

S. SUMMARY

S.1 INTRODUCTION

In accordance with the Energy Reorganization Act of 1974 (42 U.S.C. 5801), the U.S. Department of Energy (DOE) established the Solar Energy Research Institute (SERI) in 1977. SERI was designated as a national laboratory and became the National Renewable Energy Laboratory (NREL) in 1991. NREL was established to support DOE's mission to research and develop energy efficiency and renewable energy technologies. Among other responsibilities, NREL operates the National Wind Technology Center (NWTC) located in Jefferson County, Colorado. The NWTC is a federally-owned, contractor-operated site.

In accordance with the DOE National Environmental Policy Act (NEPA) regulations, DOE is required to evaluate existing Site-Wide Environmental Assessments (EA) every five years to determine whether the Site-Wide EA adequately addresses current agency plans, functions, programs and resource utilization. A Site-Wide EA for the NWTC was published in 1996 (DOE-EA-1127). DOE has determined that a new comprehensive EA should be prepared for the site to address new site development proposals and changes in the regional environment.

DOE is the lead agency for this EA, and other federal, state, and local agencies and the public have been invited to participate in the environmental documentation process.

S.1.1 Purpose and Need

The purpose of the Proposed Action is to support DOE's mission in the research and development of energy efficiency and renewable energy technologies. Alternative energy technology research is needed to improve technology designs, improve power generation efficiencies, increase economic competitiveness, and fully characterize and minimize environmental impacts from various technologies. The Proposed Action would provide and maintain enhanced facilities and infrastructure that would adequately support the site purpose of state-of-the-art alternative energy research, development, and demonstration.

S.1.2 Project Site, Proposed Action and Alternatives

The NWTC is composed of 280 acres managed by DOE's Golden Field Office and NREL. An additional 25 acres has been designated for inclusion within the NWTC by the National Defense Authorization Act for Fiscal Year 2002. The EA considers management of and potential impacts to the entire 305 acres.

The 305-acre NWTC is located in northwest Jefferson County, Colorado, approximately 16 miles northwest of Denver. The site is located in the Rocky Flats Environmental Technology Site (RFETS) buffer zone.

The Proposed Action consists of short-term and long-term site improvements and activities that would enhance the NWTC's role and capabilities as a world-class research facility focused on wind energy generation technology and other energy efficiency and renewable energy alternatives. These improvements and activities include: facility and research area modification and construction; infrastructure improvements; and site activities and routine maintenance. For purposes of long-term, site-wide environmental review, the long-term scenarios include "bounding analysis" assumptions to represent likely site "buildout" conditions.

Given the intent of this Site-Wide EA, scoping input, and preliminary impact findings, the only alternative to the Proposed Action analyzed in this EA is the No Action Alternative.

S.1.3 Characteristics of a Site-Wide Environmental Assessment

This document is a "Site-Wide Environmental Assessment" similar to the document NREL prepared for the project site in 1996. DOE defines a Site-Wide environmental document as follows:

"A broad-scope Environmental Impact Statement (EIS) or EA that is *programmatic* in nature and identifies and assesses the individual and cumulative impacts of ongoing and reasonably foreseeable future actions at a DOE site." (10CFR Part 1021)

This programmatic environmental document acts as an analytical superstructure for subsequent and more detailed analyses, as necessary. At the NWTC, the document will serve as a planning tool that aids decisions about future use and development of the site.

If new issues arise in the future, NREL will prepare subsequent environmental reviews or documents (EISs/EAs) that would incorporate this programmatic document and would be focused only on those issues that have not been adequately addressed. If new proposals or conditions would have no effects beyond those analyzed in the programmatic document, no new NEPA document would be necessary.

S.1.4 Organization and Content of the Environmental Assessment

This EA is organized in a manner consistent with NEPA and DOE's NEPA Implementing Regulations including the specific guidelines for Site-Wide EAs. The EA has seven Chapters:

Summary

Chapter 1 Introduction

Chapter 2 Proposed Action and Alternatives

Chapter 3 Affected Environment

Chapter 4 Environmental Consequences and Mitigation Measures

Chapter 5 Comments on the Draft EA and Responses

Chapter 6 List of Preparers

Chapter 7 Bibliography and References

Appendixes

S.2 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION AND ALTERNATIVES

S.2.1 Summary of Scoping Process, Input, and Impact Issues

A scoping letter was prepared and distributed to an extensive list of agencies, organizations and members of the public on June 13, 2001. The scoping letter for the Proposed Action identified the following environmental topics to be addressed in the EA:

Land Use, Planning, Socioeconomics and Public Policy
Traffic and Circulation

Air Quality and Noise
Visual Quality/Aesthetics
Water Resources
Soils and Geology
Biological Resources
Cultural Resources
Waste Management
Public Facilities, Services and Utilities
Energy

The following specific issues were raised during the scoping process:

- Wildfire: current and future values at risk, protection efforts, mitigation of risk, and vegetative fuels;
- The presence of on-site and off-site endangered species, especially Preble's Meadow Jumping Mouse populations, habitat and related protections;
- The presence of tallgrass prairie and related protections;
- Conservation management planning: purpose, focus and responsibilities;
- Gas line alignments and related impacts on conservation management areas;
- Bird strikes from turbine blades;
- Wind monitoring data for emergency response teams;
- Site access and safety at the Highway 128/site access road intersection;
- Visual access for the public from viewing areas;
- Aircraft safety caused by potential interference with Jefferson County Airport height restrictions and navigational and communication equipment;
- Status of the site relative to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the National Priority List; and
- Potential conflicts of the proposed action relative to mineral leases and associated agreements.

The specific issues listed above are addressed in this EA along with issues raised during the Draft EA comment period (see Section 1.5.3 and Chapter 5).

The following alternatives were defined prior to the scoping period and were mentioned in the scoping letter:

- New Site Alternative;
- Off-Site Improvements Alternative;
- Site Development Configuration Alternatives; and
- Reduced Development Intensity Alternative

No additional alternatives were raised during the scoping period or during the Draft EA comments period (see Section 1.5.3 and Chapter 5).

The No Action Alternative is the only alternative addressed in this EA. Other alternatives were eliminated from further analysis. The rationales for elimination of these alternatives are presented in Chapter 1.

S.2.2 Description and Comparison of Environmental Consequences

The following discussion summarizes findings of this EA and compares the impacts of the Proposed Action with those of the No Action Alternative.

Implementation of the Proposed Action, which includes short-term and long-term improvements, would not result in significant impacts to the environment. This finding has been made because the future improvements and activities included in the Proposed Action do not substantially deviate from existing conditions, and because NREL has an extensive set of existing programs, policies and practices intended to avoid, minimize and mitigate potential impacts at the NWTC. NREL's environmental commitments are described in Chapter 1 and mentioned, where applicable, in Chapters 3 and 4.

The direct, indirect, secondary and cumulative impacts of the Proposed Action are discussed throughout Chapter 4 of this EA. None of these impacts are considered significant, and mitigation measures beyond existing NREL commitments are neither required nor recommended, with the following exception related to Option 1 for the gas pipeline route.

If Option 1 for the gas pipeline route is selected, the following measures are required to minimize potential impacts to the Preble's Meadow Jumping Mouse (Preble's):

- A Biological Assessment (BA), as defined by the Endangered Species Act (ESA), will be prepared to fully evaluate potential effects from the pipeline and determine whether the construction will adversely affect Preble's;
- Initiate formal consultation with the U.S. Fish and Wildlife Service (USFWS) to obtain a Biological Opinion and Incidental Take Statement if effects to Preble's are determined to be adverse;
- Determine conservation measures through consultation with the USFWS to minimize the possibility of adversely affecting Preble's and the possibility of incidental take occurring. Measures may include but not be limited to:
 - Minimize the pipeline corridor width through the riparian habitat to the trench cut and a minimal swath for equipment passage and overburden storage;
 - Conduct a three-night trapping survey at the site of the proposed pipeline crossing immediately before any ground disturbance to capture and remove Preble's from the area; and
 - Maintain compliance with applicable permit stipulations regarding erosion control and impact minimization.

Option 2 would not impact Preble's habitat. DOE has selected Option 2 as the preferred alternative for the gas pipeline.

Comparison of Proposed Action to No Action Alternative

The vast majority of impacts created by short-term and long-term activities that would be implemented under the Proposed Action would be avoided if the No Action Alternative were selected as the preferred alternative. However, none of the impacts of the Proposed Action are considered significant, and the No Action Alternative would eliminate the beneficial impacts that could be expected from increased investment in energy efficiency and renewable energy technology and related research.

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