lands adjacent to existing transmission lines should be looked at first, since the construction of new power lines to transmit the power will have major environmental impacts. Large blocks of BLM land containing natural grassland and sagebrush/grassland habitats should be excluded from development. Parcels without roads (jeep trails don't count as roads), and wetland and riparian habitats should be avoided. Also, wind farms with forests/trees nearby tend to kill a lot of bats so these areas should also be avoided. There are plenty of areas that are already roaded, have power line corridors nearby, and have few wildlife values, and those tracts should be the ones with high priority for wind development. Also, if power lines must be constructed, they should not bisect large contiguous blocks of habitat. It would be best if all power lines could be buried, for wildlife, for scenic values, and also for national security. Buried power lines should follow existing road/utility corridors as much as possible. 80086-1

The EIS has identified areas that have high potential for wind development based on wind potential. It should go one step further and prioritize parcels for development based 80086-2

on criteria such as proximity to transmission lines and roads, size of the parcel, wildlife values, scenic values, and landscape context. Without doing this, the developers will come in the door with proposals to develop environmentally sensitive parcels, then blame "environmentalists" for being "obstructionists" when they raise objections. It would save everyone a lot of time, money, and energy if BLM lands could be ranked up front, and the rankings put out for public discussion. It all boils down to location—all the analysis and mitigation in the world won't make up for the wildlife losses if sensitive areas are developed.

80086-2 (cont.)

In particular, I have strong concerns about wind development on the Rocky Mountain Front in Montana and some other key places that are important to me. I would like to see the following areas in Montana declared off-limits to wind power development because of high wildlife, scenic, roadless/wilderness, and other outstanding natural values:

- **All BLM tracts along the Rocky Mountain Front**: Wildlife values include high nesting raptor populations, raptor migration corridors, shorebirds, waterfowl, and other bird species, high bat species diversity, high numbers of wintering elk, deer, and bighorn sheep and high use by grizzly bears. Habitat values include large areas of cliffs with caves, unique and important wetlands, large tracts of native grasslands and low road densities.

- **The Kevin Rim and adjacent BLM lands**: Wildlife values include very high population densities of nesting raptors. Habitat values include large areas of cliffs, native grasslands, and wetlands.

- **BLM tracts in the triangle formed by Choteau, Fairfield, and Augusta**: Wildlife values include mountain plovers, ferruginous hawks, long-billed curlews, and other grassland bird species. Habitat values include Freezout Lake Wildlife Management Area and other wetlands heavily used by migratory birds and antelope, extensive riparian habitat, cliff habitat along the Sun River and extensive areas of native grasslands.

80086-3

- **BLM lands in the "Devil's Kitchen" area south of Cascade**: Wildlife values include bighorn sheep and elk. Habitat values include large areas of rocky cliffs potentially used by roosting bats and nesting/migrating raptors.

- **BLM lands along the Marias River Corridor**: Wildlife values include high raptor populations and waterfowl. Habitat values include low road density and extensive cliff and riparian habitat for bats and birds.

- **BLM lands in the Sweetgrass Hills**: Wildlife values include nesting and migrating birds of prey. Habitat values include extensive cliffs, forested areas, and rocky areas used by bats, extensive grasslands and wetlands and low road densities.

- **BLM lands in Carbon County**: Wildlife values include high species diversity of bats, white-tailed prairie dogs, mountain plover, plains spadefoot toad and other "species of concern" in Montana.

- **Extensive BLM tracts south of Ekalaka**: Values include ferruginous hawks and other grassland nesting bird species.

- **Large blocks of grassland areas in Phillips and Valley counties**: some of this area has been eliminated from consideration already, but most of the large blocks should be taken out of consideration. Large blocks of grassland habitat are few and far between in Montana, and they are the key to the long-term preservation of species like the black-footed ferret and mountain plover.

80086-3
(cont.)

Thank you very much for the opportunity to comment.

Sincerely,

Kristi DuBois

Responses for Document 80086

80086-001: The issues identified in your comment are addressed by proposed policies and BMPs. The specific measures that will be needed at individual sites to mitigate impacts will be identified during the site-specific analyses. These analyses will be conducted in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement.

80086-002: The evaluation of appropriate wind energy development sites involves interactions between industry and the BLM regarding possible sites prior to submittal of a ROW application for development. These interactions often serve to screen out sites that are unsuitable for development for a variety of reasons. Ranking of BLM-administered lands regarding their suitability for development is not being considered and is beyond the scope of the PEIS

80086-003: As stated in the first bullet in Section 2.2.3.1, Proposed Policies, the BLM will exclude wind energy development from a number of specific areas. Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

Document 80088

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 5:46 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80088

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t_Letterfinal_s...

Thank you for your comment, Thomas France.

The comment tracking number that has been assigned to your comment is 80088. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 05:45:38PM CDT

Wind Energy EIS Draft Comment: 80088

First Name: Thomas
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Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

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December 10, 2004

BLM Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

RE: Comments on Draft Programmatic Environmental Impact Statement for Wind Energy in 11 Western States, dated September 10, 2004.

Dear Comment Analysis Group:

Thank you for the opportunity to comment on this Draft Programmatic Environmental Impact Statement (DPEIS). The National Wildlife Federation (NWF) believes it is in the public interest that the nation's energy sources transition from nonrenewable sources to those that provide for cleaner air and water, reduced global warming pollution, energy independence, and improved public health. NWF feels electricity generated from appropriately sited wind turbines should contribute to this transition from nonrenewable energy sources. However, NWF recognizes several adverse impacts that wind facilities have on wildlife. 80088-1

We offer the following suggestions and comments on the DPEIS:

The large footprints of wind generating facilities will have locally significant impacts on many wildlife species. Given the plethora of potential wind power sites on both private and public land, the BLM should not site any wind power developments on sensitive wildlife habitats. Wind developers should be required to seek wind development sites on private lands before the BLM considers permitting development on undeveloped public lands. The West contains vast tracts of dryland farmland that could be acquired without significant cost to potential developers. Given the abundance of this private farmland resource, NWF believes that wind development on undeveloped public lands should only be considered once developers have exhausted their opportunities for constructing a wind facility on private lands. This is especially true where public lands administered by the BLM possess significant wildlife values that would be irreparably harmed by the footprint and infrastructure network associated with a wind facility. The requirement to exhaust private land options should be a stated Policy of BLM wind energy administration. The DPEIS focuses on mitigation and BMPs when the opportunity for achieving real conservation goals is greatest before a site is permitted. 80088-2

NWF's biggest concern with wind development on BLM administered public lands is the potentially adverse impacts on wildlife and their habitat. Of particular concern is the conservation of sensitive species including, but not limited to, the greater sage-grouse and its habitats. Loss, degradation, and fragmentation of sage steppe habitat are the primary causes of region extirpations and isolation of sage-grouse populations. A panel recently convened by the U.S. Fish and Wildlife Service to evaluate the extinction potential for greater sage-grouse found energy development to be the principle concern for 80088-3

sage-grouse conservation in the eastern portion of its range. The fragmentation of public lands by mining, oil and gas development, and now wind energy development, along with the associated road building, operational disturbance, and inherent avoidance of above-ground structures exhibited by sage-grouse (as well as other prairie bird species), continue to threaten the long-term existence of this bird. Furthermore, the encroachment of cheat grass and other invasive weeds that often follow development of roads and soil disturbance associated with construction and operation of energy facilities negatively affect the habitat and survival of the species. Consequently sage-grouse numbers have declined to extirpation in many regions, and up to an estimated 90 percent from historic levels in many additional areas. Due to this decline in sage-grouse numbers and degradation of sage steppe habitat, the USFWS, USFS, and BLM have adopted a "no net loss" policy for sage-grouse habitat; BLM should state how they plan to adhere to this policy in developments like those analyzed in this DPEIS. 80088-3 (cont.)

Since wind energy projects have been proposed on thousands of acres of sage-grouse strongholds on public lands, NWF believes that if wind developments are permitted on BLM lands they must adhere to the following requirements:

- NWF believes the Policies and Best Management Practices (BMPs) outlined in the Draft Programmatic EIS should be binding on the BLM as well as potential wind facility developers. As the DPEIS currently stands, none of the BMPs are mandatory. Though the DPEIS states that the Policies and BMPs are to represent the "minimum requirements for management of individual wind energy projects," (DPEIS 2.2.3), the language describing the BMPs is consistently permissive. NWF believes that in order for the full benefit of the BMPs and mitigation measures to be realized, they should be required. Accordingly, the language describing the BMPs should parallel the language describing the Policies. The use of mandatory terms like *shall, will*, and *must* should replace the use of the following permissive terms used in the BMPs: *should*, *to the extent feasible, to the extent possible*, etc.; 80088-4

- In particular, the permissive language found throughout the mitigation measures regarding gallinaceous birds (DPEIS 5-72) should be changed to the above mandatory terms;

- The BLM itself should be responsible for implementing strategies and BMP's to achieve goals and objectives specific to habitat conservation of sage-grouse, rather than implying that wind power entities may solely carry responsibility for implementation and compliance; 80088-5

- The transmission lines needed to serve wind power projects on BLM land should be considered a connected action requiring the same analysis as all wind projects covered under this DPEIS. In addition, should any traditional coal/oil/gas powered plants be constructed as part of the wind generation facility, they must also be included within this analysis; 80088-6

- That wind projects will be restricted from wildlife habitats where adverse effects cannot be mitigated, and mitigation itself should be added to the issues and concerns to be identified and addressed in consultations with other agencies; 80088-7

- Invasive plants and wildfire have been identified as a major concern for conservation of sage-grouse habitat in their western range. We recommend there be BMP sections on invasive plants and fire management relative to wind power development. 80088-8

In addition to concerns about sage-grouse, there are a number of potential impacts to other species of birds, particularly migratory birds, and even bats. Surveys should be conducted before wind turbines are approved or constructed that would entail both on-site observations of birds on a seasonal basis (e.g., bird passage during spring and fall migration), as well as more detailed evaluation of the use of the site by birds, particularly of threatened and endangered species, sensitive species, and species of concern. Surveys for nocturnal migrants where migratory corridors exist, especially for wind projects along mountain ridgelines, should be conducted. If there are science-based concerns over avian mortality requiring more detailed surveys, two years of pre-construction surveys of migratory birds should be considered. The intensity and duration of preliminary studies can be reduced for projects in areas where risk to birds and bats is clearly low, such as small projects or projects in areas where existing data suggest little bird or bat use.

There are basic steps that should be followed when reviewing sites for bird abundance and migration patterns. Biologists should complete a site assessment by conducting a literature review, evaluating existing published and unpublished data, speaking with people knowledgeable about the area, and conducting reconnaissance surveys to document major vegetation types and likelihood of bird, bat and other wildlife impacts. These reconnaissance surveys should be used to identify potential issues related to site development and to eliminate sites that have a likelihood of causing significant negative wildlife impacts following development. After potentially suitable sites are located, a second level of more intensive surveys should be initiated, if warranted, which quantify bird and bat use of the proposed sites. These follow-up surveys may be necessary because reconnaissance surveys may not provide the level of understanding and detail needed for siting a wind farm, or for siting individual turbines. 80088-9

Habitats known to be used by birds, bats, or species listed under the Endangered Species Act should be avoided if the construction and operation of wind plants might adversely affect these species. We also recommend that locating turbines in known local bird migration pathways, in areas where birds are highly concentrated, or in areas or landscape features known to attract large numbers of raptors should be avoided, unless mortality risk has been analyzed and the likelihood of significant mortality has been ruled out. NWF also recommend that locating turbines in known local bird migration pathways, in areas where birds are highly concentrated, or in areas or landscape features known to attract large numbers of raptors should be avoided, unless mortality risk has been analyzed and the likelihood of significant mortality has been ruled out. Independent analysis is important to the process. The USFWS Guidelines contain a site evaluation checklist process for pre-development site evaluations and a ranking system for comparison with different sites. These Guidelines recommend that pre-development evaluations should be conducted by a team that includes federal and/or state agency wildlife professionals, academics and industry consultants with no vested interests in the sites selected.

Finally, NWF would like to comment on the DPEIS's range of alternatives. Currently, there are only two alternatives aside from the "no action" alternative—a maximum development scenario and a limited development scenario. Certainly the spectrum of possibilities from no development to maximum development can accommodate more than one version of limited development. Considering the large 80088-10

footprints wind facilities require, the final EIS should consider a broader range of limited development scenarios. By doing so, the BLM could accomplish many of its wildlife conservation goals by removing more sensitive and productive wildlife habitat from wind development consideration. 80088-10 (cont.)

With the above policies adopted and met, NWF would be able to support some level of wind development on BLM administered land. After reviewing the DPEIS, it appears that the BLM has undertaken a good faith effort to adequately address some of the larger issues of concern associated with wind energy development. However, as would be the case with siting any of a variety of industrial facilities, we feel more focused steps should be taken to ensure the long-term protection of wildlife populations and habitat by the BLM as it considers increased wind energy facility permitting on the public's land. 80088-11

With best regards,

Thomas France

Thomas France, Esq.
Director

Responses for Document 80088

80088-001: Thank you for your comment. We appreciate your input and participation in the public review process.

80088-002: As stated in Chapter 1, the National Energy Policy recommends that the Department of the Interior work with other federal agencies to increase renewable energy production on public lands. A requirement that wind energy development opportunities on private lands be "exhausted" prior to consideration of development on BLM- administered lands would be in conflict with the objectives of the National Energy Policy. As required by the Wind Energy Development Program proposed policies and BMPs, operators will be required to identify sensitive habitats and design projects to minimize or mitigate impacts to these habitats. Site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by- project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD.

80088-003: As required by the Wind Energy Development Program proposed policies and BMPs, predesign and preconstruction site-specific analyses will be conducted for any wind energy project proposed for BLM- administered lands. The purpose of these studies is to identify important habitats, sensitive wildlife, areas of high wildlife use, and other important ecological and environmental resources that will need to be considered during the design and development of a wind energy facility. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting, design, construction, and operation stipulations for incorporation into the POD. Regarding sage-grouse species, existing BLM guidance on the management of sage-grouse and sage-grouse habitat will be incorporated into local, site-specific analyses. Site-specific details are beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80088-004: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land. The mitigation measures identified in Section 5 are measures that could be incorporated into appropriate phases of a wind energy project. Specific mitigation measures will be developed for all wind energy projects proposed for BLM-administered lands. The appropriate mitigation measures and the approaches for their implementation will be determined on a project-by-project basis in conjunction with input from other

federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific mitigation measures for incorporation into the POD. The identification of site-specific mitigation measures is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80088-005: The BLM is responsible for establishing policy and required mitigation measures for wind energy development projects on BLM-administered lands. The Wind Energy Development Program proposed policies and BMPs, as listed in the Final PEIS, establish concrete minimum mitigation standards. The language on these proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

Operators will be required to comply with the terms and conditions of the ROW authorization. The POD, containing project-specific stipulations (including required mitigation measures), will be appended to the ROW agreement. Failure to comply could result in termination of the ROW authorization.

80088-006: Section 6.4.3 acknowledges that wind energy development on BLM-administered lands may require the construction of new transmission lines. Such construction is considered to be a separate but related activity and will require interagency cooperation and multidisciplinary environmental reviews. The potential impacts of transmission system interconnects or expansions that would be required by an individual wind energy project on BLM-administered lands will be assessed as part of the site-specific analyses, with input from other federal, state, and local agencies, and interested stakeholders. Site-specific analyses will have to consider all related construction activities, including construction of any traditional coal/oil/gas powered plants.

80088-007: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land. Among the requirements included in the BMPs is the stipulation that all wind energy projects proposed for BLM-administered lands be planned to minimize or mitigate impacts to wildlife, habitat, surface water resources, and other resources. Operators will also be required to identify important, sensitive, or unique habitats in the vicinity of the project and design the project to minimize or mitigate impacts to these habitats.

The identification of exclusion areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the identification of exclusion areas,

will be conducted for any proposed project on BLM- administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. No text change has been made to the document in response to your comment

80088-008: As required by the Wind Energy Development Program proposed policies and BMPs, noxious weed control plans and fire management strategies for minimizing the potential for human-caused fire will be developed for any proposed project on BLM-administered lands. The scope and approaches of these will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD.

Regarding sage-grouse species, existing BLM guidance on the management of sage-grouse and sage- grouse habitat will be incorporated into the POD. Site-specific details of the noxious weed and fire management plans are beyond the scope of the PEIS.

80088-009: As required by the Wind Energy Development Program proposed policies and BMPs, species-specific analyses will be conducted for any wind energy project proposed for BLM-administered lands. The scope and approach for species-specific analyses, which include predesign and preconstruction surveys of important habitats and wildlife occurrence and activity, and monitoring programs for all phases of a wind energy project, will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. The BMPs and policies also require consultations with the USFWS as required by Section 7 of the ESA. The specific consultation requirements will be determined on a project-by-project basis. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. The BLM and USFWS share a common objective in terms of minimizing potential impacts to wildlife from wind energy development activities. Many of the USFWS voluntary guidance recommendations are imbedded within the BLM's proposed policies and BMPs, reflecting consistent objectives and parallel approaches. However, because the USFWS guidance is interim and voluntary, it is inappropriate to adopt it wholly in the PEIS or in the proposed Wind Energy Development Program.

80088-010: The alternatives evaluated in the PEIS consider a range of levels of wind energy development on BLM- administered land. The levels of development are bracketed on the low side by the limited wind energy development alternative and on the high side by the proposed action. Wind energy development will occur under the no action alternative, but the pace of development is likely to be slowed by the absence of a comprehensive management program and the

proposed land use plan amendments. The PEIS evaluates how effective the different management approaches might be at facilitating the development of wind energy (as recommended by the National Energy Policy), while simultaneously ensuring that environmental impacts are minimized to the greatest extent possible.

As stated in the 1st bullet in Section 2.2.3.1, Proposed Policies, the BLM will exclude wind energy development from specific areas. Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

80088-011: The BLM is committed to full implementation of the proposed Wind Energy Development Program, elements of which require the incorporation of adaptive management strategies and monitoring programs at all wind energy development sites (see Section 2.2.3.1, Proposed Policies, last bullet, and Section 2.2.3.2.2, Plan of Development Preparation, General, 7th bullet). The application of adaptive management strategies will ensure that programmatic policies and BMPs will be revised as new data regarding the impacts of wind power projects become available. The source for a significant portion of the new data is likely to be the required site-specific monitoring programs that will evaluate environmental conditions at a site through all phases of development. A key requirement for the site-specific monitoring programs is the requirement that monitoring observations and additional identified mitigation measures be incorporated into standard operating procedures and project-specific BMPs. These measures should help ensure the long-term protection of wildlife populations and habitat.

Document 80089

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 5:49 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80089

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Thank you for your comment, Michael Smith.

The comment tracking number that has been assigned to your comment is 80089. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 05:48:36PM CDT

Wind Energy EIS Draft Comment: 80089

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Comment Submitted:
Comments Attached as PDF document.

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

December 10, 2004

VIA E-MAIL AND FIRST-CLASS MAIL

BLM Wind Energy Programmatic EIS,
Argonne National Laboratory EAD/900
9700 South Cass Avenue
Argonne, Illinois 60439

Re: Comments on the Draft Programmatic Environmental Impact Statement on Wind Energy Development on BLM Lands in the Western U.S.

To Whom It May Concern:

On behalf of the National Trust for Historic Preservation, we appreciate the opportunity to comment on the Bureau of Land Management's Draft Programmatic Environmental Impact Statement (DPEIS) on Wind Energy Development. We commend BLM for initiating this programmatic EIS and for making a proactive effort to design a programmatic process for wind energy development. However, we do have a couple of issues we would like BLM to address prior to finalizing the programmatic EIS, in particular: (1) inadequate programmatic policy regarding cultural and historic resources that reflects the purpose and requirements of the National Historic Preservation Act (NHPA); and (2) inadequate programmatic policy for completing Tribal consultation prior to issuing Right of Way (ROW) grants.

Interests of the National Trust. Congress chartered the National Trust in 1949 as a private nonprofit organization to "facilitate public participation" in historic preservation, and to further the historic preservation policies of the United States. 16 U.S.C. §§ 461, 468. With the strong support of our 250,000 members around the country, the National Trust works to protect significant historic sites and to advocate historic preservation as a fundamental value in programs and policies at all levels of government. In addition to our headquarters in Washington, D.C., the National Trust operates 25 historic sites open to the public, and eight regional and field offices throughout the country.

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The DPEIS Does Not Adequately Incorporate Policies for Complying with Section 106 Prior to Approving ROW Grants.

The DPEIS does provide relatively clear programmatic policies and Best Management Practices (BMPs) for carrying out the proposed wind energy projects. However, the draft does not provide adequate guidance or detail for ensuring that the procedural requirements of the NHPA will be satisfied. The process for compliance with Section 106 should begin prior to issuing ROW grants for testing and monitoring and for commercial development.

- **Procedural and Timing Requirements of Section 106**

In our view, BLM's obligations under Section 106 of the NHPA require completion of the 106 review process, including Tribal consultation, prior to issuing ROW grants. The issuance of a ROW grant is an "undertaking" with the potential to adversely affect cultural and historic properties. The Section 106 regulations define adverse effect to include the "[t]ransfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance." 36 C.F.R. § 800.5(a)(2)(vii) (emphasis added). Like the issuance of oil and gas leases, approving a ROW grant on federal property without adequate restrictions falls within the definition of an adverse effect. See Montana Wilderness Association v. Fry, 310 F. Supp. 2d 1127, 1152-53 (D. Mont. 2004); Southern Utah Wilderness Alliance, 164 IBLA 1, 28 (Nov. 10, 2004). Despite the fact that approval of site-specific activities will require compliance with Section 106, BLM must initiate the Section 106 process because the ROW grant will provide grantees with certain vested rights to conduct wind energy development. See 43 U.S.C. § 1761 et seq.; 43 C.F.R. Part 2800. 80089-1

Therefore, BLM must ensure that it will appropriately consider the potential adverse effects to cultural and historic resources associated with ROW grants for wind energy development, and consider whether these adverse effects can be avoided, mitigated, or minimized through the attachment of appropriate stipulations or restrictions to ROW grants, (or whether it is appropriate in some cases, based on the Section 106 analysis, to approve a ROW grant application at all). Only by completing the critical steps set out in the Section 106 regulations prior to approval of ROW grants can BLM truly demonstrate required compliance with Section 106.[1]

[1] BLM should also correct/clarify its explanation of the procedural requirements for complying with Section 106 of the NHPA in Section 3.2 *Regulatory Requirements for Wind Energy Projects.* BLM states that, if historic sites are discovered in connection with a proposed wind energy site, "certain consultations and mitigation actions may be required." DPEIS at 3-14 (emphasis added). BLM's obligation to consult with the SHPO, Tribes, and other interested parties is not discretionary, as suggested by this statement, but required.

- **Tribal Consultation Requirements according to Section 106**

Second, the DPEIS does not provide sufficient recognition and discussion of the need to conduct Tribal consultation prior to issuing ROW grants. Section 101(d)(6)(A) of the NHPA requires federal agencies to consult with any tribe that attaches religious and cultural significance to historic properties potentially affected by the undertaking. 16 U.S.C. § 470a(d)(6)(B); 36 C.F.R. § 800.2(c)(2)(ii). The Section 106 regulations clarify that the agency must make a "reasonable and good faith effort" to provide Indian tribes with a "reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects." 36 C.F.R. § 800.2(c)(2)(ii)(A); see Pueblo of Sandia v. United States, 50 F.3d 856 (10th Cir. 1995).

Section 2.2.3.2.2 *Plan of Development Preparation* discusses the need to consult with Indian tribes early in the planning process to identify "issues," such as the presence of Traditional Cultural Properties (TCPs) and other historic resources, access rights, and impacts to significant visual resources. DPEIS at 2-14. Further, Section 5.12 *Cultural Resources* (discussing potential impacts and mitigation measures) provides that BLM should consult with Native American governments early in the planning process. DPEIS at 5-99. We agree that BLM should complete these activities in the context of the plan of development (POD) to establish necessary mitigation of potential adverse effects early in the planning process. However, the timing for completing tribal consultation must be clarified. Because BLM's approval and issuance of ROW grants is an "undertaking" with the potential to adversely affect historic properties, we believe that BLM must engage in tribal consultation before issuing ROW grants. Therefore, BLM should clarify the timing for consultation and possibly establish a programmatic process for complying with tribal consultation requirements. See 16 U.S.C. § 470a(a)(2)(E); 36 C.F.R. § 800.14. 80089-1 (cont.)

Additionally, we object to BLM's proposed policy statement for government-to-government consultation at Section 2.2.3.1 – "The BLM will initiate government-to-government consultation with Indian Tribal governments whose interests might be directly and substantially affected by activities." DPEIS at 2-7 (emphasis added). This proposed policy would set an unlawfully high threshold for tribal consultation, which is inconsistent with BLM's responsibilities under the NHPA. Instead, BLM should adopt policy language that complies with Section 101(d)(6)(B) of the NHPA, which requires Federal agencies to "consult with any Indian tribe . . . that attaches religious and cultural significance to [properties of traditional religious and cultural importance to an Indian tribe]." 16 U.S.C. § 470a(d)(6)(B).

Recommendation:

We recommend that BLM revise Sections 2.2.3.1 *Proposed Policies*, 2.2.3.2.2 *Plan of Development Preparation*, and 3.2 *Regulatory Requirements for Wind Energy Projects* to

appropriately describe the Section 106 process provided for in 16 U.S.C. § 470f and 36 C.F.R. Part 800. In particular, BLM should:

(1) Clarify, especially in Section 2.2.3.1 *Proposed Policies*, that completion of the Section 106 process, including identification of historic properties, examination of potential adverse effects, and avoidance, mitigation or minimizing potential adverse effects, must be completed before BLM will issue ROW grants;
(2) Make a reasonable and good faith effort to identify and consult with all Tribes that demonstrate an interest, and carry out the specific procedural requirements of tribal consultation in accordance with 36 C.F.R. §§ 800.2(c)(2)(i), (ii); and
(3) Describe a policy that allows *all* interested consulting parties to participate in the Section 106 review process prior to approving or denying a ROW grant, in accordance with 36 C.F.R. § 800.2(c)(5).

80089-1 (cont.)

The DPEIS Does Not Accurately Describe Cultural and Historic Resources in the "Affected Environment" Section.

In our view, the DPEIS's description of cultural and historic resources potentially affected by wind energy development is incomplete and misleading. First, BLM provides conflicting numbers of cultural resources as being listed on or determined eligible for the National Register of Historic Places. See DPEIS at 4-53 (317 cultural resources as National Register-eligible vs. 12,778 cultural resources as either National Register-eligible or listed vs. more than 9,000 properties recorded during inventories of more than 500,000 acres). Second, the only historic properties identified in the DPEIS (Table 4.7.4-1, "Public Land Treasures under BLM Stewardship in the 11 Western States") are properties that would not be affected by the proposal for wind energy development in the first place, because they are located on lands that would be protected from this development according to the DPEIS itself (e.g., ACEC's, NLCS units, etc.). This section creates the false impression that a fair amount of relevant cultural resource survey work has already been done by BLM. It fails to reflect the magnitude of the identification work that will need to be completed in order to evaluate the historic properties potentially affected by the wind energy development program. We recommend that BLM revise this section to more accurately reflect the "affected environment" in terms of cultural and historic resources.

80089-2

BLM Lands Excluded from Wind Energy Development.

The National Trust strongly supports the proposed policy to prohibit wind energy development in National Landscape Conservation System (NLCS) units and Areas of Critical Environmental Concern (ACEC). DPEIS at 2-6. Given BLM's clear mission for NLCS units – to conserve, protect, and restore these nationally significant landscapes, which have outstanding cultural, ecological, and scientific values for the benefit of current and future generations – this is the appropriate action. The programmatic EIS also proposes to prohibit wind energy development in any areas where impacts to resources cannot be mitigated and/or conflicts with existing or planned multiple-use activities exist. Id. at 2-6 to 2-7. While we support this more

80089-3

expansive scope of protection, it is unclear how BLM intends to determine whether additional areas should be excluded, and if so, how they will be selected. Therefore, for this programmatic policy, we recommend that BLM provide more detailed guidance for determining circumstances where it would be appropriate or necessary to deny ROW applications and/or exclude areas from wind energy development.

80089-3 (cont.)

Overall, we recognize the importance of developing alternative, renewable energy sources, such as wind energy. To this end, we believe that BLM has an excellent opportunity to craft policies, BMPs, and general mitigation measures through this programmatic EIS in order to avoid and minimize resource cultural resource conflicts, before making irreversible decisions. Although BLM does propose policies that move in the right direction, we believe that the above recommendations will further the goal of promoting a wind energy development program that protects significant cultural and historic resources in compliance with the NHPA.

If you have any questions about our comments, please do not hesitate to contact me directly at (202) 588-6035.

Respectfully submitted,

Michael Smith
Public Lands Counsel

Cc: Alan Stanfill, ACHP, Denver, Colorado
Barbara Pahl, NTHP, Regional Director for the Mountains/Plains Office

Responses for Document 80089

80089-001: No ROWs would be granted without initially conducting all appropriate National Historic Preservation Act reviews.

In the interest of reinforcing this point, the text has been changed at Section 2.2.3.1 to include a new policy bullet regarding consultation required by Section 106 of the National Historic Preservation Act.

80089-002: The Draft PEIS states that the numbers provided are likely considerably less than the actual numbers for eligible sites in the West. However, the number was intended to provide some frame of reference for the number of sites that could be present. This number does not alter the conclusion that a site-specific review of cultural resource presence and status of cultural resource surveys would be necessary for any wind development project. The Draft PEIS states that the majority of BLM-administered land in the 11 western states has yet to be surveyed for cultural resources. Thank you for your comments.

80089-003: Exclusions of specific areas from wind energy development will be determined at the project level as part of the site-specific analyses. As required by the Wind Energy Development Program proposed policies and BMPs, site- specific analyses, including the identification of additional exclusion areas, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. These discussions will facilitate decisions about exclusion areas.

Document 80090

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 6:38 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80090

DTCDTPCwindpow
rcomments_80090.

Thank you for your comment, Michael Connor.

The comment tracking number that has been assigned to your comment is 80090. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 06:37:50PM CDT

Wind Energy EIS Draft Comment: 80090

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Last Name: Connor
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Attachment: D:\Tortoise Management Issues\Energy Projects\DTCDTPCwindpowercomments.pdf

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Desert Tortoise Preserve Committee, Inc.
4067 Mission Inn Avenue
Riverside, California 92501

THE DESERT TORTOISE COUNCIL

December 8, 2004

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Dear Sir/Madam:

The Desert Tortoise Council and the Desert Tortoise Preserve Committee (collectively "commentors") thank you for the opportunity to comment on the Draft Programmatic Environmental Impact Statement (DPEIS) on Wind Energy Development on BLM-administered Lands in the Western United States. The Committee and the Council are both publicly funded non-profit organizations working to ensure the continued survival and recovery of viable populations of the threatened desert tortoise *Gopherus agassizii*, throughout its range in the desert southwest. The Council was established in 1976 to promote the conservation of the desert tortoise in the southwestern United States and Mexico. The Council organizes the Annual Desert Tortoise Council Symposium, the Annual Tortoise Handling Workshop, and has produced 21 volumes of the Symposium Proceedings since 1976. The Committee has worked since 1974 to promote the welfare of the desert tortoise and the species that share its habitat through preserve land acquisition and management, and through research and education.

The following comments on the Wind Energy DPEIS are made with the understanding that the agency will require further site-specific environmental review to be completed for each individual wind energy project, as is stated in the DPEIS. Therefore, these comments focus solely on the programmatic measures proposed in the document and are not meant to take the place of any future comments on any individual wind energy project.

Specific Comments

The National Environmental Policy Act NEPA requires federal agencies to prepare a detailed environmental impact statement (EIS) for "all major actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). "NEPA 'ensures that the agency . . . will have available and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger [public] audience.'" *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1149 (9th Cir. 1998) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)). The comments that follow offer suggestions on how the DPEIS can ensure consistency with NEPA in the final PEIS, with a focus on the program's potential effects of the desert tortoise.

80090-1

A. Baseline Data

Under NEPA, the BLM must "describe the environment of the areas to be affected or created by the alternatives under consideration." 40 C.F.R. § 1502.15. Establishing baseline conditions of the affected environment is an essential requirement of the NEPA process. In *Half Moon Bay Fisherman's Marketing Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988), the Ninth Circuit stated that "without establishing…baseline conditions...there is simply no way to determine what effect [an action] will have on the environment, and consequently, no way to comply with NEPA."

The gathering and analysis of baseline data for specific species populations is deferred to project-specific environmental review by the DPEIS. Such a deferral is, by most terms, acceptable given the programmatic nature of the document and the fact that it does not propose specific locations for any future projects. However, because the Best Management Practices (BMPs) and other measures contained in the DPEIS will be incorporated into each eventual wind energy project, these measures should contain, at the very least, some general direction as to how and when baseline data must be gathered for each project. As it stands, the DPEIS requires that individual project operators must conduct surveys for state and federally threatened and endangered species "within the project area." (DPEIS at 2-11). The DPEIS is unclear as to what constitutes the "project area." Commentors request that the final DEIS extend such surveys to area of influence of the project, thereby allowing BLM to assess the effects of impacts such as noise, increased fugitive dust, increased vehicular traffic, etc., on surrounding populations, and not just those within the project footprint. 80090-1 (cont.)

Also, the DPEIS requires these surveys at the pre-construction design stage of each individual wind energy project. Commentors would like to see surveys take place before the site testing and monitoring stage as well, especially in those areas where roads are being built in order to provide access to the monitoring site.

With these minor additions to the final PEIS, BLM can help ensure that adequate baseline data is gathered for each specific wind energy project as called for by NEPA.

B. Range and Adequacy of Alternatives

NEPA regulations require that an EIS contain a "full and fair discussion of significant environmental impacts." 40 C.F.R. §1502.1. The discussion must address all significant impacts, whether direct, indirect, or cumulative. 40 C.F.R. §1508.8. The document must analyze the environmental impacts of both the proposed action and alternatives to the proposed action, in comparative form, to "sharply defin[e] the issues and provid[e] a clear basis for choice among options by the decision maker and the public." 40 C.F.R. §1502.14.

NEPA requires that an EIS contain a detailed statement of alternatives to the proposed action. The discussion of alternatives, including the proposed action, is the "heart" of the EIS. 40 C.F.R. § 1502.14; *Druid Hills Civic Ass'n, Inc. v. Fed. Highway Admin.*, 772 F.2d 700, 712 (11th Cir. 1985). See also *NRDC v. Callaway*, 524 F.2d 79, 92 (2d Cir. 1975) (citing *Monroe County Conservation Society v. Volpe*, 472 F.2d 693 (2d Cir. 1972)) (recognizing that the alternatives analysis is "the linchpin of the entire [EIS]"). Specifically, NEPA requires that the preparing agency "[r]igorously 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." 40 C.F.R. §1502.14. Failure to include the full range of alternatives renders the EIS inadequate as a matter of law. *Dubois v. U.S Dept. of Agriculture*, 102 F.3d 1273, 1289 (1st Cir. 1996) ("existence of a non-*de minimis* 'viable but unexamined alternative' renders [an EIS] inadequate") (emphasis in original) (quoting *Resources Ltd., Inc. v. Robertson*, 35 F.3d 1300, 1307 (9th Cir. 1993)). *See also Alaska Wilderness Recreation and Tourism Ass'n v. Morrison*, 67 F.3d 723, 729 (9th Cir. 1995). 80090-2

The three alternatives that are analyzed in the DPEIS are the proposed alternative, a "limited wind energy" alternative, and a "no action" alternative. We offer the following comments on each of these.

1. Proposed Alternative

The proposed alternative proposes siting of future wind energy projects over the next 20 years based in part on a Maximum Potential Development Scenario (MPDS). The MPDS identifies the spatial distribution of the maximum possible extent of wind energy development that may occur on BLM-administered lands in 11 western states during this time period. Existing wind resources were modeled, mapped and assigned class designations on a scale of 1 to 7 based on potential for wind power generation, with 1 being the lowest and 7 the highest. Areas with class 3 resources or higher were considered economically developable.

The second aspect of siting decisions under the proposed alternative concerns the designation of the BLM-administered land concerned. Projects are not to be located where BLM-administered lands are off limits to development by virtue of statutory or administrative controls (i.e., Wilderness Areas, Wilderness Study Areas, National Monuments, and National Conservation Areas). (DPEIS at 2-3). 80090-2 (cont.)

Therefore, the MPDS identifies BLM-administered lands that have the potential to be developed on the basis of present land status and wind resource potential.

Commentors believe that a third selection criterion is necessary in order for the proposed alternative to be adequate under NEPA. Any decision made to site a wind energy development project should reflect use of designated utility corridors in areas where utility corridors have been designated such as in the California Desert Conservation Area. This would minimize or eliminate the need to create new roads in desert habitat. Therefore, the third selection criteria under the MPDS would be "proximity to existing designated utility corridors."

The PEIS should also include more detailed information about when individual wind energy project sites will be chosen under the proposed alternative. At the very least, the document should contain a timetable for such decisions. 80090-3

Commentors support the stated policy of the proposed alternative (DPEIS at 2-6) that: "*The BLM will not issue ROW grants for wind energy development on lands on which wind energy development is incompatible with specific resource values. Lands that would be excluded from wind energy development include designated areas that are part of the National Landscape Conservation System (NLCS) (e.g. Wilderness Areas, Wilderness Study Areas, National Monuments, NCAs, Wild and Scenic Rivers, and National and Historic Scenic Trails) and Areas of Critical Environmental Concern (ACECs).*" 80090-4

However, commentors note that ACECs were not included in the list of off-limits BLM-administered lands in the MPDS potential site analysis. Commentors request that BLM fix this inconsistency in the final PEIS and include ACECs as one of the types of BLM-administered lands expressly off-limits to wind energy development. (DPEIS at 2-3).

Commentors also note that critical habitat designated under Section 4 of the Endangered Species Act (ESA) is excluded from project siting under the 2002 Interim Wind Energy Development Policy. (DPEIS at Appendix A). This policy must be extended to the proposed alternative in order to avoid wind energy project sitings that could result in adverse modification of critical habitat in violation of Section 7(a)(2) of the ESA. BLM needs to match its potential wind energy development maps with species designated critical habitat maps in order to avoid doing so. The designated critical habitat map for the desert tortoise is available at 59 Fed Reg 5820 (Feb. 8, 1994). 80090-5

2. Limited Wind Alternative

The "limited wind energy development" alternative would allow wind energy development on BLM-administered land only where it currently exists (i.e. restricted to existing wind energy projects in Wyoming and California) or where a project is under review or approved for development at the time the ROD is approved for the final PEIS. (DPEIS at 2-26).

Commentors believe this alternative needs to further assess how it would avoid impacts to species and their habitats. A simple statement that there will be "fewer environmental impacts on a regional level as a result of this third alternative because of the restricted level of development" is insufficient. (DPEIS at 2-31) The level of environmental impact is not simply measured by the amount of development, but equally important is the location of such development. An analysis of how siting techniques under this alternative would avoid sensitive habitats is necessary.

Therefore, commentors request that BLM modify its discussion of the "limited wind energy development alternative" to include an analysis of how project siting will pose lesser impacts to sensitive species and their habitats 80090-6

3. No Action Alternative

The "no action" alternative defers to the 2002 Interim Wind Energy Development Policy, under which wind energy development projects would continue on BLM-administered lands with NEPA analysis being prepared on a project-by-project basis.

The difference between the "no action" alternative and the proposed alternative is that the 2002 Interim Wind Energy Development Policy does include the BMPs, policies, and other measures contained in the proposed alternative. Therefore, the "no action" alternative allows wind energy development projects to be constructed and reviewed on an individual basis, without any programmatic policies or practices to guide it.

C. Biological Resources

Direct effects on the desert tortoise cannot not be determined because no specific sites are planned or discussed in the DPEIS. However, the Department of Energy's initial testing shows medium to high wind power project potential in several areas of both the Mojave and Central basin and range of California, Nevada, and Utah, and the Sonoran basin and range of Arizona, which overlap with the desert tortoise's current range. (DPEIS at 5-36, fig. 5.9-1). Therefore, the effects on biological resources discussed in the DPEIS, although not species specific, can be viewed as potential effects on the tortoise. If designated critical habitat is not considered as an exclusion criteria the PEIS should review impacts to both the desert tortoise and to its critical habitat. 80090-7

The Best Management Practices (BMPs) and other measures concerning biological resources included in the DPEIS are separated into the four stages of wind energy project development and decommissioning. The adequacy of the document's analysis of effects on biological resources at each stage is discussed in turn below.

Stage 1: Site Monitoring and Testing

For the site monitoring and testing stage potential effects on biological resources are described as minimal, with some construction (a meteorological tower) and potential access measures planned for each future project area. While the proposed alternative calls for review of "existing information on species and habitats in the vicinity of the project area to identify potential concerns," no up-to-date species surveys are required. (DPEIS at 2-11). The potential road construction, construction of the meteorological tower, and the human activity associated with monitoring of the test site, all have the 80090-8

potential for adversely affecting resident tortoise populations. Some potential effects include crushing of individual tortoise and tortoise burrows by vehicular traffic, as well as new perch sites created for avian predators such as ravens by the construction of the meteorological towers.

Commentors request that up-to-date species surveys be required prior to the site monitoring and testing stage, and, where tortoise or tortoise sign are found to be present, that either the test site be relocated, or, any activities necessary for the site monitoring and testing stage take place outside tortoise breeding season. 80090-8 (cont.)

Stage 2: Construction

For the construction stage, the DPEIS states that the potential effects are considered serious and potentially adverse. The document predicts that the following construction activities will affect the biological resources of the given project area: (1) establishing access to the site, (2) site grading, (3) constructing lay down areas and on-site road system, (4) removing vegetation, (5) installing equipment, buildings, towers and substations, (6) laying cable. (DPEIS at 5-37).

The specific effects of the construction stage on biological resources are predicted to include: fugitive dust, introduction and spread of invasive vegetation, modification, fragmentation and elimination of habitat, mortality of individuals through clearing and grading activities, exposure to contaminants, noise, and interference with behavioral activities. 80090-9

Commentors request a more detailed description of the above mentioned activities and their effects on biological resources. For instance, what level of fugitive dust increase is expected during this stage? What time of year will construction occur? What will the average length of the construction period be? The DPEIS estimates that some wind energy projects will be as large as 1000 acres. How many projects are estimated to be this size? When will their location be determined? Any such project scheduled to take place in tortoise habitat will result in long term habitat loss and it is vital that commentors receive notice of project locations as soon as possible.

Stage 3: Operation

For the operation stage, the DPEIS predicts effects on biological resources by way of electrocution from transmission lines, noise, presence of equipment, exposure to contaminants, site maintenance and daily workforce activities, and predation from an increase in avian predators due to major increase in perch sites.

Commentors request a more complete description of what will be involved in "site maintenance and daily workforce activities." Further, commentors would like to see an estimate of the actual increase in noise levels that will accompany construction. Commentors also request that the final PEIS include a full list of the potential contaminants involved in a wind energy development project, along with what measures will be taken to avoid spills and leaks, and what type of detection devices will be installed on site. 80090-10

Finally, the DPEIS fails to mention the attractive nuisance that will be created by the presence of wind farms and the impact this will have on the biological resources of the area. Wind energy development projects in previously undeveloped areas are sure to attract new human traffic to the area, and with it, the associated impacts on biological resources such as behavioral disturbances, harassment, and species collection. Commentors believe the Final PEIS must mention this impact and discuss what measures will be taken. 80090-11

Stage 4: Decommissioning

For the decommissioning stage, the effects on biological resources are predicted by the DPEIS to be the same as the construction stage, but at a reduced magnitude. 80090-12

Commentors repeat the same requests as included in the *Stage 2: Construction* above. 80090-12 (cont.)

D. Adequacy of Mitigation

Mitigation measures comprise an important part of the scientific and analytical basis for the comparative analysis required under NEPA. 40 C.F.R. §1502.16 (h). NEPA also requires this section to "[i]nclude appropriate mitigation measures not already included in the proposed action or alternatives" 40 C.F.R. § 1502.14.

Commentors find that several of the mitigation measures included in the DPEIS are either vague or unacceptable. The document states that individual wind energy projects should be designed to minimize and mitigate impacts on species "to the extent feasible." (DPEIS at 2-11). However, where federal and state threatened species such as the desert tortoise are involved, BLM *must* design the project to minimize and mitigate impacts to species. "Feasibility" is not a consideration in these situations, and commentors request that this language be removed. 80090-13

The DPEIS also calls for a "habitat restoration plan" to be completed for each individual wind energy project. (DPEIS at 5-84). While commentors find the inclusion of these plans to be an important mitigation measure, the DPEIS lacks any concrete standards concerning the proposed make-up of the plan, or how they will be funded, monitored, etc. Commentors call for a more detailed description of these plans in the final PEIS and specifically request that a habitat restoration bond be required and posted by each individual project operator. 80090-14

Finally, commentors would like a discussion of where funding for all of the mitigation measures proposed in the DPEIS will come from to be included in the final DPEIS. Commentors suggest that a mandate calling for proof of mitigation funding prior to construction of individual projects be included in the final PEIS. 80090-15

E. Cumulative Impacts

The CEQ regulations implementing NEPA clearly direct federal agencies to consider the direct, indirect, and *cumulative* effects of their actions on environmental resources. 40 C.F.R. §1508.8. The regulations define "cumulative effects" 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. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. (40 C.F.R. §1508.7)

80090-16

The discussion of cumulative impacts on ecological resources contained in the DPEIS does not meet this standard. (DPEIS at 6-18,19). The analysis must consider the incremental impacts of the action in conjunction with the impacts of other past, present, and future actions. This requirement means that BLM must look beyond the life of the proposed action. Moreover, the past, present, and future actions that must be evaluated include all actions -- whether federal, non-federal, or private. The DPEIS does not look at cumulative impacts on ecological resources beyond the 20-year period, and does not give an adequate estimation of the impact of long term habitat loss on species.

Commentors suggest that the BLM provide a more comprehensive assessment of the cumulative impacts of the wind energy development program on ecological resources in order to fully meet the requirements of NEPA.

Conclusion

The Desert Tortoise Council and the Desert Tortoise Preserve Committee thank you for the opportunity to comment on the Draft Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States. If we can be of any further assistance, please do not hesitate to contact us by telephone at (951) 683-3872 or by email at <dtpc@pacbell.net>.

Sincerely,

Michael J. Connor, Ph.D.
DESERT TORTOISE COUNCIL
DESERT TORTOISE PRESERVE COMMITTEE

Responses for Document 80090

80090-001: The scope and approach for required site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. This process will include a determination of the area that will be influenced by the project and, therefore, subject to analyses and future monitoring. The need to conduct site surveys prior to any development activity, including site monitoring and testing, will be identified in initial meetings between the BLM and the operator.

80090-002: Designated corridors providing adequate transmission capacity do not exist across the entire 11-state study area and, therefore, would not be a useful selection criterion for developing the MPDS. Designated corridors that do exist, such as those in the CDCA, will be used to the extent they have available transmission capacity.

80090-003: The timing of individual wind energy projects depends on many factors that affect the decisions of private operators to apply for authorization to develop a project on BLM-administered lands. The generation of a specific timetable is inappropriate because of the wide range of circumstances and factors outside the purview of the BLM.

80090-004: As stated in the 1st bullet in Section 2.2.3.1, Proposed Policies, ACECs are one of the types of BLM- administered lands that will be excluded from wind energy development. The MPDS did not include ACECs in the excluded lands, only because comprehensive GIS data for ACEC locations are not available and, therefore, could not be used as a screening criterion. As noted in the footnote to the referenced bullet, even though the ACECs (and other lands to be excluded) were not included in the MPDS, they will be excluded from wind energy development.

80090-005: As required by the Wind Energy Development Program proposed policies and BMPs, species-specific analyses will be conducted for any proposed project on BLM-administered lands. Species of concern and their habitats will be covered by these analyses. The scope and approach for species-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Species-specific analyses are beyond the scope of the PEIS.

80090-006: Regarding the limited wind energy development alternative, it is accurate to state that there will be fewer environmental impacts on a regional level because of the restricted level of development. The environmental impacts of new development at each of the identified development sites will be, or currently are being, examined through project-specific NEPA analyses. Analyses of site-specific impacts for these projects are beyond the scope of the PEIS and would be redundant with project-specific NEPA analyses.

80090-007: Exclusions of specific areas or habitats from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the identification of exclusion areas, will be conducted for any wind energy project proposed for BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project- by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. In addition, the BLM will consult with the USFWS as required under Section 7 of the ESA. The specific consultation requirements will be determined on a project-by-project basis. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. The identification of project- specific exclusion areas is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80090-008: As required by the Wind Energy Development Program proposed policies and BMPs, site monitoring and testing activities on BLM-administered lands will be required to utilize existing roads to the extent possible, and to locate meteorological towers away from sensitive habitats. The proposed policies also require the BLM to consult with the USFWS as required by Section 7 of the ESA on all wind energy projects proposed for BLM- administered lands. The need for species-specific surveys will be determined on a project-by-project basis in consultation with the USFWS and other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific site stipulations for site monitoring and testing that take into account species listed under the ESA. The specific consultation requirements will be determined on a project- by-project basis.

80090-009: As required by the Wind Energy Development Program proposed policies and BMPs, site- and species-specific analyses will be conducted for any wind energy project proposed for BLM-administered lands. The scope and approach of these analyses, which include surveys of wildlife and habitats, will be determined on a project-by- project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. The proposed policies also require that the BLM consult with the USFWS under Section 7 of the ESA. The specific consultation requirements will be determined on a project-by-project basis. BMPs addressing the construction phase of wind energy projects include measures to suppress fugitive dust generation. Through this process, the BLM will develop project-specific design, siting, construction, operation, and decommissioning stipulations for incorporation into the POD.

It is not possible to provide estimates of how many wind energy projects will be developed, nor the specific sizes of individual projects.

All wind energy projects proposed for BLM-administered lands will be required to undergo site-specific environmental assessment as required under NEPA and stipulated in the proposed Wind Energy Development Program policies. The level of analysis will be determined at the Field Office level on a project-by project basis. In certain instances, it may be determined that a tiered EA is appropriate in lieu of an EIS.

The identification of details regarding site-specific surveys, POD stipulations, and environmental assessments is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80090-010: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific environmental assessments will be conducted for any wind energy project proposed for BLM-administered lands. These assessments will address many of the items indicated in the comment. The level of assessment will be determined at the Field Office level. The policies and BMPs also require project-specific PODs to be developed that will identify many of the items requested in the comment (such as work force activities, spill control plans, and pesticide use. A number of the POD components will be developed on a project-by-project basis, in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations and specifications for incorporation into the POD. The presentation of detailed, project-specific analyses, specifications, and plans is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80090-011: Section 5.9.3 discusses the potential adverse effects to vegetation and aquatic ands terrestrial wildlife from increased human access to areas surrounding wind energy projects, especially when they are located in areas with little current public access. These potential effects include legal and illegal take, increased fire, and disturbance, and are highlighted in Tables 5.9.3-1, 5.9.3-2, and 5.9.3-7. No text change has been made to the document in response to your comment.

80090-012: It is not possible in the PEIS to provide a detailed description of the decommissioning activities that may be undertaken at any given site, particularly given that decommissioning may not occur for several decades. A BMP has been added to Section 2.2.3.2.5, Decommissioning, requiring the development and implementation of an approved decommissioning plan prior to termination of the ROW authorization. The decommissioning plan will identify the activities to be undertaken, the potential impacts, and the mitigation measures that will be undertaken. Required elements of the decommissioning plan include a site reclamation plan and monitoring program.

80090-013: The term "to the extent feasible" has been removed from the proposed BMPs. In addition, the language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these

policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

80090-014: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific habitat restoration plans will be required for any wind energy project proposed for BLM-administered lands (see Section 2.2.3.2.2). The scope and approach of the restoration plans will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific habitat restoration plans for incorporation into the POD. Site- specific habitat restoration plans are beyond the scope of the PEIS.

The BLM will require financial bonds for all wind energy development projects on BLM-administered lands to ensure compliance with the terms and conditions of the ROW authorization and the requirements of applicable regulatory requirements, including reclamation costs. The amount of the required bond will be determined during the ROW authorization process on the basis of site-specific and project-specific factors. The BLM may also require financial bonds for site monitoring and testing authorizations. A requirement regarding the establishment of bonds has been added to the proposed policies (see Section 2.2.3.1).

80090-015: The BLM will require financial bonds for all wind energy development projects on BLM-administered lands to ensure compliance with the terms and conditions of the ROW authorization and the requirements of applicable regulatory requirements, including reclamation costs. The amount of the required bond will be determined during the ROW authorization process on the basis of site-specific and project-specific factors. The BLM may also require financial bonds for site monitoring and testing authorizations. A requirement regarding the establishment of bonds has been added to the proposed policies (see Section 2.2.3.1). Noncompliance with the terms and conditions could subject the operator to administrative and possible legal action including termination of the ROW authorization.

80090-016: A new BMP has been inserted in Section 2.2.3.1, Proposed Policies, to ensure that site-specific NEPA analyses will identify and assess any cumulative impacts that are beyond the scope of the cumulative impacts addressed in the PEIS.

Document 80091

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 6:50 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80091

Comments_of_OCE
S_on_DPEIS_2004..

Thank you for your comment, J. Edward Duggan.

The comment tracking number that has been assigned to your comment is 80091. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 06:49:26PM CDT

Wind Energy EIS Draft Comment: 80091

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Attachment: E:\BLM\Comments of OCES on DPEIS_20041209.doc

Comment Submitted:
See Attachment

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

December 10, 2004

BLM Wind Energy Programmatic EIS
Argonne National Laboratory
EAD 900/900, 9700 S. Cass Avenue
Argonne, Il 60439
windeis.anl.gov

For: United States Department of the Interior
Bureau of Land Management
Washington, D.C. 20240

Re: Comments of Oak Creek Energy Systems, Inc. (OCES) on the Draft Programmatic Environmental Impact Statement (DPEIS) on Wind Energy Development on BLM-Administered Lands in the Western United States U.S. Department of Interior – Bureau of Land Management (DOI-BLM).

Introduction

OCES commends the U.S. Department of the Interior (DOI) and it's Bureau of Land Management (BLM) in moving forward the referenced program environmental assessments. Renewable wind energy is increasingly recognized as a key element in America's energy future, possessing dimensions of sustainability, economy and security matched by few other energy resources. DOI-BLM's commitment to a comprehensive

80091-1

and rational framework within which scaled wind energy development can proceed on public-administered lands is consistent with a consensus of public opinion that favors renewable energy.

While the comments below express reservations regarding the preliminary and evolving state of the DPEIS, these are intended to move the PEIS proceeding forward with constructive efficiency. The goal of this PEIS should be to resolve as many broad policy matters as feasible and expeditious within decisioned timelines. A sound foundational document that quiets controversy where consensus has been formed, and organizes the application of planning guidelines is the PEIS mission. While this has yet to be achieved, OCES is confident it can be fashioned, and submits the following comments in that spirit.

80091-1 (cont.)

EXECUTIVE SUMMARY

While the DPEIS represents progress on creating a foundation reference for multiple implementation purposes, the quality of the analysis is uneven. It is strong where it catalogues data issues; it is weak and not sufficiently justified in attempts to assert finalized, detailed Best Management Practices (BMP's) and mitigation programs. The mapping of wind resource estimates, potential development areas and Avoidance and Exclusion areas is a demanding fundamental undertaking of the PEIS. However, these mappings should still be regarded as preliminary, and **are an area where re-circulation for study and comment is required.**

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The proposed mitigations and BMP's addressing impacts to visual resources were narrowly culled, much from a single individual (Gipe) whose orientation to the European project experience is not simply transferable to the U.S. Western lands subject of PEIS, nor cognizant of the needs of developing U.S. national renewable energy resource strategy. While Gipe's sensitivities may find use and acceptance in village and farmstead settlement locales, where permitting is informed by the local building permitting experience, this approach is of marginal utility to industrial and special remote facilities

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siting on BLM-administered lands. The assertion in the PEIS Executive Summary (p. ES-5) that "Ultimately, decisions regarding the magnitude of potential visual impacts would be made by local stakeholders.", **is flat-wrong policy with highly obstructive and draconian potential**, implying a local stakeholder veto based solely on a subjective aesthetic assertion of one response-viewpoint to a potential project. **The PEIS must seek a fair balancing test formulation for assessing visual resource impacts, one that fairly weights effects impacts costs and benefits of wind energy, the light-footprint energy resource.**

80091-3 (cont.)

Additional evaluation of Land Use categorization specific to Wind Energy development applications is needed; the Land-Use conclusions reached in Table C-1 ("Proposed Changes and Rationales for Land Use Plan Amendments") **should be regarded as still preliminary, requiring re-circulation**. Some of the deficiency of the omission of designation of lands for ROW bidding process may be alleviated in extended reviews.

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This PEIS should not be rushed to a Record of Decision (ROD) in a manner that forfeits the overarching mission for a program document that obtains broadest practical consensus and accepted data, criteria and analysis. Modestly extending the PEIS promulgation timeline, employing the use of Supplements for broad areas requiring fuller justification, and focused workshops, are methods to keep the PEIS on a timely track for development. An extended timeline is unquestionably preferable to a PEIS of substantially more limited use and reliability.

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THE DPEIS REQUIRES REFORMATION AND POSSIBLE REORGANIZATION.

THE RECORD OF DECISION (ROD) SHOULD NOT BE PREMATURELY SOUGHT.

Overview

The diversity of the U.S. Western lands subject of the DPEIS is countenanced, and running with that, the extensive nature of the DOI-BLM-Field Office (FO) system that is the operational basis of land stewardship. However, the uneven application and uses to which the DPEIS is proposed to be made for BLM-FO Land Use Plans and Resource Management Plans (RMP) is troubling. While it may not be expected that a uniform set of policies should be perfected at this stage, OCES finds the proposed Land Use applications too ad hoc. The goal of the ROD in this regard should be more ambitious. Leaving so many policy-level deliberations to a Field Office level invites future delays and rounds of meetings and orientations that could otherwise be reduced. A balance should be struck between further PEIS review, and remanding review to FO levels.

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OCES certainly concurs that an adopted PEIS can be used as a foundational tiering document for future Land Use plans and RMP's. However, the wholesale exemption of California and Arizona, as well as other categories exempted from reference, unwisely limits the usefulness of this PEIS. It could invite challenges of incompleteness and discoordination where environmental assessments and mitigations are evolved wholly separate from this program is effort.

Recommendation: *The PEIS should reduce the scope of lands exempted from PEIS application, and propose specific ways to converge and conform exempted areas to it's findings. Supplementation may be a necessary procedural tool.*

I. The quality of proposed Best Management Practices, (BMP), proposals is uneven.

BMP development is a critical work product of the PEIS effort. There is an inherent tension to promulgating specific BMP's while at the same time adhering to the principle that a program-level EIS should not set down specific practices that are more effectively managed at a Land Use plan, RMP and project plan level. While the wind energy industry has the experience to embrace and implement sets of BMP's, it is still a young industry in which the BMP manuals, so to speak, can be expected to evolve. The DPEIS does not recognize this dynamism, nor provide a process to accommodate BMP evolution and updating. 80091-7

Recommendation: *1) BMP's might be "de-coupled" from the PEIS primary assessment, and issued separately in Supplement(s). 2) While the DPEIS notes (p. 5-110) that mitigation measures common to a variety of activities other than wind energy development are not encompassed within this PEIS specific to wind development, a BMP Supplementation strategy or other focused review method, could better coordinate and integrate such common mitigation provision into instructions and BMP's that are specific to wind energy development applications. 3) BMP's should be formally revised every two (2) years in an accepted stakeholder process, for the next ten (10) years.*

SPECIAL TOPIC – Objection to proposed BMP

The visual resources BMP's are narrowly based and cannot be accepted. The DPEIS has distinctly erred in its proposals for BMP's for visual resource impact mitigation. The misconceptions arise broadly along two primary failings: 1) the BMP's are inordinately specific, standing out as a textbook example of specificity that does not belong at a program-level, and 2) a number of BMP's are narrowly based on a single author's (Gipe) opinions, and certainly do not represent an industry consensus, much less a public consensus. Gipe does not have scale development industry experience or 80091-8

engineering knowledge borne from project operations layout and investment criteria, on which to base his ramifying conclusions for BMP for visual resource mitigation.

While the industry recognizes many critical responsibilities for responsibly siting facilities, e.g. reducing avian and other wildlife impacts -- and that siting, contouring, and surface cover management warrant studied siting design and management, the justification for dramatically reducing wind energy development output efficiencies based on subjective human aesthetic responses has not been made. This is extremely controversial because it is inherently subjective. The DPEIS acknowledges this, but then proceeds to incorporate the "Gipe siting guidelines." The unintended consequences of these would be to substantially reduce project efficiencies in many cases. Electrical output could be reduced to as little as to one-half or one- third of optimal feasible output (H. Romanowitz, OCES, 2004).

The proposed BMP's to mitigate visual impacts do not and cannot integrate and rationalize aesthetics with other site-specific conditions including wildlife impact avoidance and mitigation. Further unintended consequences of harms to wildlife could occur by following the specific aesthetics-based BMP's "from above" in the PEIS. This could indeed occur if such BMP's were used as a cudgel to distort siting deliberations and reviews.

80091-8
(cont.)

The consequent loss of project efficiencies from irrational siting BMP's would be multiply perverse:

1) infeasibility of development;
2) loss of renewable energy resource opportunity, and consequent increased environmental impacts from much higher-impact energy fossil-fuel sources.

Another clearly foreseeable perverse impact of projects that attempted to labor under foolish siting criteria, would be a reduced revenue basis that would directly translate to reduced commitment and funding of mitigation measures generally.

Recommendation: *Visual resource impact BMP's, as well as any other BMP area found deficient and /or controversial, should be subjected to further DPEIS review. Special surveys and studies of the states-of-art and engineering, as well as stakeholder workshop(s), may be warranted and useful to achieving resolutions at PEIS level, that will intelligently inform local visual impact planning concerns.*

80091-8 (cont.)

II. The proposed mappings and adoptions of "Excluded, " "Avoidance," and "Automatic-Avoidance" Areas is premature, overreaching and not fully justified commensurate with implications.

The mapping of wind resource potential and development eligibility and exclusion boundaries is recognized as a foundational element of the PEIS, and the efforts thus far represent hard work and progress in defining the fields. However, the implications of prematurely adopting such maps as "bright line" finalized determinations are so sweeping, that this aspect of the DPEIS **must remain at a draft/preliminary stage for some circulation, and even special additional study.** OCES does not see the requisite policy consistency and coherence in Land Use designations that are proposed. The justification in many Land Use designations in Table C-1 are simply not in the record or not referenced. While preservation designations such as exist in the NLCS designations have basis, they may prohibit wind projects at sites within NLCS areas that can leave a lighter footprint and impacts than currently exist due to built-environment impacts.

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What is suggested here, is not wholesale revisitations of such broad designations as encompassed by the NLCS, but rather, **drawing of an exemption or permitting process for wind development that would be subject to more stringent standards and constraints, and showings of needs in restricted areas**. Additionally, where state and local public jurisdictions or entities make application for wind energy development, or support such development, such showing should be accorded increased weight as a matter of policy.

The DPEIS wind resource mappings do not account for fundamental technology-change factors, such as breakthroughs in energy storage, and incremental evolution of the electrical grid's resiliency and flexibility. The mappings do not account for radical market-change events in hydro-carbon markets, or catastrophic events and trends that could shift energy reliance ever-more into the electrical sector. Major shifts in sectoral sourcing of energy (e.g. increased use of electricity in transportation) could have dramatic effects on wind energy source economics and desirability.

It is not expected the DPEIS should depart deeply into academic and highly speculative scenarios. However, scenario analysis based on limited sets of assumptions and factors should be performed, at least to provide a better understanding of when and how mappings accepted for Land Use decisions are revised.

80091-9 (cont.)

"Checkerboard" holdings. For BLM-administered lands designated as Avoidance or Exclusion "checkerboarded" amongst private holdings, exemption/permitting criteria and showing requirements should be promulgated. This is required in recognition of the property interests of private holders.

Recommendation: *1) In addition to the recommendations above for land use review and mappings, consideration of an additional/alternative system is of categories and layers that is wind-development specific is in order. Project permitting through exceptional showings, land-use overlays for incidental activities, and other categories of development-related activity, e.g. ROW use can provide flexibility without loss of desired protection. Surveys, studies and workshop(s) can assist the drawing of alternative Land-Use categories. 2) Consideration should be given to de-coupling the mapping and land-use designations onto a Supplemental-issuance track.*

III. Omission of designation of lands for ROW bidding process represents another major DPEIS discontinuity.

It is recognized that there is a speculative nature to attempting to scope ROW transmission relationships to generation project proposals in an ever-evolving electrical grid. However, to completely bypass it from PEIS cognizance, may be to introduce major future environmental clearance barriers – likely it will appreciably lengthen on-line startup times and costs. The PEIS needs to make more clear, a BLM policy commitment to wind energy development, addressing transmission issues with more guidelines and direction. Again, it may serve to de-couple assessment, policies and BMP development onto a Supplementation track. 80091-10

Other existing activities and new ones sought for use of BLM-administered lands also have needs for established as well as new utility corridors. This too, is daunting and sprawling analysis that needs coordination. ROW corridors for wind energy use may well be integrated and coordinated with other activities. OCES is not prepared to suggest what level of coordination can be achieved at this juncture. An effort at displaying existing accepted utility corridors within this PEIS appears to be a minimum task that should be included in PEIS Appendices.

PROCEDURAL CONCLUSION:
STATUS AND DIRECTION OF THE DPEIS

OCES's response comments raise such substantive reservations and recommendations that the DOI-BLM must carefully evaluate the appropriate procedural next-steps. Four follow-on review pathways are summarized here, to assist in a strategy for the comprehensive PEIS sought. Options include:

1) **Telescope the PEIS proceeding**, permitting extended DPEIS re-circulation and comment period (e.g. six months), workshops, surveys, special analyses / studies.

2) **De-couple major work-group / study areas, e.g. for:**
   a) Best Management Practices (BMP) development;
   b) mapping, Land Use categorization specific to Wind Energy Development; promulgation of exemption/permitting method(s) for restricted areas;
   c) method (s) for designation of lands for ROW bidding process;

3) **Combination of 1) and 2)**

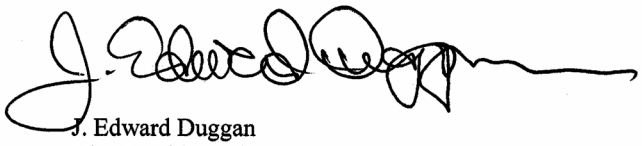
4) **Determining methodological areas that should be subject to periodic formal updating (2, 5, 10 years)**

80091-11

Closing comment. Within a reformed and reorganized PEIS development effort, a more coherent and consistent framework for relating PEIS policies, work products, Supplements (potential), and future updates (potential) should be established. The administrative efficiencies inherent to more detailed time lining and application to Land Use plans and RMP's will be substantial, and undoubtedly accelerate renewable wind energy development, a fast-rising national energy mission. 80091-11 (cont.)

OCES appreciates this opportunity to contribute comments and recommendations to the DPEIS review.

Respectfully Submitted,



J. Edward Duggan
Vice President of Operations
Oak Creek Energy Systems, Inc.

Responses for Document 80091

80091-001: Thank you for your comment. We appreciate your input and participation in the public review process.

80091-002: The level of analyses conducted, as well as the scale and resolution in the maps, in the PEIS is appropriate for a programmatic evaluation and is adequate to support the development of policies and BMPs. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM- administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. In addition, the BLM is committed to full implementation of the proposed Wind Energy Development Program, elements of which require the incorporation of adaptive management strategies and comprehensive monitoring programs at all wind energy development sites (see Section 2.2.3.1, Proposed Policies, last bullet, and Section 2.2.3.2.2, Plan of Development Preparation, General, 7th bullet). The application of adaptive management strategies will ensure that programmatic policies and BMPs will be revised as new data regarding the impacts of wind power projects become available. The source for a significant portion of the new data is likely to be the required site-specific monitoring programs that will evaluate environmental conditions at a site through all phases of development. A key requirement for the site-specific monitoring programs is the requirement that monitoring observations and additional identified mitigation measures be incorporated into standard operating procedures and project-specific BMPs.

80091-003: The proposed mitigations for addressing visual impacts were selected from a variety of sources, including existing BLM Visual Resource Management policies and available literature specific to wind power. The involvement of local stakeholders, defined as all interested parties (including federal, state, and local agencies; Tribal governments; local residents; and members of industry), is a necessary part of the environmental review process.

80091-004: The scope of the proposed land use plan amendments identified in Appendix C is limited to the adoption of the Wind Energy Development Program proposed policies and BMPs and the identification of a limited number of additional exclusion areas. The BLM has determined that the PEIS process adequately meets the NEPA requirements for public review of these proposed amendment changes. As required by the proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project

basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. The scope and appropriate level of site-specific NEPA analyses will assess local conditions and site-specific environmental impacts, and will support the development of project-specific stipulations.

The identification of lands for competitive ROW bidding will be addressed in local land use planning activities as local interest develops.

80091-005: Thank you for your comment.

80091-006: The proposed land use plan amendments are expected to facilitate the processing of ROW applications for wind energy development on BLM-administered lands. Table 2.2.4-1 explains that plans in California and Arizona are not included because plan amendments that address wind energy development are already underway in those states, or are planned. Text in Section 2.2.4 states that plans not amended by the PEIS can be amended or revised in the future to address wind energy development. Therefore, it is inaccurate to say that there has been a "wholesale exemption of California and Arizona." The exclusions of BLM-administered lands from wind energy development proposed in the PEIS were determined on the basis of analyses of several laws, regulations, and policies that preclude development of any kind (e.g., the Wilderness Act). Providing a clear definition of these exclusions in the proposed program will allow prospective wind energy developers to focus their efforts on lands that are available for wind energy development subject to the policies and BMPs described in the PEIS.

80091-007: The BLM is committed to full implementation of the proposed Wind Energy Development Program, elements of which require the incorporation of adaptive management strategies and monitoring programs at all wind energy development sites (see Section 2.2.3.1, Proposed Policies, last bullet, and Section 2.2.3.2.2, Plan of Development Preparation, General, 7th bullet). The application of adaptive management strategies will ensure that programmatic policies and BMPs will be revised as new data regarding the impacts of wind power projects become available. The source for a significant portion of the new data is likely to be the required site-specific monitoring programs that will evaluate environmental conditions at a site through all phases of development. Other sources of new data will be research and development activities undertaken by federal and state agencies, industry, and interested stakeholders.

80091-008: Many sources were consulted in developing the recommendations in Section 5.11.6 and the BMPs in Section 2.2.3.2.2, Visual Resources, for mitigating visual impacts. Design decisions will be made at a site-specific level in conjunction with input from other federal, state, and local agencies, and interested stakeholders (as part of the environmental review process) and other environmental and cost-benefit considerations. The scope and approach for site-specific analyses will be determined on a project-by-project basis. Through

this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

80091-009: Exclusion of the National Landscape Conservation System (NLCS) (with the exception of the California Desert Conservation Area, see Section 5.10.1) and Areas of Critical Environmental Concern (ACECs) from most development, including wind energy development, is consistent with BLM national policy and is appropriate for application and use in defining wind energy development opportunities at the programmatic level. The maps included in the PEIS are appropriate for the level of analyses required to develop and evaluate a Wind Energy Development Program. Given the size of the 11-state study area and the scale of the maps presented in the PEIS, it is not feasible to evaluate wind energy resources, the status or condition of BLM lands, or other spatial attributes at a more local level. Furthermore, such an evaluation would not enhance or improve upon the effectiveness of the Wind Energy Development Program. As required by the program's policies and BMPs, detailed analyses of specific parcels of BLM-administered land will be conducted at the site-specific level on a project-by-project basis. More specific information about the location of lands excluded from wind energy development can be obtained at the local Field Office. The Program requires that BLM employ adaptive management strategies to the oversight of wind energy development on BLM-administered lands. The BLM will monitor the level of wind energy development into the future as well as the effectiveness of its policies and BMPs. If necessary, adjustments to the programmatic requirements will be made.

80091-010: As discussed in Sections 1.2 and 2.2.4, none of the alternatives in the PEIS includes amendment of land use plans to provide for competitive right-of-way bidding, in part, because interest in this approach was limited to two areas in California (the Palm Spring-South Coast Field Office and the Ridgecrest Field Office). If competitive bidding is conducted, it will be addressed on a case-by-case basis in local BLM land use planning efforts.

Section 6.4.3 acknowledges that wind energy development on BLM-administered lands may require the construction of new transmission lines. Such construction is considered to be a separate but related activity and will require interagency cooperation and multidisciplinary environmental reviews. New text has been added to Section 6.4.3, to describe the existing and proposed rules and regulations governing wind project grid interconnections and transmission system upgrades. These regulations will be applicable to wind energy development projects on BLM-administered lands.

The designation of new transmission corridors on BLM-administered lands will occur as a result of interagency consultations, not as a result of a unilateral decision by the BLM. Any such designations would be evaluated through either regional or local land use planning efforts, with opportunities for full public

involvement. The potential impacts of transmission system interconnects or expansions that would be required by an individual wind energy project on BLM-administered lands will be assessed as part of the site-specific analyses, with input from other federal, state, and local agencies, and interested stakeholders. The maps in Appendix B include available information showing existing transmission lines. Maps displaying existing utility corridors have not been added to the PEIS; this information will be evaluated on a project-by-project basis.

80091-011: The level of analyses conducted in the PEIS is appropriate for a programmatic evaluation and is adequate to support the development of policies and BMPs. The BLM has determined that the PEIS process adequately meets the NEPA requirements for public involvement. Site-specific analyses to support the development of project-specific requirements will be conducted for all proposed wind energy development projects on BLM- administered lands in conjunction with input from other federal, state, and local agencies, and interested stakeholders.

In addition, the BLM will require the incorporation of adaptive management strategies and appropriate monitoring programs at all wind energy development sites (see Section 2.2.3.1, Proposed Policies, last bullet, and Section 2.2.3.2.2, Plan of Development Preparation, General, 7th bullet). The application of adaptive management strategies will ensure that programmatic policies and BMPs will be revised as new data regarding the impacts of wind power projects become available, and that additional mitigation measures will be incorporated into standard operating procedures and project-specific BMPs if needed to mitigate impacts.

Document 80092

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 7:42 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80092

Thank you for your comment, Gene Sentz.

The comment tracking number that has been assigned to your comment is 80092. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 07:41:43PM CDT

Wind Energy EIS Draft Comment: 80092

First Name: Gene
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Address: PO Box 763
City: Choteau
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Zip: 59422
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Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
Thank you for studying wind power. We need that.

Please don't allow windmills on public land along Montana's Rocky Mountain Front west of Highway 89 and Highway 287. 80092-1

Thank you.

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80092

80092-001: Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific stipulations for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS.

Document 80093

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Friday, December 10, 2004 8:13 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80093

RNP_BLM_Comments_80093.pdf (28...

Thank you for your comment, Troy Gagliano.

The comment tracking number that has been assigned to your comment is 80093. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 10, 2004 08:12:26PM CDT

Wind Energy EIS Draft Comment: 80093

First Name: Troy
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State: OR
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Country: USA
Privacy Preference: Don't withhold name or address from public record
Attachment: /Big Millie Shared Files/Troy/RNP BLM Comments.pdf

Comment Submitted:
Attached are the comments from the Renewale Northwest Project for the BLM Wind PEIS. If you do not receive the 16 pages of comments please contact our office at 503.223.4544

Thank you,

Troy Gagliano

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

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Renewable Northwest Project

December 10, 2004

BLM Wind Energy Programmatic EIS
Argonne National Laboratory, EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

Dear BLM Staff:

We appreciate the opportunity to comment on the Bureau of Land Management's Wind Draft Programmatic EIS (PEIS). The Renewable Northwest Project (RNP) is a unique combination of consumer groups, renewable energy companies and environmental organizations that advocates for the development of new and properly sited solar, wind and geothermal resources in the Pacific Northwest.

In recent years, economics, technology and policy have converged to greatly expand the use of wind power across the BLM's eleven-state region. We expect this growth to continue as wind power compares even more favorably to traditional resources and as state and regional energy policies encourage further development. Five of the eleven states in BLM's region have renewable portfolio standards in place and more are considering them. Also, the Western Governor's Association is calling for the development of 30,000 MW of new "clean energy resources" across the west by the year 2015. Many of the strong wind resources that run across BLM lands can be tapped to meet these goals. Wind energy developers are already seeking permits to build on BLM land and we commend the Bureau for seeking to streamline this process. 80093-1

We hope that this proposed Wind Energy Development Program results in clear and consistent guidelines that determine how BLM manages right-of-way (ROW) applications and grants for wind energy. Without this streamlined program, the length of time necessary to review, process, and approve ROW applications for wind energy projects would be overly burdensome for many developers; a fact that runs contrary to the National Energy Policy's goal of developing renewable energy on federal lands. The "no action alternative" proposed in the Draft PEIS would lead to inconsistencies in the type and degree of mitigation required for individual wind projects.

Our comments are divided into three sections. The first section refers the BLM to the State of Washington's Department of Fish and Wildlife (WDFW) Wind Power Siting Guidelines. These guidelines are relevant to a number of issues in the Draft PEIS. The second section highlights some areas that we support and the third section offers suggestions and highlights some areas of concern.

I. Washington Department of Fish and Wildlife Wind Power Siting Guidelines
We are pleased to see that this draft PEIS mentions the WDFW siting guidelines. RNP, wind project developers and environmental consultants worked with the WDFW for over a year to develop these fair and consistent guidelines for pre-project assessment studies and habitat mitigation. We refer the BLM to the WDFW Siting Guidelines because they are relevant to many sections of the Draft PEIS that focus on avian issues and other general mitigation measures. (For convenience, this brief, 10-page document is attached to the end of these comments.) Although the guidelines contain some mitigation measures specific to habitats in Central and Eastern Washington, they can assist BLM in determining what site-specific studies and mitigation measures might be needed for similar habitat types. 80093-2

A.) Section 2.2.3.2.2: Plan of Development Preparation
This section states, "A monitoring program shall be developed to ensure that environmental conditions are monitored during the construction, operation, and decommissioning phases. 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. 80093-3

- We refer BLM to pages 3 and 4 of the WDFW Guidelines under "Operational Monitoring" where a Technical Advisory Committee is suggested for monitoring purposes. If unanticipated biological impacts become apparent from the first-year monitoring data, then the Technical Advisory Committee would make suggestions to the permitting agency on additional mitigation and/or studies.

B.) Page 5-64
This section states, "To the extent feasible, the project should be designed to minimize or mitigate the potential for raptor strikes. Scientifically rigorous raptor surveys should be conducted…" 80093-4

- We refer BLM to page 1 of the WDFW Siting Guidelines under "Raptor Nest Surveys".

C.) Section 6.1.2: Environmental Impacts
This section states, "At the project level, operators would be required to develop monitoring programs to evaluate the environmental conditions at the site through all phases of development, to establish metrics against which monitoring observations could be measured, to identify potential mitigation measures, and to establish protocols for incorporating monitoring observations and new mitigation measures into standard operating procedures and project-specific BMPs." 80093-5

- We refer BLM to pages 3 and 4 of the WDFW Guidelines under "Operational Monitoring" where a Technical Advisory Committee is suggested for monitoring purposes.

II. General Support
Some of the ideas contained throughout the Draft PEIS that we support include:

A.) Individual Nature of Each Site 80093-6
- We are pleased to see the PEIS state that each wind power site has unique characteristics and that the amount of environmental assessment and mitigation required for each should be determined on a project-by-project basis. We also support the notion that assessment and mitigation should be negotiated with BLM, USFWS, and relevant state wildlife

agencies so long as there is coordinated effort among the agencies and a specific timeline is established to which all must adhere.

B.) Wind Power has Less Environmental Impact

- **Section 2.6.2: Comparison of Environmental Impacts**
  We support the statement that "indirect environmental impacts could be greater under both the no action and the limited wind energy development alternatives" if they resulted in more fossil fuel power plants. As discussed in Section 6.4.2, land area disturbance, air quality, water use, and waste generation impacts associated with traditional energy sources are greater than those associated with wind energy.

80093-6 (cont.)

C.) Early Stakeholder Involvement

- **Early Involvement of Tribes, Relevant Agencies and Stakeholders (Sections 2.2.3.2.2; 5.10.5)**
  "Federal and state agencies, property owners, and other stakeholders should be contacted as early as possible in the planning process to identify potentially sensitive land uses and issues, rules that govern wind energy development locally, and land use concepts specific to the region."

III. General Comments

A.) 2.2.3.1: Proposed Policies
Department of Defense Involvement
This section states, "Entities seeking to develop a wind energy project on BLM-administered lands, in conjunction with BLM Washington Office and Field Office staff, shall consult with the U.S. Department of Defense (DoD) regarding the location of wind power projects and turbine siting as early in the planning process as appropriate. This consultation shall occur simultaneously at both the installation/field level and the Pentagon/BLM Washington Office level."

- Does this suggest that every wind project developer seeking permission to build on BLM land must consult with DoD, or is consultation required only if a project is within a certain distance from DoD facility or on DoD land? If it is the latter, then it seems reasonable to have DoD involved. Otherwise, requiring consultation with DoD on every wind project seems contrary to BLM's goal of streamlining the process for developing wind projects on federal land. We are not aware of any DoD staff specifically dedicated to consulting with wind energy developers. Requiring this for all wind projects on federal land would be overly burdensome and discourage development on federal lands. It would be helpful to establish a threshold that determines when DoD involvement is required. BLM staff should be educated about this threshold so they can best assist developers and other interested parties.

80093-7

B.) Section 2.2.3.2.2
This section states: "…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."

- Siting should be based on environmental assessment studies that determine whether a particular location is a risk to species of concern. Many existing wind projects are located near areas with high bird usage, in migration
  pathways, near wetlands and other areas with a high incidence of fog and mist that do not experience high rates of avian mortality.

80093-8

C.) Section 3.2: Land Use
This section states, " 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."

80093-9

- The term "special" is vague and may be open to individual interpretation. "Special land use determinations" must be defined.

D.) 3.3.2: Public Safety
This Draft PEIS correctly states that, "Today, with proper engineering design and quality control, blade throw should rarely occur" and that "such an occurrence has been extremely rare."

80093-10

- Ice throw, also mentioned here, is another rare occurrence. The sufficient setback from residences, roads, and other access areas that permitting agencies require should address this issue. These setbacks also mitigate potential noise and visual impacts.

E.) 4.10.1: Wind Energy Contributions to Electricity Production Capacity
This section states that based on "data forecasting in the *Annual Energy Outlook 2004* (DOE 2004a) and State Electricity Profiles (DOE 2004b), renewable energy sources are expected to provide an important share of energy capacity growth in a number of states over the period 2005 through 2025. This is the case particularly in Idaho, Montana, Oregon, and Washington, where renewables are expected to equal or exceed the share of fossil fuel generating capacity in these states. The importance of renewable energy sources in these states is largely due to the contribution of hydropower resources. In contrast, wind energy contributions to overall electricity production capacity over the same time period are expected to be of minor importance, making up less than 10% of new capacity in most states."

80093-11

- Although hydropower is currently the renewable energy resource that contributes the most to the energy mix in the Northwestern United States, this statement implies that the hydropower system will expand and remain the largest renewable energy resource from 2005 through 2025. We already have a large, existing hydropower system and it is unlikely that it will expand greatly by 2025. In contrast, we believe that wind power will continue to expand in the near future and that other renewable technologies should expand by 2025 as their costs become more competitive.

- Wind energy making up 10% of new capacity in the BLM eleven-state region is not "of minor importance" as stated above. That would be a tremendous expansion of wind energy, much of which may be developed on BLM land.

F.) 5.5.2: Site Construction
This sections states, "In general, construction activities would last for a short period (1 or 2 years at most)."

80093-12

- The environmental assessment, development and construction phases together may last more than one year, but in our experience the construction phase itself for many large wind projects in the Pacific Northwest is often between 3-6 months.

G.) 5.3.2.1: Use of Water Resources
This section states, "A number of construction activities would use water. Because the construction phase may last more than 1 year, potentially significant amounts of water would be needed."

80093-13

Wind turbines use very little water over their 20-30 year operating lifetime. Unlike traditional power plants, wind turbines do not require copious amounts of water for electricity generation; only small amounts are required to wash turbine blades.

H.) Section 5.9.5.2.1
This section states that, "Permanent meteorological towers, transmission towers, and other facility structures should be designed so that they cannot be used for perching or nesting by birds."

80093-14

- Wind developers can design sites so that perching is minimized, but they can not completely prevent birds from perching at sites.

I.) Table 5.9.3-3: Avain Impacts
All forms of human development, including wind turbines, affect the natural habitat. Most of the avian mortality associated with wind power occurs at the Altamont Pass Wind Resource Area in Central California. This was one of the first large wind sites and it was built in the early 1980s long before developers and wildlife experts knew how to properly site these facilities. Over the last twenty years the wind industry and scientists have learned a tremendous amount about micrositing techniques. Consequently, avian mortality at modern wind projects has been greatly reduced. For the most recent information about wind turbine and avian interaction, see the study from the National Wind Coordinating Committee found at:

http://www.nationalwind.org/pubs/wildlife_factsheet.pdf

80093-15

The seventh bullet in this section states, "Discussion should be held with the appropriate BLM Field Office staff regarding the occurrence of sensitive species or other valued ecological resources in the proposed project area."

- We applaud this suggestion and hope that there will be sufficient BLM staff committed specifically to wind power that will serve as the point person for this information.

J.) BLM Guidance Documents
According to section 3.6.2, there are BLM program-specific guidance documents that identify mitigation measures for activities on program-specific BLM-administered lands that may be applicable to wind energy development projects. We would encourage BLM to have these documents readily available and easily accessible for applicants in both hard copy and electronic forms.

80093-16

K.) 5.9.5.2.2: Mitigating Site/Wildlife Interactions.
This section states, "Electrical supply lines should be buried to the extent practicable."

80093-17

- While buried lines may be practical at certain locations, for example sites on already disturbed land, burying them under critical habitats like shrub steppe may do more damage to the habitat. This should be determined on a site-by-site basis.

L.) Lighting
The PEIS addresses lighting in various sections and on Page 5-65 is states that, "the FAA should be consulted so that only white strobe lights with a minimum number of flashes per minute are used."

80093-18

- There are discussions among wind industry stakeholders of whether red lights attract birds more than white lights and the FAA is currently considering revisions to its wind power project lighting requirements. Wind developers should comply with what the FAA's determines.

Conclusion
We commend the BLM for its efforts to streamline the permitting of wind energy projects on its lands. As mentioned earlier, the WDFW Wind Power Siting Guidelines follow this section. RNP was instrumental in crafting these guidelines and we invite the BLM to contact us with any questions that may arise.

Sincerely,

Troy Gagliano
Senior Policy Associate

Attachment to Document 80093

Washington Department of FISH AND WILDLIFE

August 2003

SECTION 1

BASELINE AND MONITORING STUDIES FOR WIND PROJECTS

PRE-PROJECT ASSESSMENT

The primary purposes of pre-project assessment studies are to 1) collect information suitable for predicting the potential impacts of the project on wildlife and plants and 2) design the project layout (e.g., turbine locations) so that impacts on biological resources are avoided and minimized. To the extent possible, this pre-project assessment may utilize existing information from projects in comparable habitat types in locations close to the proposed project. The site-specific components and the duration of the assessment should depend on the size of the project, the availability and extent of existing and applicable information in the vicinity of the project, the habitats potentially affected, the likelihood and timing of occurrence of Threatened and Endangered and other Sensitive-Status species at the site, and other factors such as issues and concerns identified during public scoping. Each component is discussed below. The results of the information review and baseline studies should be reported to the affected stakeholders (e.g., state and federal wildlife agencies) in a timely fashion.

Information Review

Existing information on species and potential habitats in the vicinity of the project area should be reviewed and if appropriate, mapped. Sources of existing information should include resource agencies, local experts, recognized databases (e.g., Priority Habitats and Species [PHS] database), and data gathered at other nearby wind plants or other types of projects. This information should be used to develop a current state-of-the-art field and analysis protocol that is reviewed and approved by the state wildlife agency.

Habitat Mapping

Key information about general vegetation and land cover types, wildlife habitat, habitat quality, extent of noxious weeds, and physical characteristics within the project area should be collected and compiled using current state-of-the-art protocols.

Raptor Nest Surveys

At a minimum, one raptor nest survey during breeding season within 1-mile of the project site[1] should be conducted to determine the location and species of active nests potentially disturbed by construction activities, and to identify active and potentially active nest sites with the highest likelihood of impacts from the operation of the wind plant. A larger survey area (e.g., a 2-mile buffer) is recommended if there is some likelihood of the

[1] Site – a project "site" for the purposes of addressing potential raptor nest disturbances is defined as the furthest extent of a ground disturbing activity and includes gravel sites used for construction, overhead and underground electrical routes, new and upgraded substations.

occurrence of nesting state and/or federally threatened and endangered raptor species (e.g., ferruginous hawk, bald eagle, golden eagle), or if empirical data on displacement impacts may be monitored after construction (see Research-Orientated Studies Below).

General Avian Use Surveys
A minimum of one full season of avian use surveys is recommended following current state-of-the-art protocols to estimate the use of the project area by avian species/groups of interest during the season of most concern (usually spring/early summer). Additional seasonal data (e.g. fall or winter) is recommended in the following cases: 1) use of the site for the avian groups of concern is estimated to be high relative to other projects, 2) there is very little existing data regarding seasonal use of the project site, and/or 3) the project is especially large. This additional avian use data should be collected to refine impact predictions and make decisions on project layout.

Surveys for Threatened, Endangered and Sensitive Species
If existing information suggests the probable occurrence of state and/or federal threatened or endangered or sensitive-status species on the project site at a level of concern, focused surveys are recommended during the appropriate season to determine the presence or likelihood of presence of the species. For example, if bald eagles are expected to winter in concentrations in the project vicinity, targeted surveys to estimate bald eagle use of the site would be appropriate.

MINIMIZATION OF WILDLIFE IMPACTS
One goal of the pre-project assessment is to help design the project to avoid, reduce and minimize impacts to habitat and wildlife. Below are some considerations for avoiding and minimizing impacts to wildlife.

Avoid Impacts

- Encourage development in agricultural and already disturbed lands, including using existing transmission corridors and roads where possible.
- Use of tubular towers is recommended to reduce the ability of birds to perch on towers and to possibly reduce the risk of collision. Discourage the use of lattice towers, particularly those with horizontal cross-members.
- Discourage tower types that employ guy wires. If guy wired towers are approved, encourage the requirement of bird flight diverters on the guy wires.
- Avoid high bird concentration areas, especially concentration areas of sensitive status species, and breeding sites.
- Discourage the use of rodenticides to control rodent burrowing around towers.
- Encourage the protection of PHS priority habitats.

Minimize Impacts

- Minimize use of overhead power lines.[2]
- When overhead lines are used, use designs that avoid and minimize impacts to raptors and other birds (e.g., adequate conductor spacing, use of perch guards).
- Minimize the use of lights on towers, in accordance with federal, state, and local requirements, wherever possible because they may attract flying wildlife to the vicinity of the turbines in certain conditions.
- Encourage the control of noxious weeds in accordance with federal, state, and local laws. Encourage the control of detrimental weedy species that invade existing habitat as a result of disturbance from construction and operation.
- Encourage the requirement of a complete road siting and management plan, including vehicle-driving speeds that minimize wildlife mortality.
- Encourage the requirement of a fire protection plan.

Reduce or Eliminate Impacts Over Time

- Encourage a decommissioning condition that would require removal of the turbines and infrastructure when it ceases operation, and restoration of the site to approximate pre-project conditions.

OPERATIONAL MONITORING

As is the case with most development, some mortality of bats and birds is expected to result from wind power projects. However, it is anticipated that significant impacts to wildlife can be avoided or lessened at most wind projects if proper pre-project assessment is implemented and good project design and management practices are established. Monitoring studies, such as carcass surveys, using current state-of-the-art protocols are required to determine the actual direct impacts of the wind farm on birds. The duration and scope of the monitoring should depend on the size of the project, and the availability of existing monitoring data at projects in comparable habitat types.

A Technical Advisory Committee (TAC) is recommended to be responsible for reviewing results of monitoring data and making suggestions to the permitting agency regarding the need to adjust mitigation and monitoring requirements based on results of initial monitoring data and available data from other projects. The range of possible adjustments to the monitoring and mitigation requirements should be clearly stated in the project permit (e.g., Conditional Use Permit). Adjustments should be made if unanticipated impacts become apparent from monitoring data. Examples of such changes

[2] However, use of overhead power lines might be warranted if habitat type is of concern.

may include additional monitoring or research focused to understand the identified impacts (e.g., bats) and creation of raptor nesting structures (artificial or natural, on or off-site) if significant impacts to raptor species are identified. Adjustments that are not feasible because they would make the wind project un-financeable include removing turbines or shutting down turbines during certain periods of the year. Adjustments can also reduce monitoring requirements based on monitoring data and site-specific conditions.

Potential members to the TAC include stakeholders such as state and federal wildlife agencies, the developers, environmental groups, landowners, and county representatives. Protocols for conducting the monitoring study and procedures for reporting and handling, and rehabilitating injured wildlife should be reviewed by the TAC. Progress reports summarizing the monitoring results should be reported to the TAC on a quarterly basis. Reporting schedules and scope of reports will be developed in the event of unusual unanticipated avian mortality.

RESEARCH-ORIENTED STUDIES

Standard pre-project assessment studies and standard fatality operational monitoring have been distinguished from more research-orientated studies. At some projects, additional studies that utilize pre-construction data may be conducted to test specific research hypotheses about impacts to a particular species or group of species. Rather than being necessary for pre-permit assessment, such studies are often more research-oriented and often are focused on indirect impacts, such as displacement, that provide information for future projects. Examples include the use of gradient analysis in understanding the level of displacement of grassland nesting birds as a function of distance from turbines or raptor nest monitoring comparing density and nest success before and after operation of the wind plant. If such studies are determined to be important to the overall understanding of wind energy/wildlife interactions, they should be designed to follow appropriate experimental designs and state of the art protocols (Anderson et al. 1999, Morrison et al. 2002). Funding for these more research- oriented studies should be solicited from multiple sources, including the wind industry, environmental groups, state and federal agencies, advocacy groups and other sources.

REFERENCES

Anderson, R.L., M.L. Morrison, K. Sinclair, M.D. Strickland. 1999. Studying wind energy/bird interactions: a guidance document. National Wind Coordinating Committee Avian Subcommittee.

Morrison, M.L., W.M. Block, M.D. Strickland, and W.L. Kendall. 2001. Wildlife study design. Springer-Verlag New York, Inc., New York, NY. 210 pp.

SECTION 2
WIND PROJECT HABITAT MITIGATION

General Principles for Wind Project Siting and Mitigation
These principles are intended for projects proposed for sites east of the Cascades, where almost all wind projects have been proposed to date. These principles would require review and revision for sites west of the Cascades.

- Implementation of the mitigation measures contained in this proposal are presumed to fully mitigate for habitat losses for all species, including species classified as "protected," in the Washington Administrative Code, but excluding species classified as state "endangered" or federally "threatened" or "endangered," for which additional species- and site-specific mitigation may be necessary.
- Wind project developers should be encouraged to site wind power projects on disturbed lands (i.e., developed, cultivated, or otherwise disturbed by road or other corridors).
- Wind project developers should be encouraged to place linear facilities (such as collector cable routes, transmission line routes, or access roads) in or adjacent to existing disturbed corridors in order to minimize habitat fragmentation and degradation.
- Wind project developers should be discouraged from using or degrading high value habitat areas, especially shrub-steppe habitat in "excellent" condition.
- Wind project developers are responsible for acquiring replacement habitat under this proposal and for management of such lands for the life of the project, unless otherwise indicated.
- WDFW mitigation guidance seeks to recognize the full range of environmental benefits and impacts of development in determining appropriate mitigation, including the fact that wind is a renewable energy resource that can replace fossil fuels and other energy sources that have serious environmental consequences to plant and animal species and habitats.

MITIGATION FOR PERMANENT HABITAT IMPACTS

A. No mitigation required for cropland, developed, or disturbed areas

No mitigation will be required for impacts to lands that have little or no habitat value. Examples include lands that are:

- Currently being cultivated;
- Developed (long term); or
- Disturbed by an active road or other corridor that eliminates natural habitat values.

B. Criteria for Mitigation by Acquisition of Replacement Habitat

In each of the mitigation categories listed below, the criteria indicate that the replacement habitat should be:

- Like-kind (e.g., shrub-steppe for shrub-steppe; grassland for grassland) and/or of equal or higher habitat value than the impacted area, noting that an alternative ratio may be negotiated by a wind developer and WDFW for replacement habitat that differs from impacted habitat;
- Given legal protection (through acquisition in fee, a conservation easement, or other means);
- Protected from degradation for the life of the project to improve habitat function and value over time;
- In the same geographical region as the impacted habitat; and
- Jointly agreed upon by the wind developer and WDFW.

If a wind power applicant meets these criteria, then the following ratios apply:

1. **Acquisition of Replacement Habitat Subject to Imminent Development – 1:1**
   One acre of suitable replacement habitat will be accepted as mitigation for one acre of permanently impacted habitat where the replacement habitat is subject to imminent development – that is, there is a credible plan to develop the replacement habitat within five years and WDFW concurs with this assessment.

   Rationale: There is no net loss of habitat function or value where the replacement habitat would be lost but for its acquisition as mitigation. In fact, there should be a net gain in habitat value over time since protection of the replacement habitat (of equal or better value than the impacted area) will usually result in improved habitat value.

2. **Acquisition of Grassland, CRP Replacement Habitat – 1:1**
   One acre of suitable replacement grassland or CRP habitat will be accepted as mitigation for one acre of such habitat that is permanently impacted.

   Rationale: Habitat values are protected under this approach because:

   - Development of degraded grasslands or CRP habitat is preferable to development of shrub-steppe or other high value habitats.
   - The replacement habitat was at some risk of development and is now given permanent protection.
   - The replacement habitat is likely to improve in habitat function and value over time as degrading forces are removed.
   - The value of the replacement habitat is equal to or better than the habitat value of the impacted area.
   - The 1:1 ratio combines a number of factors -- which could require much time, effort, and expense to analyze and process -- in a simple and equitable approach.

3. **Acquisition of Shrub-Steppe, Other High-Value Habitat– 2:1**
   Two acres of suitable shrub-steppe or other high-value replacement habitat will be accepted as mitigation for one acre of permanently impacted shrub-steppe or other high-value habitat. In this context, "other high-value habitat" includes lithosol/shrub matrix (plant communities on lithosol soils intermixed with other plant communities on deeper soils).

   Rationale: A net gain in habitat value is likely under this approach because the replacement habitat:

   - Was at some risk of development and is now given permanent protection.
   - Is likely to improve in habitat function and value over time as degrading forces are reduced on the protected area.
   - Value is equal to or better than the habitat value of the impacted area.
   - The 2:1 ratio combines a number of factors -- which could require much time, effort, and expense to analyze and process -- in a simple and equitable approach.

   Exception for habitat in "excellent" condition: Where a wind project will affect habitat in "excellent" condition (based on federal methodologies for assessing range land, or other method acceptable to WDFW), wind project developers will engage in additional consultation with WDFW regarding suitable mitigation requirements for such habitat.

MITIGATION FOR TEMPORARY IMPACTS TO HABITAT

Temporary impacts to habitat are those that are anticipated to end when construction is complete and land has been restored. Temporary impacts include trenching for placement of underground cables, construction staging areas, lay-down areas, and temporary construction access. Temporary impacts also include the portions of road corridors that are used during construction but that are re-vegetated at the end of construction, but do not include the portions of roads that continue to be used for project operations (which are considered permanently affected). The goal of restoration of temporary impacts should be to restore the disturbed habitat to a condition that is at least as good as its pre-project condition.

A. No Mitigation Required for Temporary Impacts to Cropland, Developed or Disturbed Areas (same as for permanent impacts)

B. Restoration, Mitigation for Temporary Impacts to Grass, CRP Lands -- 0.1:1
Temporary impacts to grassland or CRP habitat can be mitigated by:

- Implementing a WDFW approved restoration plan for the impacted area. A restoration plan should include site preparation, reseeding with appropriate vegetation, noxious weed control, and protection from degradation (irrigation

or planting with live plants will not be required).

- Acquiring 0.1 acres of suitable replacement habitat for every acre temporarily impacted by the project.
- A good faith effort should be made to restore the impacted area, however long-term performance targets should not be imposed since temporal losses and the possibility of restoration failure are incorporated into the acquisition and improvement of replacement habitat.
- WDFW and a wind developer may agree on other ratios and terms where doing so is mutually beneficial.

C. Restoration, Mitigation for Temporary Impacts to Shrub-steppe Habitat—0.5:1

Temporary impacts to shrub-steppe habitat can be mitigated by:

- Implementing a WDFW approved restoration plan for the impacted area. A restoration plan should include site preparation, reseeding with appropriate vegetation, noxious weed control, and protection from degradation (irrigation or planting with live plants will not be required).
- Acquiring 0.5 acres of suitable replacement habitat for every acre temporarily impacted by the project.
- A good faith effort should be made to restore the impacted area, however long-term performance targets should not be imposed since temporal losses and the possibility of restoration failure are incorporated into the acquisition and improvement of replacement habitat.
- WDFW and a wind developer may agree on other ratios and terms where doing so is mutually beneficial.

Customized Acquisition and Restoration Packages – This Habitat Mitigation proposal should not be viewed as preventing or discouraging WDFW and wind developers from negotiating "customized" or "alternative" mitigation packages where circumstances make it desirable for both parties to use accepted methodologies (such as NRDA or an alternative mitigation option) to do so.

SECTION 3
WIND POWER ALTERNATIVE MITIGATION PILOT PROGRAM

INTRODUCTION: This pilot program offers an alternative to conventional mitigation for wind projects that can greatly improve the habitat value per mitigation dollar as well as provide a more streamlined and efficient mitigation process for applicants. A significant feature of the pilot program is that it links targeted acquisition by WDFW of the highest value habitat in central and eastern Washington[3] with sustained "stewardship" funding from wind projects to restore, manage, and monitor these critical habitat areas. Fortunately, many of the areas that have the highest habitat values are also low cost, providing an outstanding opportunity to maximize the value of mitigation funds.

Because the Alternative Mitigation Pilot Program is experimental in nature, the fee will be reviewed annually, and adjusted as necessary, by WDFW to ensure that it is equitable, compared to the conventional mitigation option in Section 2, and provides incentives to encourage significant participation by wind developers. In addition, the Alternative Mitigation Pilot Program will be reviewed and evaluated at the end of five years, along with the other sections of the Wind Power Guidelines.

GOAL: The goal of the Wind Power Alternative Mitigation Pilot Program is to provide an optional and streamlined approach to mitigation that results in better habitat value and is more attractive to wind developers than conventional "on-site" mitigation.

PRE-PROJECT ASSESSMENT, OPERATIONAL MONITORING

A wind project applicant may either:

1. Follow the guidance set forth in Section 1 of the Wind Power Guidelines document (Baseline and Monitoring Studies for Wind Projects), or
2. Follow a streamlined process (to be negotiated with WDFW) if the project is to be sited in an area that has been determined by WDFW to present a low probability of significant risk to wildlife (and efforts have been made to avoid and minimize wildlife impacts).

ALTERNATIVE HABITAT MITIGATION

After determination by the wind project applicant, in consultation with WDFW, of the project's impact on habitat (in terms of acres permanently and temporarily impacted, and the type and general quality of habitat impacted), the applicant and WDFW will identify the appropriate annual fee for the life of the project[4], based on an Alternative Mitigation Fee Rate of $55.00/acre/year for each acre of replacement habitat that would be owed

[3] At the time of this writing, a request is being made to the State Legislature for an appropriation in the 2004 Supplemental Operating Budget.

[4] "Life of the project" is defined as beginning at the end of the first year of commercial operation and ending with implementation of the project decommissioning plan.

using the ratios and analysis contained in Section 2.[5]

As noted above, the Alternative Mitigation Fee Rate will be reviewed annually, and adjusted as necessary, by WDFW. Changes to the fee will be applied to future wind development proposals (for which mitigation has not yet been determined); changes in the fee will not be applied retroactively.

General provisions:

- The fee listed above is based on habitat in "average" condition and can be increased or decreased by up to 25% to account for differences in habitat quality.
- The applicant will be required to implement an approved restoration plan for temporarily impacted areas (in accordance with Section 2).
- In cases where the project impacts a mixture of habitat types, the fee schedule will be applied accordingly (to the nearest acre).
- The annual fee will be used primarily to support "stewardship" of high-value habitat in the same ecological region as the project (for management, monitoring, restoration, protection from degradation). It is envisioned that these annual stewardship funds will be applied to strategically important habitat in central and eastern Washington that is newly acquired by WDFW. The annual fees will be deposited into a dedicated WDFW account and may also be used for acquisition.
- If the applicant and WDFW cannot agree on a mutually advantageous "package" under the alternative mitigation program, the conventional mitigation guidance in Section 2 will be applied to the project.

[5] To determine Alternative Mitigation Fee, use the guidance provided in Section 2 to:

1) Determine acres permanently and temporarily impacted by project for the shrub-steppe and grass categories (i.e., permanently impacted shrub-steppe, permanently impacted grass/CRP, temporarily impacted shrub-steppe, and temporarily impacted grass/CRP);
2) Multiply the acres in each of the four categories by the applicable ratio (e.g., shrub-steppe acres permanently impacted x 2.0);
3) Sum the acreage of the four categories to arrive at the total acres of mitigation owed; and
4) Multiply this total by the Alternative Mitigation Fee Rate to arrive at total annual payment for the project.

Responses for Document 80093

80093-001: Thank you for your comment. We appreciate your input and participation in the public review process.

80093-002: The WDFW Siting Guidelines may be one source of information consulted during the site-specific analyses that will be conducted for each wind energy development project on BLM-administered lands.

80093-003: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses will be conducted for any proposed project on BLM-administered lands in conjunction with input from other federal, state, and local agencies, and interested stakeholders. The establishment of a technical advisory committee to oversee activities at a given site would be a topic for consideration during the site-specific analyses.

80093-004: Because the PEIS encompasses 11 states, it is not appropriate for the document to stipulate state-specific guidelines. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including surveys for raptor nest sites, will be conducted for any proposed project on BLM-administered lands. The scope and approach for such site-specific surveys and other analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting and design stipulations for incorporation into the POD. Descriptions of site-specific analyses are beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80093-005: As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the development of an appropriate monitoring program, will be conducted for any proposed project on BLM-administered lands in conjunction with input from other federal, state, and local agencies, and interested stakeholders. The establishment of a technical advisory committee to oversee monitoring activities at a given site would be a topic for consideration during the site-specific analyses.

80093-006: Thank you for your comment.

80093-007: The BLM and DoD are working on an interagency protocol agreement that will establish a consultation process between the two agencies on wind energy development projects on BLM-administered land. The agreement will establish a process and identify the scope of potential issues for consultation. The BLM will seek consultation with the DoD on all wind energy development projects.

80093-008: This BMP requirement has been deleted. This guidance has been retained as a suggested mitigation measures in Section 5.9.5.2.2.

80093-009: Special land use areas refer to areas that contain special resource values (e.g., areas that are environmentally sensitive, contain unique physical attributes, or have unique land use ownership or designation). Special land use areas could suffer resource impacts from a wind development project that could not be mitigated and/or that conflict with existing or planned multiple-use activities. Special land use determinations would be made on a project-by-project basis. These would be determined in conjunction with input from other federal, state, and local agencies, and interested stakeholders.

80093-010: Thank you for your comment. Setbacks from residences, roads, and other public access areas will be determined on a site-specific basis.

80093-011: The text in the PEIS has been changed in response to your comment.

80093-012: Your experience is consistent with what the BLM might expect to be a desirable schedule for wind farm developers. Minimizing construction phases will certainly control costs. However, the exigencies and uncertainties of weather, as well as a number of other factors outside the developer's control may extend that construction phase. Nevertheless, your experiences fall within the time range for construction specified in the text.

80093-013: The referenced statement in Section 5.3.2.1 of the PEIS discusses water use only during the construction phase. Section 5.3.3, Site Operation, indicates that impacts on water resources would be limited to possible water quality impacts. No text change has been made to the document in response to your comment.

80093-014: Comment noted. The text has been revised to state that "...structures should be designed to discourage their use for perching or nesting..."

80093-015: The BLM is fully committed to ensuring that sensitive species and other valued ecological resources are fully considered in all aspects of any wind energy project proposed for BLM-administered lands.

80093-016: Your recommendation is being taken into consideration.

80093-017: The intent of this mitigation measure is to encourage the burial of electrical supply lines to the greatest extent feasible without adding to project-related habitat disturbance. The mitigation measure has been rewritten to clarify this.

80093-018: It is agreed that wind farm developers and operators must identify and comply with all applicable FAA regulations and requirements, and that requirement is established in the 7th bullet under Human Health and Safety, Section 2.2.3.2.2,

Plan of Development Preparation. The text regarding use of white strobe lights with a minimum number of flashes per minute has been removed.

Document 80094

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Saturday, December 11, 2004 1:54 AM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80094

Thank you for your comment, Maeve Sowles.

The comment tracking number that has been assigned to your comment is 80094. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 11, 2004 01:53:30AM CDT

Wind Energy EIS Draft Comment: 80094

First Name: Maeve
Middle Initial: E
Last Name: Sowles
Organization: Lane County Audubon Society
Address: #####
City: #####
State: ##
Zip: #####
Country: USA
Privacy Preference: Withhold address only from public record

Comment Submitted:
Wind power has many advantages as a power generation resource. The main concern I have for this programmatic EIS BLM decision relates to siting of the wind power farms. A specific area must be evaluated for native birds and other flying species throughout an annual cycle. Flying animals have different needs and migration patterns at different times of the year. Each season must be evaluated for habitat needs and migration routes both at day and night. The range of species must also be evaluated, since birds of different sizes fly at different heights. One siting aspect would be to place wind power farms in agricultural areas where human disturbance is already established, rather than in undisturbed areas. Leave the wild places for wildlife. Another reason for placing wind turbines near human settlements is to minimize the power lines through remote areas of BLM property. This decreases the expense of transporting the electricity. The turbines and power lines have a deadly effect on large birds such as condors, eagles, hawks and owls. Large migratory waterfowl and wading birds can also be decimated by a poorly placed wind farm. Many of these species use ancient migratory routes and a gauntlet of wind power turbines or power lines can destroy a whole population if placed in the wrong hilltop or valley. Overall habitat destruction and fragmentation should be considered for bird, bat and other species that are threatened by human activity. The range of species that could be impacted by general human disturbance in fragile, marginal ecosystems goes beyond birds and bats. General resource extraction, as well as wind power must not be considered in such ecosystem areas. BLM is the steward of remote areas that need protection so that wildlife can survive. Saving some of this land for the wildlife, and for the future enjoyment of humans who want to see and experience a quiet ridgetop as a golden eagle soars up, over and away into a blue sky is the job you must do.
Sincerely,
Maeve Sowles, President
Lane County Audubon Society

80094-1

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Responses for Document 80094

80094-001: The identification of specific areas to be excluded from wind energy development or the siting of individual facility structures will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. As required by the Wind Energy Development Program proposed policies and BMPs, site-specific analyses, including the identification of important or sensitive habitats and other ecological resources, will be conducted for any wind energy project proposed for BLM-administered lands. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting and design stipulations for incorporation into the POD. Site-specific analyses and siting details are beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

Document 80096

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Monday, December 13, 2004 5:45 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80096

BLM_Programmatic
_Wind_EIS_Coop...

Thank you for your comment, David Swanson.

The comment tracking number that has been assigned to your comment is 80096. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 13, 2004 05:44:32PM CDT

Wind Energy EIS Draft Comment: 80096

First Name: David
Middle Initial: R
Last Name: Swanson
Organization: Western Area Power Administration
Address: 12155 W. Alameda Parkway
City: Lakewood
State: CO
Zip: 80228
Country: USA
Email: swanson@wapa.gov
Privacy Preference: Don't withhold name or address from public record
Attachment: P:\NEPA\BLM Programmatic Wind EIS Coop Request.pdf

Comment Submitted:
Offical version of comments previously provided with 80087. See attached.

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Department of Energy
Western Area Power Administration
P.O. Box 281213
Lakewood, CO 80228-8213

DEC 13 2004

Mr. Ray Brady
Group Manager, WO350
U.S. Department of the Interior
Bureau of Land Management
1849 C Street NW
LS1000
Washington, DC 20036

Dear Mr. Brady:

The Western Area Power Administration (Western), U.S. Department of Energy (DOE), reviewed the Bureau of Land Management (BLM) *Draft Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States, DES 0441* (PEIS). Based on our review, we found that the draft PEIS covers crucial policy and program issues needed to make sound decisions about wind energy development. However, as indicated to you in our letter dated December 19, 2003, we believe that the PEIS must also consider the impact of wind development on the electric transmission system. A proposed wind farm development would not be viable unless there were firm arrangements for interconnection with the electrical transmission system. Since Western may provide transmission arrangements for several wind energy projects in the future, we request that Western be designated as a cooperating agency on the PEIS. As a cooperating agency, Western would strengthen the PEIS discussion and analysis by providing technical expertise in transmission system planning and operation. Western's cooperating agency status would help avoid duplication of effort and streamline environmental reviews for projects where Western and BLM would have actions related to any proposed wind development. Western currently has two interconnection requests for wind developments that would be located on BLM-administered lands (Montana and Arizona). Designating Western as a cooperating agency would be consistent with the purposes of the Council on Environmental Quality's emphasis on agencies becoming a cooperating agency where they have special expertise (40 CFR 1501.6) and would meet the requirement set forth in Executive Order 13212, for executive departments and agencies to "expedite projects that will increase the production, transmission, or conservation of energy." 80096-1

Western proposes modifications to the PEIS, as addressed in the enclosure, to appropriately assess wind project impacts on the transmission system. A copy of these comments will be provided to Argonne National Laboratory per your instructions. With our support as a cooperating agency, making these modifications will

have little or no impact on the schedule for the issuance of the final PEIS. Furthermore, by incorporating these modifications, the transmission issues would be addressed from a policy and program standpoint and provide for our adoption of the BLM PEIS for our future actions.

80096-1 (cont.)

We support your development of comprehensive policies and best management practices, as well as the use of tiering project-specific environmental analyses and decisions to the PEIS and its Record of Decision. We commend you for your excellent work on the draft PEIS.

80096-2

We would appreciate a prompt response to our request to be a cooperating agency. I have designated Ms. Shane Collins, our Natural Resources Manager, as your point of contact. Ms. Collins will provide the resources to ensure Western's needs are appropriately addressed in the development of the final PEIS. She may be reached at 720-962-7252 or by e-mail at collins@wapa.gov.

Sincerely,

Michael S. Hacskaylo
Administrator

Enclosures

cc:
BLM Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

Director, Office of NEPA Policy and Compliance, EH-42, Washington, DC

BLM Wind Energy Programmatic EIS
Argonne National Laboratory EAD/900
9700 S. Cass Avenue
Argonne, IL 60439

RE: Western Area Power Administration (Western), U.S. Department of Energy (DOE), comments on the Bureau of Land Management (BLM) *Draft Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States, DES 0441*

Section 2.2 Description of the Proposed Action – A number of the proposed policies and best management practices (BMPs) would be applicable to transmission system additions needed to support wind development. The list of policies and BMPs should be revised and augmented to address transmission system additions. 80096-3

Section 2.4.2 Proposed Wind Energy Projects Currently under Review – The Valley County Wind Energy Project proposed by Wind Hunter LLC in Montana and the Senator Mountain Wind Energy Project proposed by Western Wind Energy in Arizona should be included. Western will be participating with BLM in the environmental reviews for these projects. Western helped facilitate a comprehensive research study in California now known as the Hetch Hetchy PIER Project. The wind resource assessment part of this study should be included in the BLM EIS. For more information on the study please, contact Ray Dracker, Center for Resource Solutions, 415-561-2135. An overview of the study can be found at: http://www.resource-solutions.org/PIER/PIEREmphasis1.htm. 80096-4

Section 3 Overview of Wind Energy Projects – We suggest adding a new section with a description that addresses "Transmission Considerations" that need to be considered by a wind developer in demonstrating that transmission outlets are available for its wind power. For Western, requests for interconnection are processed in accordance with Western's *General Requirements for Interconnection*. Interconnection is a separate but parallel process to other processes, including the transmission service request process set forth in Western's Open Access Transmission Service Tariff (63 *Federal Register* 521). We are updating the Tariff largely to adopt the principal features of Federal Energy Regulatory Commission's (FERC) Standard Large Generator Interconnection Procedures and Standard Large Generator Interconnection Agreement. We expect to file this revision in early January. A proposed interconnection must not degrade the reliability or operating flexibility of the existing power system, and must meet the North American Electric Reliability Council's Planning Standards and Operating Manual procedures. For interstate transmission providers other than Western, FERC has issued orders and guidance on interconnection and transmission open access policy that apply to wind energy projects. 80096-5

Section 5 Potential Impacts of Wind Energy Development and Analysis of Mitigation Measures – Some modifications are needed to this section to include transmission-related developments for wind energy projects. Several of the site construction and mitigation 80096-6

measures are consistent with transmission-related developments. Western is available to work with you in modifying this section. 80096-6 (cont.)

Section 6.1 Impacts of the Proposed Action – Section 6.4.3, Related Transmission Line Construction, is addressed under cumulative impacts. Related transmission line construction would be a direct result of a wind developer's request for interconnection and transmission service rather than to meet future power demands as noted. A proposed wind farm development would not be viable unless it has demonstrated that firm arrangements for interconnection with the electrical transmission system are available. Since a firm transmission arrangement is needed to make a wind farm development economically viable, a discussion on related transmission line construction impacts should be addressed under Section 6.1. The list of concerns and issues presented in Section 6.4.3 should be addressed under Section 6.1. Some modifications are required to be consistent with current transmission-related siting policies and practices, including Federal Land Policy and Management Act provisions addressing the designation of existing transportation and utility corridors pursuant to Section 503 of the act without further review. New corridors may need to be designated to support wind development. Western is available to work with you in making the modifications. 80096-7

DEC 19 2003

BLM Wind Energy
Programmatic EIS Scoping
Argonne National Laboratory EAD/900
9700 S. Cass Ave.
Argonne, IL 60439-9902

Dear Programmatic EIS Team Lead:

The Western Area Power Administration (Western) wishes to thank you for the opportunity to participate in a recent scoping meeting where information was provided about the Bureau of Land Management's (BLM) decision to develop a Programmatic Environmental Impact Statement (PEIS) for BLM's National wind energy program and additional related policy to be applied on BLM-administered lands in the western United States (excluding Alaska).

Western, as a Federal power marketing administration within the Department of Energy, has responsibility for the safe and continuous delivery of electric power to customers located in 15 western states. In order to meet the demands of such a large customer base, Western owns and/or operates more than 17,000 miles of transmission lines and has numerous stationary facilities that support the transmission system. These support facilities include substations, switchyards, metering stations, and communication sites.

Western also operates several control areas and as a result is required to operationally support new generating resources with ancillary services, either directly if available from our own resources or by acquisition of needed services from others. Because Western has such a large presence in several western states, we have already been contacted by wind energy proponents to provide interconnections for wind developments. Western also is actively involved with several Federal agencies that have asked Western to act as their agent to acquire renewable resources or renewable energy certificates, which promote the development of resources such as wind.

The PEIS that BLM is proposing to undertake, particularly as it relates to development of a "National wind energy program and policy," must also consider the impact of wind development on the electric transmission system. It is not uncommon for potentially productive wind sites to be located in areas with limited transmission capability (the potential wind energy is likely to exceed the local capability to absorb it, requiring transmission in that area). A National policy could lead to large scale development that will require construction or rebuild of numerous transmission lines, resulting in other environmental consequences. These impacts must also be addressed in the PEIS. Another related issue is the potential for changes in existing generating patterns to accommodate the intermittent nature of wind generation.

Western, as a Federal agency, may also have information available that would be useful in completing National Environmental Policy Act requirements for wind energy projects at specific wind generation sites, whether Western has an interconnection role or not. Where wind energy projects are proposed on public lands, and Western facilities are located in the same area,

Western may already have environmental information it can share with BLM. Where the proponent of a wind energy project wants to connect to the power grid using facilities owned or operated by Western, we would need to assess the need to take a lead agency role and conduct project specific environmental reviews. Also, Western would be interested in the final programmatic EIS, as it may provide useful information for future Western transmission line upgrade and addition proposals.

At this early stage in development of the EIS, Western would like to meet with your staff and/or BLM representatives to further explore and develop ways BLM and Western can assist one another with wind energy on public lands. Using our Geographic Information Systems program, and through coordination with Department Of Energy's National Renewable Energy Laboratory in Golden, Colorado, we may be able to provide map products that show Western's facilities in relation to identified sites on public lands that have potential for development of wind energy.

Finally, please add Western to your list of contacts and your mailing list for this PEIS effort. In addition, please feel free to contact Ms. Susan Starcevich, telephone 720-962-7275; e-mail starcevi@wapa.gov, for any assistance you may require in determining Western's role in development of the programmatic EIS.

Sincerely,

C. Shane Collins

C. Shane Collins
Natural Resources Manager

bcc:
A0020, B. Fullerton
A7000
A7400
A7500-OF
A7520
D.Gaul, A7550.LV, Loveland, CO
N. Stas, B0400. BL, Billings, MT
H. Hernandez, B5521,HU, Huron, SD
A. Wood, B5522.BS, Bismarck, ND
J. Holt, G0400, Phoenix, AZ
C. Cristelli, G5605, Phoenix, AZ
J. Hartman, J0400, Loveland, CO
R. Steinbach, J6100, Loveland, CO
C. Palmer, L6400, Salt Lake City, UT
B. Thomas, N0400, Folsom, CA
L. Castle, N1610, Folsom, CA

A7520:SMStarcevich:lou:x7275:12/18/03:P:\corel\BLM Wind EnergyProgrammatic

Responses for Document 80096

80096-001: Section 6.4.3 acknowledges that wind energy development on BLM-administered lands may require the construction of new transmission lines. Such construction is considered to be a separate but related activity and will require interagency cooperation and multidisciplinary environmental reviews. The designation of new transmission corridors on BLM-administered lands will occur as a result of interagency consultations, not as a unilateral decision by the BLM. Any such designations would be evaluated through either regional or local land use planning efforts, with opportunities for full public involvement. The potential impacts of transmission system interconnects or expansions that would be required by an individual wind energy project on BLM- administered lands will be assessed as part of the site-specific analyses, with input from other federal, state, and local agencies, and interested stakeholders.

New text has been added to Section 6.4.3, on the basis of input from the Western Area Power Administration, to describe the existing and proposed rules and regulations governing wind project grid interconnections and transmission system upgrades. These regulations will be applicable to wind energy development projects on BLM-administered lands. The BLM appreciates the Western Area Power Administration's contributions to the PEIS.

80096-002: Thank you for your comment.

80096-003: Section 6.4.3 acknowledges that wind energy development on BLM-administered lands may require the construction of new transmission lines. Such construction is considered to be a separate but related activity and will require interagency cooperation and multidisciplinary environmental reviews. The potential impacts of transmission system interconnects or expansions that would be required by an individual wind energy project on BLM-administered lands will be assessed as part of the site-specific analyses, with input from other federal, state, and local agencies, and interested stakeholders. Many of the proposed BMPs may be relevant to transmission system additions and will be evaluated for applicability during the site-specific analyses. No text change has been made to the document in response to your comment.

80096-004: The limited wind energy development alternative considers additional wind energy development on BLM- administered land in areas where it currently exists, will be under review, has been approved for development at the time the ROD for the PEIS is established. When the Draft PEIS was prepared, it was determined that only six locations were likely to meet these criteria by the time the ROD will be published (anticipated in July 2005). Although applications for additional ROW authorizations for both site monitoring and testing and

commercial development may have been submitted to the BLM or may be under consideration by developers, the scope of the limited wind energy development alternative will not be expanded. Including additional projects would not substantively alter the conclusions of the PEIS regarding the alternatives.

Additional information that may become available about wind energy development within the 11-state study area will be considered during site-specific analyses.

80096-005: New text has been added to Section 6.4.3, on the basis of input from the Western Area Power Administration, to describe the existing and proposed rules and regulations governing wind project grid interconnections and transmission system upgrades. These regulations will be applicable to wind energy development projects on BLM-administered lands. The BLM appreciates the Western Area Power Administration's contributions to the PEIS.

80096-006: Chapter 5 has not been modified to include transmission-related developments for wind energy projects. The potential impacts of transmission system interconnects or expansions that would be required by an individual wind energy project on BLM-administered lands will be assessed as part of the site-specific analyses, with input from other federal, state, and local agencies, and interested stakeholders. It is agreed that much of the discussion and the recommended mitigation measures contained in this chapter may be relevant to transmission system additions; these will be evaluated for applicability during the site-specific analyses.

80096-007: Section 6.4.3 acknowledges that wind energy development on BLM-administered lands may require the construction of new transmission lines. Such construction is considered to be a separate but related activity and will require interagency cooperation and multidisciplinary environmental reviews. The designation of new transmission corridors on BLM-administered lands will occur as a result of interagency consultations, not as a unilateral decision by the BLM. Any such designations would be evaluated through either regional or local land use planning efforts, with opportunities for full public involvement. The potential impacts of transmission system interconnects or expansions that would be required by an individual wind energy project on BLM- administered lands will be assessed as part of the site-specific analyses, with input from other federal, state, and local agencies and interested stakeholders.

New text has been added to Section 6.4.3, on the basis of input from the Western Area Power Administration, to describe the existing and proposed rules and regulations governing wind project grid interconnections and transmission system upgrades. These regulations will be applicable to wind energy

development projects on BLM-administered lands. The BLM appreciates the Western Area Power Administration's contributions to the PEIS.

80096-008: The BLM appreciates the level of interest exhibited by the Western Area Power Administration (Western) in this PEIS. Subsequent meetings between the BLM and Western have resulted in improvements to the PEIS, particularly with respect to new text incorporated into Section 6.4.3, regarding transmission system considerations. The BLM thanks Western for its participation and contributions.

Document 80097

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Tuesday, December 14, 2004 3:02 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80097

Thank you for your comment, Sherry Bolden.

The comment tracking number that has been assigned to your comment is 80097. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 14, 2004 03:02:04PM CDT

Wind Energy EIS Draft Comment: 80097

First Name: Sherry
Middle Initial: A
Last Name: Bolden
Address: 300 Alden Court
City: Windsor
State: CA
Zip: 95492
Country: USA
Privacy Preference: Don't withhold name or address from public record

Comment Submitted:
I believe that wind energy production (as well as any other renewable source of energy)is extremely benifical for the environment as well as providing jobs and education for the citizens in this country. It's not likely that those jobs could be outsourced (although Americans are pretty creative)and to be involved in the research and developement in reNEWables. Citizen could be trained to install solar or wind plantations or determine an appropriate renewable source of energy for private or public buildings and offices. 80097-1
This is my suggestion as I have do this and would like to be involved in the installation of renewable resources and would like to do it again.
It is important for our future and the planet's.

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

Response for Document 80097

80097-001: Thank you for your comment. We appreciate your input and participation in the public review process.

Document 80098

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, December 16, 2004 6:48 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80098

FinalBLMletter_800
98.doc (43 K...

Thank you for your comment, Melinda Dorin.

The comment tracking number that has been assigned to your comment is 80098. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 16, 2004 06:47:58PM CDT

Wind Energy EIS Draft Comment: 80098

First Name: Melinda
Last Name: Dorin
Organization: California Energy Commission
Address: 1516 Ninth Street MS-40
City: Sacramento
State: CA
Zip: 95814
Country: USA
Privacy Preference: Don't withhold name or address from public record
Attachment: C:\Documents and Settings\mdorin\My Documents\Wind\FinalBLMletter.doc

Comment Submitted:
A signed copy of the letter will follow in the mail.

Questions about submitting comments over the Web? Contact us at:
windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

STATE OF CALIFORNIA — THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, *Governor*

CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

December 16, 2004

Mr. Ray Brady
Group Manager, Lands and Realty
Bureau of Land Management
United States Department of the Interior
Washington, D.C. 20240

RE: Draft Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States

Dear Mr. Brady:

The California Energy Commission has several comments on the Programmatic Impact Statement (Statement) on Wind Energy Development. The Energy Commission is supportive of wind development in order to meet the Renewable Energy Portfolio Standard for the State, and is exploring the concept of designating or "banking" certain areas for wind development, some of which may be on Bureau of Land Management (BLM) administered lands. In order to ensure that the development is pursued in an environmentally sound manner we request that the following items be addressed in the Final Statement. 80098-1

Biological Resources

- The Final Statement should include a discussion regarding configuration standards for transmission and distribution lines to ensure they are safe for birds. The Energy Commission is concerned about bird kills resulting from electrocutions and collisions. Safety standards that reduce the chance of electrocutions can be found in APLIC guidelines.[1] 80098-2

- In most cases, baseline surveys of bird use in the project areas should be conducted to determine the potential for impacts. These surveys should follow established protocol and be conducted for a full year to capture seasonal 80098-3

[1] APLIC (Avian Power Line Interaction Committee). 1996. Suggested practices for raptor protection on power lines: the state of the art in 1996. Edison Electric Institute. Washington D.C.

differences.[2] The Final Statement should require that survey results be included and discussed in the project specific Plans of Development. 80098-3 (cont.)

- The Final Statement should include a discussion of how rotor speed, rotor diameter, blade height from the ground and turbine plaement can contribute to the risk of bird and bat collisions with turbine blades. The Final Statement should discuss measures to mitigate impacts to birds and bats from collisions and wind energy development in general. The Final Statement should also require that each project specific Plan of Development include specific mitigation measures to mitigate impacts to birds and bats from collisions. 80098-4

- The Final Statement should establish a framework that requires the specific projects to implement the following mitigation measures and Best Management Practices:
  - Use the baseline bird use survey results to site wind turbines in areas that avoid the highest bird use;
  - Require habitat compensation to mitigate for habitat loss and bird fatalities;
  - Require bird use monitoring and dead bird searches during operation to determine the level of bird fatalities; and
  - Require a contingency plan to remove or re-locate turbines determined to be causing greater than expected numbers of bird fatalities

  80098-5

- In the discussion of decommissioning, the Final Statement should require the removal of derelict turbines as soon as they become inoperable and include the terms of turbine removal in the BLM right of way permit as part of project closure or repower requirements. 80098-6

Land Use

- The issue of installing new electric transmission lines and/or expanding transmission line corridors needs to be addressed in more detail. For example, cities like Lancaster, north of Los Angeles, are experiencing significant growth that may conflict with the need for new transmission lines to deliver wind-generated power and related development of transmission corridors. 80098-7

- Wind development projects must be consistent with local land use regulations, which are usually city or county general plans and zoning restrictions. The land use discussion in Chapter 5.10 of the Statement does not discuss this issue and instead notes that the construction and operation of a wind energy project would 80098-8

[2] Anderson, Richard et al. 1999. Studying Wind Energy/Bird Interactions: A Guidance Document Metrics and methods for determining or monitoring potential impacts on birds at existing and proposed wind energy sites. National Wind Coordinating Committee. Washington D.C.

have an impact on land use if it would "conflict with existing environmental plans and community goals." Please discuss the need for consistency with local regulations, plans and policies, which can include, but are not limited to environmental plans and community goals. 80098-8 (cont.)

- The discussion of potential impacts of wind development projects on military restricted airspace is useful. It may also be appropriate for the Final Statement to include an overview map of BLM lands with restricted airspace areas in California, which also depicts the most favorable sites for wind development. 80098-9

Thank you for the opportunity to comment on the Draft Statement. If you have any questions on land use issues please contact James Adams at (916) 653-0702 or e-mail at jadams@energy.state.ca.us. For questions or comments about biological resources please contact Melinda Dorin at (916) 654-4024 or e-mail at mdorin@energy.state.ca.us. We look forward to receiving a copy of the Final Statement.

Sincerely,

ROGER E. JOHNSON, Manager
Environmental Office

Responses for Document 80098

80098-001: Thank you for your comment. We appreciate your input and participation in the public review process.

80098-002: The BMPs presented in Section 2.2.3.2 include a BMP calling for facilities to be designed to avoid perching and nesting by birds, thus reducing electrocution potential.

80098-003: As required by the Wind Energy Development Program proposed policies and BMPs (Section 2.2.3), site- and species-specific analyses, including predesign and preconstruction biotic surveys, will be conducted for any proposed project on BLM-administered lands. The scope and approach for these analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific siting, design, monitoring, construction, and operation stipulations for incorporation into the POD. The specification of site- and species- specific analyses is beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80098-004: The PEIS addresses these issues in Section 5.9.3.2.3 and in the text boxes in this section. The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land. With regard to specific mitigation measures, these would be developed at the project level for any wind energy project proposed for BLM-administered lands. Specification of specific mitigation measures, as well as details regarding the design and implementation of any such measures, will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, and interested stakeholders. Through this process, the BLM will develop project-specific mitigation measures for incorporation into the POD. Site-specific analyses are beyond the scope of the PEIS. No text change has been made to the document in response to your comment.

80098-005: The Wind Energy Development Program proposed policies and BMPs, as listed in the Final PEIS, establish such a framework as suggested by the comment, and require wildlife surveys during the project planning phase, as well as monitoring during all phases of a wind energy project. The specific designs of these surveys and monitoring plans will be developed on a site-specific, project-by-project basis and in conjunction with input from appropriate federal, state, and local agencies, and interested stakeholders. The proposed Wind Energy Development Program also incorporates adaptive management strategies to ensure that the

potential adverse impacts of wind energy development will be mitigated to the fullest extent possible.

80098-006: Operators will be required to repair, replace, or remove inoperative turbines in a timely manner. Requirements to do so will be incorporated into the due diligence provisions of the ROW authorization. Failure to demonstrate due diligence in the repair, replacement, or removal of turbines may result in termination of the ROW authorization. A BMP addressing this issue has been added to Section 2.2.3.2.4, Operations.

80098-007: Section 6.4.3 acknowledges that wind energy development on BLM-administered lands may require the construction of new transmission lines. Such construction would constitute a separate but related activity and would require interagency cooperation and multidisciplinary environmental reviews. The designation of new transmission corridors on BLM-administered lands will occur as a result of interagency consultations, not as a result of a unilateral decision by the BLM. Any such designations would be evaluated through either regional or local land use planning efforts, with opportunities for full public involvement. The potential impacts of transmission system interconnects or expansions that would be required by an individual wind energy project on BLM-administered lands will be assessed as part of the site-specific analyses, with input from other federal, state, and local agencies, and interested stakeholders.

New text has been added to Section 6.4.3 to describe the existing and proposed rules and regulations governing wind project grid interconnections and transmission system upgrades. These regulations will be applicable to wind energy development projects on BLM-administered lands. In addition, under Section 2.2.3.1, Proposed Policies, the 9th bullet addressing required NEPA analyses has been reworded to define how NEPA analyses of proposed wind energy development on adjacent private or state-owned lands will be conducted.

80098-008: City or county general plans and zoning restrictions would be among the considerations that would be addressed for site-specific projects. All wind development projects would have to consider local regulations, plans, and policies. The 1st BMP under the General heading in Section 2.2.3.2.2, Plan of Development Preparation, requires that appropriate agencies be contacted early in the planning process to identify potential local and regional land use issues. No text change has been made to the document in response to your comment.

80098-009: Figure 4.7.3-1 shows the locations of military operations areas (MOAs), military training areas (MTAs), and areas of medium or high wind potential. As discussed in Section 5.10.5, both the DoD and FAA will need to be contacted for potential air safety concerns and requirements for site-specific projects. No text change has been made to the document in response to your comment.

Document 80099

WindEISArchives

From: windeiswebmaster@anl.gov
Sent: Thursday, December 16, 2004 9:32 PM
To: WindEISArchives
Subject: Wind Energy EIS Comment 80099

WindDPEIScomment_80099.doc (51...

Thank you for your comment, Corina Wachter.

The comment tracking number that has been assigned to your comment is 80099. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: December 16, 2004 09:32:29PM CDT

Wind Energy EIS Draft Comment: 80099

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Comment Submitted:
see attached memo, thank you

Questions about submitting comments over the Web? Contact us at: windeiswebmaster@anl.gov or call the Wind Energy EIS Webmaster at (630)252-6182.

MEMORANDUM

TO: BLM WIND ENERGY PROGRAMMATIC EIS
ARGONNE NATL. LAB EAD/900
9700 S. CASS AVE.
ARGONNE, IL 60439
FROM: CORINA WACHTER
HUMBOLDT STATE UNIVERSITY
ENVIRONMENTAL RESOURCES ENGINEERING STUDENT
SUBJECT: WIND ENERGY DRAFT PROGRAMMATIC EIS
DATE: 1/10/2005
CC: SHERI WOO

COMMENTS AND CRITIQUE OF SELECTED SECTIONS OF THE WIND ENERGY DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

SUMMARY

This memo presents a critique of, and recommendations for improving, the Wind Energy Draft Programmatic EIS (DPEIS) prepared by the Bureau of Land Management (BLM). The memo first gives a background summary of the DPEIS. It then points out a major weakness in the wording used in the Best Management Practices (BMP's) and Mitigations sections of the DPEIS, where use of the word "should" is prevalent, rendering all BMP's and mitigations optional. The memo then evaluates the efficacy and understandability of the document, pointing out several specific instances where wording could be strengthened, protections of Native American Sacred Sites improved, and a mis-named link on the document web page. This critique then goes on to assess the methods used in the WinDS model, and the contribution that the model makes to the DPEIS. Lastly, conclusions and recommendations for the preparers of the DPEIS are presented.

BACKGROUND

The Draft Programmatic EIS on Wind Energy Development (the DPEIS) on BLM-administered lands in the Western US presents an assessment of impacts that may be associated with development of wind energy on BLM-administered lands in the Western US region. The states that are included in this region are: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah,

Washington, and Wyoming. The purpose and need statement of the DPEIS is to "support wind energy development on public lands and also to minimize potential environmental and sociocultural impacts."

The BLM assessed the potential magnitude of future wind activities and land use plan amendments, and presents three alternatives. The proposed action is the implementation of a Wind Energy Development Program; also analyzed are the no action alternative, and a limited wind energy development alternative. The DPEIS then summarizes the impacts associated with adoption of each alternative, including long-term and cumulative impacts, and suggests possible mitigation measures for each of the potential impacts.

BEST MANAGEMENT PRACTICES AND MITIGATION PROCEDURES ARE ONLY RECOMMENDATIONS, NOT REQUIREMENTS (CHAPTERS 2 AND 5)

The Use of "Should" as Opposed to "Shall" Makes the Document Impotent

The Plans of Development (POD's) that the proposed program would require for each individual project are to incorporate mitigation measures, but none of the BLM-specific wind energy mitigation measures are required; the measures merely "should" be implemented. There are 13 policies under the proposed action, including: off-limits lands; non-prevention of other land uses; consultation with federal, state, and local agencies, as well as Indian Tribal governments and The Department of Defense; amendment of existing land use plans; Field Office determination of the level of assessment required for a project; Categorical Exclusion status for site monitoring and testing; requirement of a Plan of Development; sage-grouse habitat conservation; visual resource value consideration; consultation regarding upgrades and changes; and incorporation of adaptive management strategies. Of the several hundred Best Management Practices (BMP's) and mitigation measures presented in Chapters Two and Five, only seven use indicate that they are required. The required measures are: 80099-1

- Documentation of accidental hazardous waste releases, their causes, corrective actions taken,
- Compliance with FAA regulations, including a notice of proposed construction,
- Informal consultation under Section 7 of the Endangered Species Act if federally listed endangered species are present,

- Nacelle-mounted lights that flash white during the day and red at night,
- Consultation with Native American governments, as required by the National Historic Preservation Act,
- A paleontological survey if a project area is determined to have a high potential for fossil remains,
- Roads designed "to an appropriate standard no higher than necessary to accommodate their intended functions."

Documentation of a hazardous waste release is not mitigation: the clean-up and removal efforts are. The document does not enumerate specific tasks required of the developer to remedy the situation. If other guidelines exist in BLM documents, or in the guidelines of other agencies, they should be referenced. There is no recourse provided in this DPEIS if the developer does not take appropriate action to mitigate a release.

Four of the required measures (compliance with FAA regulations, specification of Nacelle-mounted lights, informal consultation required if endangered species are present, and consultation with Native American Governments) are required by agencies other than the BLM, so they are not applicable and cannot be counted as BLM-required regualtions. 80099-1 (cont.)

Although a paleontological survey is required if there is a possibility of fossil remains in the area, the mitigations to occur in the event of their discovery are all presented using "should" wording, which relegates responsibility for insuring appropriate mitigations to the local Field Office.

To protect the environment and resources, mitigation measures cannot be conditional. It is understood that the writing of the document is intentionally broad to maintain its applicability, and that it was written in this way because not all of the mitigation measures are anticipated to be required for every wind energy project. However, this wording causes all BMP's and mitigations to be options dependent on local Field Office enforcement. Instead of making the mitigations and best management practices dependent on the judgment of the local BLM Field Officers, which will lead to inconsistency in their application, mitigation measures should be required based on the conditions of a specific site. Here is an example of a more effective BMP: "If there is a high potential for fossil remains to be present at a site, a paleontologist shall be consulted to develop a paleontological resources plan that will include the following components: management options, and criteria to

evaluate their efficacy, mitigation measures that include a collection strategy, and site monitoring to insure that all important paleontological resources are identified." In this example, the conditions that constitute a "high potential" would be explicitly specified.

Many of the best management practices and mitigations that are suggested should be applied to every wind energy development site, regardless of site-specific characteristics.

80099-1 (cont.)

EVALUATION OF DOCUMENT EFFICACY AND UNDERSTANDABILITY

The Link to Sections 5.10-5.15 is Mis-Labeled

The webpage that contains the links to the Adobe PDF's that comprise the document (found at http://windeis.anl.gov/documents/dpeis/index.cfm) has a mis-named link: the link that is titled "Sections 5.10 - 5.11" actually links to a PDF that contains Sections 5.10 - 5.15. There is no listing in the directory for Sections 5.12 – 5.15.

80099-2

Proposed Policies Do Not Adequately Address Native American Sacred Sites (2.2.3.1)

The list of lands that would be excluded from wind energy development under proposed policies (first bullet of 2.2.3.1) does not explicitly protect Native American sacred sites from development. Sacred sites are protected in this clause only if they are designated as part of the National Landscape Conservation System (NLCS). The fourth bullet requires that the BLM initiate consultation with Indian Tribal governments "as early in the planning process as appropriate," to address concerns that might arise, but this clause is weaker than the protection given to NLCS protected areas. Native American sacred sites deserve the same protection from development as the NLCS designated areas, and equally strong wording should be used.

80099-3

Recommendations for Strengthening Other Proposed Policy Areas

Field Office guidelines and/or checklists should be developed to standardize a procedure for determining the level of assessment that will be required for individual projects (bottom of pg. 2-7).

80099-4

On page 2-8, fourth bullet, referring to Visual Resource Management (VRM) attainment, "to the extent possible" wording is weak, and implies that projects could obtain ROW grants without

80099-5

mitigating impacts on visual resources, if the mitigation actions are considered, to some extent, impossible. 80099-5 (cont.)

The first bullet on pg 2-10, section 2.2.3.2.1, addresses new road construction, and says that new roads should "be constructed to the appropriate standard," but there is no definition of the appropriate standard. If other BLM documents that set forth standards of road construction, they should be referenced. 80099-6

Rationale for Using the WinDS Model is Unclear, as are Some of the Terms in Appendix B

The WinDS model is cited briefly in the text of the DPEIS as the source of estimates of economically developable land acreage in each state, but the model "does not identify where the economically developable BLM-administered land is located." Appendix B describes the model's workings, and the model is rather complicated, incorporating a number of factors to determine the "significant market issues pertaining to wind energy," but, despite the intricacy of the model, it can do nothing but predict the number of acres upon which wind installations are economically feasible. The value of the model is ambiguous: if it predicted the best development locations, its value would be clear, but the numbers that it produces do not seem to be worth the effort and time spent on the analysis. 80099-7

The WinDS model was run with one set of inputs, and no parameterization studies were done to determine how varying the inputs would affect the output. This is standard procedure for evaluating the sensitivity of any model, and yet it was overlooked. Due to the economic nature of the model, specific attention should be given to simulating the effects of varying market conditions; these are not economically stable times and it is nearly impossible that one set of economic predictions will be accurate. 80099-8

CONCLUSIONS AND RECOMMENDATIONS

To ensure that environmental impacts of specific projects are not overlooked, specific procedural guidelines should be developed to assist Field Officers who are evaluating a project proposal. Mitigation measure language should be strengthened to require measures that will mitigate the effects of a project. Native American sacred sites should receive the same level of protection as NLCS sites. 80099-9

Responses for Document 80099

80099-001: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land.

80099-002: Thank you for your comment. The link has been corrected on the Web site.

80099-003: The locations of many sacred sites are often only known to Native Americans. This information is not provided to federal agencies in order to protect the sacred site. A system like the NLCS requires foreknowledge of the locations. As stated, this is generally not the case for sacred sites. Also, if this information was provided to the BLM it would not be appropriate to publish it in a forum such as the NLCS. Therefore, determining the presence of a sacred site is appropriately conducted through early scoping and consultation with the Tribes on a project-by-project basis.

80099-004: Thank you for your comment.

80099-005: The text has been revised to remove the phrase "to the extent possible."

80099-006: The BLM guidance documents that should be consulted regarding standards for road design, construction, and maintenance are referenced in the proposed BMP under the Roads heading of Section 2.2.3.2.2, Plan of Development Preparation, and in Section 5.6.5 on mitigation measures for transportation impacts. The documents are BLM Manual 9113 (BLM 1985) and the BLM *Surface Operating Standards for Oil and Gas Exploration and Development* (RMRCC 1989).

80099-007: The WinDS model identifies the best development locations for wind considering the economics of wind and those of other competing generation sources. The purpose of the modeling efforts in this PEIS is to provide a general framework of possible development over the next 20 years, in order to assess the potential spatial, environmental, social, and economic impacts of implementing a Wind Energy Development Program for BLM-administered lands.

80099-008: Many sensitivity runs have been conducted with the WinDS model for other purposes. However for this PEIS, it was desired to examine a case that was consistent with the future electricity demands and fuel prices estimated by the DOE Energy Information Administration in its Annual Energy Outlook 2004. The BLM recognizes that many other factors can also affect the accuracy of the projections, and, as discussed in Appendix B, a variety of factors will determine actual development levels. However, the Maximum Potential Development

Scenario (MPDS) and WinDS model results employed in the PEIS are adequate for forecasting potential development levels over such a large geographic area and long, projected time frame. Greater accuracy or sensitivities to these forecasts would not likely result in changes to the requirements of the Wind Energy Development Program; that is, the proposed policies and BMPs would not be changed at this time. The program requires that the BLM employ adaptive management strategies to the oversight of wind energy development on BLM-administered lands. The BLM will monitor the level of wind energy development into the future as well as the effectiveness of its policies and BMPs. If necessary, adjustments to the programmatic requirements will be made.

80099-009: The language on the Wind Energy Development Program proposed policies and BMPs has been reworded in the Final PEIS to indicate that these policies and BMPs are required, not suggested, elements of any wind energy development activity on BLM-administered land. Exclusions of any additional areas from wind energy development will be determined at the project level as part of the site-specific analyses or through local land use planning efforts, with opportunities for full public involvement. The scope and approach for site-specific analyses will be determined on a project-by-project basis in conjunction with input from other federal, state, and local agencies, Tribal governments through the government-to-government consultation process, and interested stakeholders.

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