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Forest and  
National  
Grasslands**



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# Wind Energy Development Specialist Report

## **Kiowa, Rita Blanca, Black Kettle and McClellan Creek National Grasslands Plan Revision**

### **Environmental Impact Statement Analysis**

Submitted by:       /s/        
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## **Executive Summary**

The Forest Service's special use program provides authorized services by permit, easement, and lease which supports the Agency's mission on the Grasslands, and meets the needs of the public and private business sector.

Wind energy development is authorized by a special use permit/lease. These permits are a partnership between the Agency, and the private businesses and individuals to provide services and facilities. The Grasslands because of their location and fragmented pattern will experience proposals for wind energy development as adjacent lands are developed. Currently, wind energy development interest is occurring in the private sector with some in the Grasslands; however, no formal proposals have been submitted. The Grasslands are considered areas of high potential for energy generation per the National Renewable Energy Laboratory classification for wind energy which exceeds the 6.5 m/s minimum wind speed at 80 m above ground level (AGL).

The 1985 Land and Management Resource Plan does not address wind energy development per se, Alternative A (No Action) provides general goals and direction for special use administration, while following Forest Service manual, handbook, and law, regulations and policy. Alternative B (Preferred Alternative) recommends guidelines for wind energy development and transmission corridors. It further recommends avoidance of wind energy development within 500 feet of eligible National Historic Register sites, or within one half mile of Black-tail prairie dog colonies, or one half mile of airport approach and departures paths, or one half mile buffer or modification of buffers for developed recreation sites. In addition it recommends raptor that protection guidelines be implemented for all power, energy and communication sites. Alternative C, Canadian River Potential Wilderness Area,—energy plan components are not applicable to wilderness.

The Agency has recently completed wind energy directives (August 2011) that set forth direction on responsibilities for wildlife monitoring at sites identified for potential wind energy development. Consistent with adaptive management, the purpose of monitoring wildlife at wind energy facilities is to detect both desired and undesired effects as soon as possible and to minimize undesired effects through changes in operation to the extent possible.

## **Overview of the Affected Environment**

Northeast New Mexico and the Texas and Oklahoma panhandles are all considered areas of high potential for wind energy generation per the National Renewable Energy Laboratory classification which exceeds the 6.5 m/s minimum wind speed at 80 m AGL. Several power transmission and wind energy development companies are beginning to develop these areas. The National Grasslands, because of their location and fragmentation will also experience proposals for development as adjacent lands are developed. Currently there is no wind energy development adjacent to the various federal holdings however, there is interest for development of the wind farms in the private sector and transmission lines to access the power grid.

## **Summary of Environmental Consequences**

Potential environmental consequences are similar in nature for Alternatives A and B with none being of sufficient importance. Energy plan components are not applicable for wilderness and Alternative C.

The potential cumulative environmental consequences are as follows:

- National Grassland habitat for the Lesser Prairie-Chicken becomes more fragmented.
- Lesser Prairie-Chicken avoidance behavior indicates suitable habitat will diminish as energy development advances across the landscape.
- Oklahoma provides private lands incentive programs which make payments for black-tailed prairie dog colony establishment adjacent to the Rita Blanca units. Expansion of prairie dog colonies on the private lands has the potential to expand onto the National Grasslands. This may effect wind energy development and siting.

Wind energy development as permitted by special use authorizations will result in **no environmental consequences** as it pertains to management direction by alternative.

## Specialist Report

### Introduction

This report discloses and evaluates the potential environmental consequences on the wind energy development resource as permitted by special use authorization that may result with the adoption of a revised land management plan. It examines, in detail, three different alternatives for revising the management direction from the 1985 Cibola National Forest Land Management Plan (only that which is relevant to the National Grasslands).

### Relevant Laws, Regulations, and Policy that Apply

36 CFR 251 Subpart B Land Uses, Special Uses; FSM 2700 Special Uses Management, FSM 2709.11 Special Uses Handbook, Chapters 40 and 70; FSH 2609.13 Wildlife and Fisheries Program Management Handbook, Chapter 80; Suggested Practices for Raptor Protection on Power Lines; The State of the Art in 2006, Avian Power Line Interaction Committee (APLIC) 2006; Edison Electric Institute, Washington D.C. Standard Guidance for Towers with Potential Impacts to Federally-Listed Species and Migratory Birds (document prepared by the U.S. Fish and Wildlife Service Oklahoma Ecological Services Field Office, 9014 East 21<sup>st</sup> Street, Tulsa, Oklahoma 74129-1428).

### Methodology and Analysis Process

The Forest Service's wind energy development is authorized by the Special Use Program, and guided by Forest Service manual direction from the Special Uses and Wildlife and Fisheries Programs, and sound professional judgment to evaluate a proponent's proposal before authorization is approved for occupancy and use of the National Grasslands.

As part of the authorization process and siting of wind energy proposals, guidelines will be incorporated from various agencies, as well as the Forest Service to avoid and minimize wildlife impacts from wind turbines, for raptor protection on power lines, and potential impacts to federally listed species and migratory birds.

The National Renewable Energy Laboratory map dated January 15, 2010 indicates that areas which exceed 6.5 m/s minimum wind speed at 80 m AGL are potential areas, highly desirable, for wind energy development. The majority of the federal lands of the Grasslands are within this category.

## **Assumptions**

In the analysis for this resource, the following assumptions have been made:

- The land management plan provides a programmatic framework for future site-specific actions.
- Land management plans do not have direct effects. They do not authorize or mandate any site-specific projects or activities (including ground-disturbing actions).
- Land management plans may have implications, or environmental consequences, of managing the forests under a programmatic framework.
- The plan decisions (desired conditions, objectives, standards, guidelines, management areas, monitoring) will be followed when planning or implementing site-specific projects and activities.
- Law, policy, and regulations will be followed when planning or implementing site-specific projects and activities.
- Monitoring will occur and the land management plan will be amended, as needed.
- We will be funded similar to past budget levels (past 5 years).
- The planning timeframe is 15 years; other timeframes may be analyzed depending on the resource (usually a discussion of anticipated trends into the future).

## **Revision Topics Addressed in this Analysis**

The analysis addresses the need to provide direction on the development of alternative energy and permitting of utility easements while protecting other resources.

Alternative A (No Action) designates existing transmission rights-of-ways as corridors. It provides for joint use in the corridors, however, is silent on alternative energy development.

Alternative B (Preferred Alternative) carries forward right-of-way guidelines from the current plan. It recommends avoidance of new or reconstructed lines within 500 feet of eligible Historic Register areas. It recommends avoidance of wind energy development within one half mile of Black-tail prairie dog colonies, or one half mile of airport approach and departure paths, or one half mile buffer or modification of buffers in relation to developed recreation sites. It recommends raptor protection guidelines for all power, energy, and communications sites.

Alternative C (Canadian River Potential Wilderness Area), alternative energy plan components would not be applicable to wilderness.

## **Summary of Alternatives**

Wind energy development is authorized by the special use program requiring project specific NEPA. The 1985 Plan does not address wind energy per se, Alternative A (No Action) it provides general goals and direction for special use administration while following Forest Service

manual , handbook and laws, regulations and policy. The alternative designated existing transmission rights-of-ways as corridors, and provides for joint use in the corridors. It is silent on alternative energy development. Alternative B (Preferred Alternative) recommends guidelines for wind energy development and energy transmission corridors. It further recommends avoidance of wind energy development within 500 feet of eligible Historic Register sites, within one half mile of Black-tail prairie dog colonies, or one half mile of airport approaches and departure paths, or one half mile buffer or modification of buffers around developed recreation sites. It recommends raptor guidelines be implemented for all power, energy and communication sites. Alternative C (Canadian River Potential Wilderness Area), the energy plan components are not applicable to wilderness. Issuance of a permit will result in **no difference** in management direction by alternative.

## **Description of Affected Environment (Existing Condition)**

Wind energy development is permitted by special use permits which authorize services that support the Forest Service mission and meet the needs of the public. These permits are a partnership between the Agency, and private businesses and individuals to provide services and facilities which contribute to economic growth and sustainability. Northeast New Mexico and the Texas and Oklahoma panhandles are all considered areas of high potential for wind energy generation per the Renewable Energy Laboratory classification. The Grasslands because of their location and fragmented ownership pattern will also experience proposals for development as adjacent lands are developed. The National Renewable Energy Laboratory classifies the Grasslands as exceeding the 6.5 m/s minimum wind speed at 80 m AGL. Currently there is no wind energy development (wind farms) in the private sector adjacent to the federal lands, however, there is interest including transmissions lines to access the power grid.

The Grasslands contribute to the livelihood of local residents, communities and the counties in a variety of ways. It is expected that demand for development of wind energy on the Grasslands is likely to occur and increase over time. As the private lands are developed it is likely that industry will focus its efforts on the public lands which may have a bearing on the local economy.

## **Environmental Consequences**

The land management plan provides a programmatic framework that guides site-specific actions but does not authorize, fund, or carryout any project or activity. Because the land management plan does not authorize or mandate any site-specific activities or ground-disturbing actions there can be no direct effects. However, there may be implications, or longer term environmental consequences, of managing the forests under this programmatic framework.

Potential environmental consequences are similar for Alternatives A and B, and are not applicable to Alternative C since the special use component is not permitted in wilderness.

The desired condition for special uses is to:

- Permit activities which provide goods and services that increase the public's enjoyment of the Grasslands and support nearby communities. The special use permits comply with agency standards.
- Utility lines and other permitted infrastructure have minimal impacts on the scenic resources of the area by harmonizing with the landscape. Large vertical structures

should not dominate the views from High Scenic Integrity areas and developed recreation sites.

- Research permitted on the Grasslands is focused on improving the general scientific understanding of natural and social systems. Research on the Grasslands does not negatively impact long-term vegetation structures and composition, and does not introduce new invasive plants or animals.

## **Scenery**

Scenery is predominantly characterized by agricultural landscapes on the Grasslands with the local population and visitors having a deep appreciation of the plains grassland landscape. The landscape is dynamic and changing. An authorization of a special use permit for various types of uses and locations for (transmission/pipeline corridors, facilities/structures, wind farm) development could potentially present conflicts, however, as part of the application process and acceptance, mitigation with the applicant occurs for example, the permit may recommend a buffer around areas of High Scenic Integrity, or buffers around developed recreation sites.

Alternative A (No Action) Per the 1985 Plan, the visual quality of lands viewed from recreation sites, and scenic travel ways are increasingly important. Specific emphasis needs to be placed on those areas identified as high in scenic value or recreation visitor use. The Plan contains management requirements to maintain Visual Quality Objectives (VQOs) in order to maintain the natural quality of the landscape.

Alternative B (Preferred Alternative) Within 15 years of plan approval, mitigate adverse scenic impacts of all structures upon the landscape that do not meet desired conditions and guidelines of High Scenic Integrity. Infrastructure from special uses and energy developments on the Grasslands would have minimal visual impacts on areas of High Scenic Integrity and developed recreation sites.

Alternative C (Canadian River Potential Wilderness Area) Scenery is not applicable to the special use component in this alternative.

## **Developed Recreation**

Developed recreation sites are in harmony with respect to their natural setting and integrate nature and cultural elements of the surrounding area and local communities, adding to the satisfaction of the visitor. An authorization of a special use permit for various types of uses and locations for (transmission/pipelines corridors, facilities/structures, wind farms) development could potentially present conflict; however, as part of the application process, mitigation with the applicant occurs. Recommend a one half mile buffer for developed recreation sites of modification of existing ones. Existing special use authorizations will be modified as opportunities present themselves.

Alternative A (No Action) The 1985 Plan addresses construction and rehabilitation of developed recreation sites on the Grasslands.

Alternative B (Preferred Alternative) Would continue to provide a variety of recreation opportunities. New recreation development would be limited and rehabilitating existing developments would be emphasized. Developed campgrounds buffers would be modified (extended).

Alternative C (Canadian River Potential Wilderness) Developed recreation is not applicable to the special use component in this alternative since special use development is not authorized.

### **Heritage Resources**

Activities protecting and mitigating impacts to heritage resources are well-covered by existing law, regulation, and policy. An authorization of a special use permit for various types of uses and locations for (transmission/pipeline corridors, facilities/structures, wind farms) development could potentially present conflicts with heritage components; however, as part of the application process, mitigation with the applicant occurs. Recommend a buffer of 500 feet of eligible National Historic Register sites.

Alternative A (No Action) Per the 1985 Plan, archeological management has been effective in controlling impacts of various other resource activities.

Alternative B (Preferred Alternative) This alternative is silent on archeological management in general, except recommending purchases of lands with cultural values.

Alternative C (Canadian River Wilderness Recommendation) Heritage is not applicable to the special use component in this alternative since special use development is not authorized.

### **Wildlife Habitat**

All of the Grasslands have special use development potential which could result in vegetation and habitat becoming more fragmented. Species that utilize the structure and composition of the Grassland vegetation will have decreasing habitats available. The Oklahoma private lands incentive payments program for Black-tailed prairie dog establishment is adjacent to units of the Rita Blanca NG. Expansion of prairie dog colonies on private lands has the potential to expand onto the National Grasslands.

Alternative A (No Action) The 1985 Plan, focuses its objectives on management indicator species, listed or potential threaten and endangered plant and animal species. Management activities involving wildlife and fish species should include: 1) coordination with other resource activities; 2) continued direct habitat improvement work; 3) continued protection of threatened or endangered species; 4) continued cooperation with appropriate game departments; 5) continued diversity sufficient to maintain the minimum viable population of management indicator species.

Alternative B (Preferred Alternative) Would allow for removal of invasive or non-native trees from historical grassland communities or in otherwise suitable Lesser Prairie-Chicken habitat on the Black Kettle NG. This alternative articulates to having a management approach that encourages Black-tailed prairie dog colonies to expand on the Rita Blanca NG. It encourages having sufficient habitat available to potentially accommodate reintroduction of the Black-foot ferret as a natural predator.

Alternative C (Canadian River Wilderness Recommendation) Wildlife habitat is not applicable to the special use component in this alternative since special use development is not authorized.

An authorization of a special use permit for various types of uses and locations for (transmission/pipeline corridors, facilities/structures, wind farms) development could potentially present conflicts, however, as part of the application process, mitigation with the applicant occurs. Recommend avoidance of active of active prairie dog colonies. As a management approach is



developed for the Black-tailed prairie dog and reintroduction of the Black-foot ferret, restriction maybe imposed on specific areas for development.

The Lesser Prairie chicken avoidance behavior indicates habitat will diminish as special use (structures are constructed) development continues to advance across the landscape. Recommend avoidance of potential habitat areas which will have a negative impact on some areas desirable for various types of development.

Special Use authorization will result in **no environmental consequences** as it pertains to management direction by alternative.

### **Cumulative Environmental Consequences**

There is the potential for cumulative consequences as a result of wind energy development because of the land pattern of the Grasslands as a result of facilities being developed in the private sector and expanding onto the federal lands (transmission corridors/routes and wind energy development).

All the Grasslands have energy development potential. The activities on adjacent private land may produce additional consequences. Wind energy development in the private land is increasingly showing more interest and as infrastructure transmission lines are developed, more wind farms will occur. The potential cumulative environmental consequences are as follows:

- National Grassland habitat for Lesser Prairie-Chicken becomes more fragmented.
- Lesser Prairie chicken avoidance behavior indicates suitable habitat will diminish as energy development advances across the landscape.
- Oklahoma provides private land incentive programs which make payments for black-tail prairie dog colony establishment adjacent to the Rita Blanca units. The expansion of prairie dog colonies on the private lands has the potential to expand onto the National Grasslands. This may affect wind energy development and siting.

Wind energy development as permitted by a special use authorization will result in **no cumulative environmental consequences** as it pertains to management direction by alternative.

### **Unavoidable Adverse Impacts**

The land management plan provides a programmatic framework that guides site-specific actions but does not authorize, fund, or carryout any project or activity. Before any ground-disturbing actions take place, they must be authorized in a subsequent environmental analysis. Therefore none of the alternatives cause unavoidable adverse impacts.

### **Irreversible and Irretrievable Commitment of Resources**

The land management plan provides a programmatic framework that guides site-specific actions but does not authorize, fund, or carryout any project or activity. Because the land management plan does not authorize or mandate any ground-disturbing actions, none of the alternatives cause an irreversible or irretrievable commitment of resources.

## **Adaptive Management**

All alternatives assume the use of adaptive management principles. Forest Service decisions are made as part of an on-going process, including planning, implementing projects, and monitoring and evaluation. The land management plan identifies a monitoring program. Monitoring the results of actions will provide a flow of information that may indicate the need to change a course of action or the land management plan. Scientific findings and the needs of society may also indicate the need to adapt resource management to new information. The Forest Supervisor annually evaluates the monitoring information displayed in the evaluation reports through a management review and determines if any changes are needed in management actions or the plan itself. In general, annual evaluations of the monitoring information consider the following questions:

- What are the effects of resource management activities on the productivity of the land?
- To what degree are resource management activities maintaining or making progress toward the desired conditions and objectives for the plan?
- What changes are needed to account for unanticipated changes in conditions?

In addition to annual monitoring and evaluation, the Forest Supervisor reviews the conditions on the land covered by the plan at least every 5 years to determine whether conditions or demands of the public have changed significantly. The forest plan is ordinarily revised on a 10-year cycle and the Forest Supervisor may amend the plan at any time.

## **Consistency with Law, Regulation, and Policy**

All alternatives are designed to guide the Kiowa, Rita Blanca, Black Kettle and McClellan Creek National Grasslands' management activities in meeting federal law, regulations, and policy.

## **Other Planning Efforts**

There are no potential conflicts between the proposed action and the objectives of Federal, Regional, State, local, or Tribal land use plans, policies, and controls for the area concerned.

### **List of Preparers**

Donald L. Hall, Cibola National Forest, Lands Specialist; Graduated from Utah State University – 1976 with a Bachelor of Science Degree; have been employed by the USDA Forest Service for 30+ years in natural resource management

## **Reference**

National Renewable Energy map date January 15, 2010; Web: [www.awstruewind.com](http://www.awstruewind.com)