

Chapter 1.0 Introduction

1.1 General Overview

This document presents the Draft Environmental Impact Statement (DEIS) for the proposed White Pine Energy Station (also referred to as the Station) in White Pine County in eastern Nevada. The Proposed Action and alternatives evaluated in this document were developed in response to a proposal by White Pine Energy Associates, LLC, (WPEA) to construct, own, operate, and maintain an approximately 1,590-megawatt (MW) coal-fired electric power generating plant. The power plant and associated features (electric transmission facilities, water supply system, electric distribution line, rail spur, and access roads) would be located primarily on lands managed by the Ely Field Office of the U.S. Department of the Interior Bureau of Land Management (BLM). This document evaluates the BLM action and potential environmental effects that would result from the issuance of Rights-of-Way (ROWs) and the ultimate sale of the power plant site under the Federal Land Policy and Management Act (FLPMA) for the construction, operation, and maintenance of the electric power generating plant, electric transmission lines and substations, wellfield and water pipeline, electric distribution line, railroad spur, access roads, and ancillary features. The power plant site would subsequently be sold to WPEA.

This document was prepared in compliance with the Council on Environmental Quality regulations for implementing the National Environmental Policy Act (NEPA) (40 CFR Sec. 1500-1508); the *NEPA Handbook*, H-1790-1; and the Ely Field Office *Environmental Analysis Guidebook*: Sections 201, 202, and 206 of FLPMA of 1976 (43 CFR Sec. 1600). The Ely, Nevada, Field Office of the BLM is the

federal lead agency in the NEPA process and development of this document. The National Park Service, Nevada Department of Wildlife, and White Pine County, Nevada, are cooperating agencies.

1.2 Purpose, Need, and Background

1.2.1 Introduction

The construction of new power generation facilities is required throughout the western United States to meet the increasing demand for power resulting from population growth, business expansion, and other factors.

The western United States is projected to have the largest percent change in population of any region with an estimated 45.8 percent growth between 2000 and 2030 (Census Bureau, 2005). Nevada has the fastest rate of population growth in the United States and the demand for power continues to increase. Population increases and economic growth in Nevada will result in a demand for electricity that cannot be met with existing power generation resources.

According to Executive Order 13212, May 18, 2001, “The increased production and transmission of energy in a safe and environmentally sound manner is essential to the well-being of the American people...agencies shall take appropriate actions, to the extent consistent with applicable law, to expedite projects that will increase the production, transmission, or conservation of energy.”

WPEA is proposing the White Pine Energy Station in White Pine County, Nevada, to help meet baseload electricity demand in Nevada and the western United States. WPEA is proposing to locate the

White Pine Energy Station on federally administered lands managed by the BLM.

1.2.2 Purpose

The purpose of the White Pine Energy Station is to supply reliable, low-cost electricity in an environmentally responsible manner to meet baseload energy needs in Nevada and the western United States, and to bring economic benefits to White Pine County, Nevada. To achieve this purpose, the Station must:

(1) utilize commercially proven and reliable technology; (2) be cost-effective; (3) be located in proximity to infrastructure and water supplies in White Pine County needed to support the Station's operations; (4) put water rights held by White Pine County for energy production in Steptoe Valley to a beneficial use in producing energy; and (5) provide traffic for the Nevada Northern Railway (NNR).

1.2.3 Need and Background

Adequate and reliable electricity supply is essential to the well-being of the American people and the economy. The construction of new power generation and transmission facilities is required to meet increasing demands for electricity.

Electricity demand varies on an instantaneous, daily, and seasonal basis as a function of the usage of electrical devices. Generally, the most economical and reliable means of supplying electric load is to have three types of generating facilities: baseload facilities; intermediate load facilities; and peaking load facilities. The White Pine Energy Station is being developed to serve baseload electric needs.

Baseload facilities operate near full capacity 24 hours per day and must be efficient, highly reliable, and economize fuel. Large-scale generating facilities fueled by coal, nuclear, or hydropower typically serve

baseload energy needs in the most economical manner. Intermediate load facilities operate seasonally and in a cycling fashion, and typically have a higher operating cost than baseload facilities. Natural gas-fired combined-cycle generating facilities have become a predominant supplier of intermediate energy needs. Wind, hydropower, gas steam boilers, and smaller coal-fired plants also can serve intermediate energy needs. Peaking load facilities operate only during peak demand periods and during emergencies because of their higher operating costs relative to baseload and intermediate load facilities. Peaking facilities include quick-start natural gas and oil-fired combustion turbines, diesel generators, natural gas and oil-fired steam boilers, and hydropower.

The Energy Information Administration forecasts that coal-fired plants will make up most of the capacity additions during the forecast period. Specifically, in the western United States, the Energy Information Administration states that the choice to build mostly coal-fired plants is based on the region's lower-than-average coal prices and higher-than-average natural gas prices (Energy Information Administration, 2006). The Western Electricity Coordinating Council forecasts that "reported generating capacity additions in the region may not be sufficient to reliably supply the forecast firm peak demand and energy requirements throughout the [2005-2014] period" (Western Electricity Coordinating Council, 2005).

The Energy Information Administration forecasts energy needs through 2030. The Energy Information Administration (2006) forecasts the need for approximately 24,000 MW of new power generation in the western United States by 2015 (78,000 MW by 2030) to meet growing energy needs and maintain reliable

operation of the electric system. The Energy Information Administration (2006) estimates that new coal-fired generation facilities will supply 5,700 MW by 2015 (47,000 MW by 2030) of this need for new generation capacity. In Nevada, Nevada Power Company (2006) and Sierra Pacific Power Company (2006) have identified the need for approximately 5,500 MW of additional electric capacity beyond their existing generation capacity and secured purchases by 2015. The White Pine Energy Station would help fill part of the identified need for electricity by providing approximately 1,590 MW of new baseload coal-fired electric generation capacity.

Completion of the White Pine Energy Station also would help meet stated objectives of the Nevada State Office of Energy and Nevada electric utilities to increase fuel diversity in the State of Nevada. The addition of stable-priced, low-cost, coal-fired capacity would reduce the risk of reliance on volatile and more expensive natural gas-fired generation and the impacts of droughts on hydropower.

WPEA's proposal to locate the Station in Steptoe Valley approximately 34 miles (proposed site) or 22 miles (alternative site) north of Ely is based on the following factors:

- The proposed site is near the NNR, which would be used to supply coal to the power plant.
- The proposed site is near a utility corridor that is permitted for a new 500,000-volt electric transmission line that would extend from Idaho to Clark County, Nevada. Access to this utility corridor provides a route to existing electric transmission facilities in White Pine County, specifically 345,000-volt and 230,000-volt transmission lines near Robinson Summit, and provides

access to planned regional electric transmission facilities.

- The site is centrally located to the ground water source that would be used to supply the White Pine Energy Station's water needs. A reliable and economical water supply is central to a low-cost baseload, steam power plant and is available in the form of water rights held by White Pine County.
- The proposed site can be easily accessed via U.S. Highway 93 (U.S. 93) and is within a short driving distance to the population centers of Ely and McGill.
- The availability of a water supply was among the key factors in WPEA's decision to undertake the proposed project and to site it at the proposed location in White Pine County.

Siting the Station in White Pine County, Nevada, would meet long-held county objectives of attracting a coal-fired electric generation facility to bring needed and desired economic benefits to the county, strengthening and stabilizing the county economy, and, therefore, improving the quality of life for county citizens. The Proposed Action and the other action alternative (Alternative 1) would put to beneficial use ground water rights granted to White Pine County by the Nevada State Engineer in Steptoe Valley for energy production purposes. If these rights are not put to beneficial use, White Pine County is at risk of having the rights withdrawn by the State Engineer. The proposed project also would help generate additional support for reactivating and upgrading the NNR, which would benefit the county's economy through recreational and industrial uses of the NNR.

White Pine County is approximately 93 percent public land and its economy has historically relied on the boom-bust cycles

of the mining industry. This has resulted in significant fluctuations in population, employment, tax base, and revenues. Specifically, with the closing of the Robinson Copper Mine in 1999, White Pine County has seen its population decrease from 10,134 in 1996 to 8,842 in 2003 (Nevada State Demographer's Office, 2006) and its labor force decrease from 4,337 in 1995 to 3,694 in 2003 (Nevada Department of Employment, Training & Rehabilitation, 2006). Likewise, White Pine County has seen the assessed valuation of its tax base decrease from \$173,614,000 in 1999-2000 to \$126,300,000 in 2003-2004. The county's median household income of \$36,622 in 2003 was the fourth lowest in Nevada and ranks below the state and national averages of \$45,249 and \$43,318, respectively. More recently, with the re-opening of the Robinson Copper Mine in 2004, the population has increased to 9,275 in 2005 and the labor force has increased to 4,300 in 2005. The construction and operation of the White Pine Energy Station would provide a steady, long-term positive effect on employment opportunities, tax revenues, household incomes, and sales of local goods and services in the county.

In 1983, to facilitate such a project, the county secured 25,000 acre-feet of water rights for power generation purposes and has since been maintaining these water rights with regular filings with the State Engineer of Nevada. In February 2004, White Pine County entered into an agreement granting WPEA the exclusive right to use these water rights for development and operation of the White Pine Energy Station. The Station would use up to 5,000 acre-feet of water per year.

1.3 Project Location

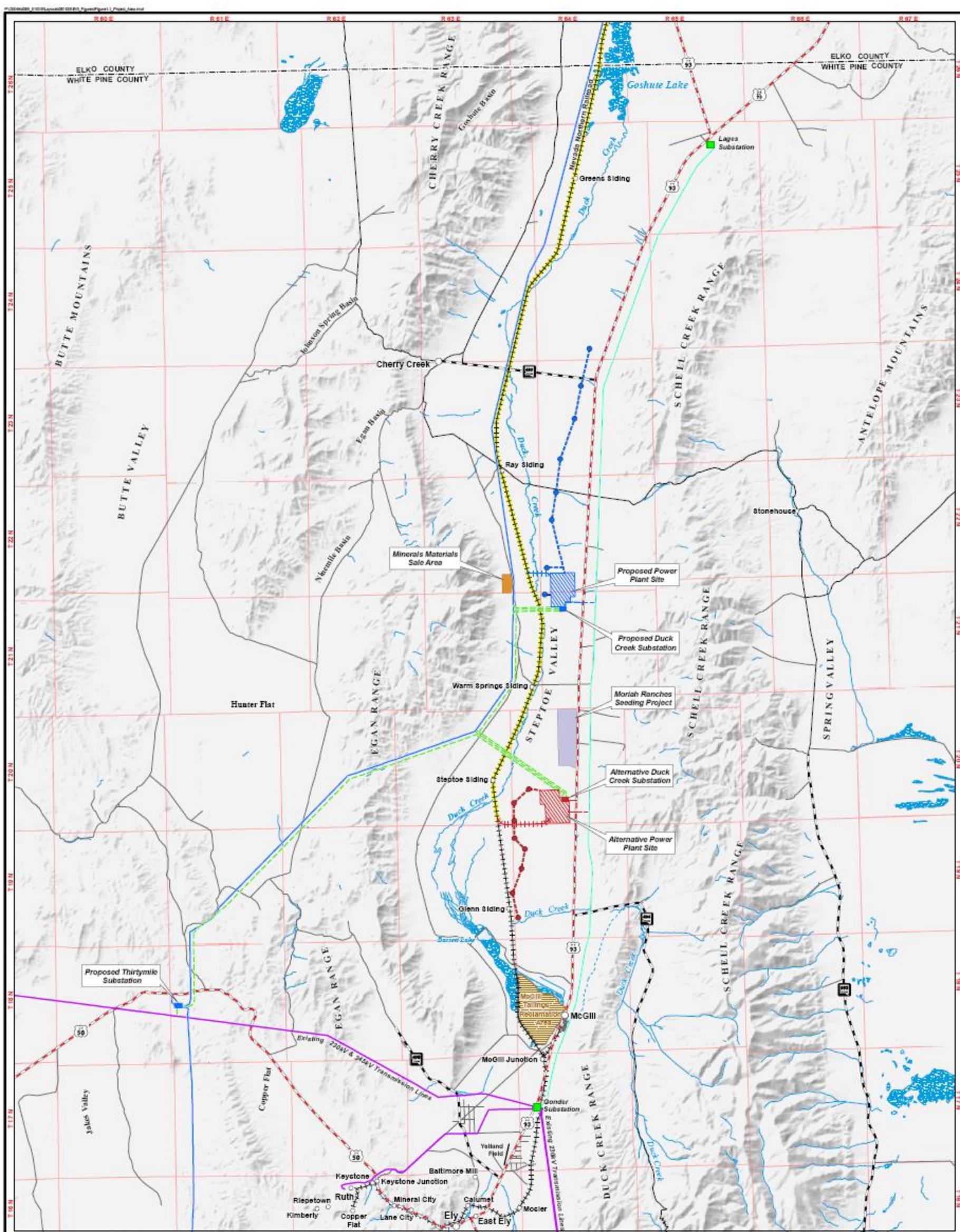
The White Pine Energy Station site is located in White Pine County in eastern

Nevada primarily on public lands managed by the Ely Field Office of the BLM (see Figure 1-1). The power plant site for the Proposed Action is in the Steptoe Valley Hydrographic Basin, approximately 34 miles north of Ely, 22 miles north of McGill, and 1 mile west of U.S. 93. The Steptoe Valley is bordered on the east by the Schell Creek Range and on the west by the Egan Range (approximately 8 miles and 5 miles from the Proposed Action power plant site, respectively). The Utah border is approximately 43 miles east and the northern boundary of Great Basin National Park approximately 57 miles southeast of the Proposed Action power plant site. An alternative power plant site (Alternative 1), also in Steptoe Valley, is approximately 12 miles south of the Proposed Action power plant site and 1 mile west of U.S. 93.

1.4 Policies, Plans, and Programs

1.4.1 Relationships to BLM Policies, Plans, and Programs

The BLM is responsible for managing the lands requested for use by WPEA for the White Pine Energy Station. WPEA's proposed use of public land for the Station conforms to BLM's land management policies under the Egan Resource Management Plan, as well as the FLPMA. The Ely Field Office is now preparing the Ely Resource Management Plan, which will consolidate and update management direction for all BLM-managed lands in the Ely District and replace three separate planning documents (the Egan Resource Management Plan and the Schell and Caliente Management Framework Plans) that have guided management of public lands in the Ely District for over 15 years. WPEA's proposed Station is being considered under, and conforms to, the existing Egan Resource Management Plan.



0 1.5 3 Miles
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- Existing Electrical Features**
- Existing Substation
 - Existing Transmission Line
 - Existing Distribution Line
- Surface Water**
- Perennial Stream or River
 - Wetland
- Connected Action**
- SWIP Transmission Line
 - NNR Upgrade
- Common Project Features**
- Minerals Materials Sale Area
 - Moriah Ranches Seeding Project

- Proposed Action Project Features**
- Proposed Well Site
 - Proposed Water Pipeline/ Distribution Line
 - Proposed Rail Spur
 - Proposed Transmission Line
 - Proposed Electric Distribution Line
 - Proposed Access Road
 - Proposed Substation Site
 - Proposed Power Plant Site

- Alternative 1 Project Features**
- Proposed Well Site
 - Proposed Water Pipeline/ Distribution Line
 - Proposed Rail Spur
 - Proposed Transmission Line
 - Proposed Electric Distribution Line
 - Proposed Access Road
 - Proposed Substation Site
 - Proposed Power Plant Site

Project Area
White Pine Energy Station Project

Figure 1-1

The BLM must review WPEA's development plans to ensure that adequate provisions are included to: (1) prevent unnecessary degradation of public lands and their resources; (2) ensure reclamation of disturbed areas; and (3) ensure compliance with applicable state and federal laws. Approved BLM land use plans in adjacent or nearby administrative units are the Schell and Caliente Management Framework Plans, and the Elko and Egan Resource Management Plans. The Schell and Caliente Management Framework Plans and the Egan Resource Management Plan will subsequently be replaced by the Ely Resource Management Plan (BLM, 2005a).

1.4.2 Relationships to Non-BLM Policies, Plans, and Programs

The Proposed Action and the other action alternative (Alternative 1) being evaluated in this document are consistent with approved resource-related policies and programs of other federal agencies, Indian Tribes, local governments, and the State of Nevada.

1.5 Applicable Laws and Regulations and Authorizing Actions and Permits

1.5.1 Applicable Laws and Regulations

Table 1-1 lists laws, regulations, and executive orders potentially applicable to the Proposed Action and Alternative 1.

1.5.2 Permits and Approvals

Table 1-2 lists federal, state, county, and other permits and approvals that may be needed to implement the Proposed Action or Alternative 1.

1.6 Summary of Public Scoping and Issue Identification

Public scoping for the White Pine Energy Station DEIS occurred in Ely, Nevada on August 23, 2004, and Reno Nevada on August 24, 2004. Forty-two individuals attended the Ely meeting and 11 individuals attended the Reno meeting. WPEA and BLM representatives presented project information and discussed concerns with individuals in an open-house format at both meetings.

Individuals, public agencies, and non-profit organizations submitted 35 letters containing written comments to the BLM after the meetings. The majority of the comments expressed concern about potential impacts of the power plant to air quality and water development in the area. Numbers of comments (from highest to lowest) provided in each resource category by the public follow, and were used to identify issues addressed in this DEIS:

- Air quality: 44 comments
- Water development, use, and ground water impacts: 41 comments
- Wildlife, habitat, and ecological concerns: 33 comments
- Transmission: 15 comments
- Socioeconomics: 13 comments
- Visual resources: 13 comments
- Transportation, roads, and railroad: 12 comments
- Power need and recipients: 10 comments
- Proposed site and alternatives: 10 comments

- Waste and hazardous materials: 9 comments
- Energy efficiency, conservation, and alternative energy: 7 comments
- Power plant technology: 6 comments
- Noise: 6 comments
- Recreation: 2 comments
- Other: 10 comments

Public scoping and issue identification are discussed further in *Chapter 5, Consultation and Coordination*.

1.7 Projects Considered for Cumulative Analysis

Council on Environmental Quality guidelines for the preparation of EISs require that cumulative impacts be addressed in addition to direct and indirect impacts. Cumulative impacts are those incremental impacts that would result from the effects of the Proposed Action or Alternative 1 when added to the effects of other past, present, and reasonably foreseeable projects. The BLM recognizes the need for a thorough analysis of potential cumulative effects, not only from power plant siting activities, but from other development activities as well.

This section identifies 11 large projects whose cumulative impacts may extend across a broad range of the resource categories being assessed in this document (see Figure 1-2). Each project has been evaluated to determine if it is sufficiently defined (reasonably foreseeable) to be:

(1) relevant to potential impacts;
 (2) within the project area of influence;
 and (3) of a magnitude that could potentially result in a cumulative impact. Descriptions and cumulative effects, if any, of the projects listed below are presented in Section 4.19, *Cumulative Impacts*, of Chapter 4, *Environmental Consequences*, together with any other projects not listed here whose effects would be very resource-specific. The 11 large projects considered in the cumulative impacts analysis are the following:

- Southwest Intertie Project (also a connected action as described in Section 2.2.3.7, *Connected Actions*)
- Nevada Northern Railway Upgrade (also a connected action)
- Nevada Northern Railway Operation (also a connected action)
- White Pine County Airport (Yelland Field) Expansion
- Basset Lake Expansion
- Egan Range Wind Generating Project
- Intermountain Power Project Phase III
- Newmont Gold Coal-fired Power Plant
- Clark, Lincoln, and White Pine Counties Groundwater Development Project (Southern Nevada Water Authority Project)
- Toquop Coal-fired Power Plant
- Ely Energy Center

TABLE 1-1

Laws, Regulations, and Executive Orders That May Apply to the Proposed Action and Alternative 1 of the White Pine Energy Station

National Environmental Policy Act (NEPA) 42 USC 4321 et seq.
Council on Environmental Quality general regulations implementing NEPA (40 CFR Parts 1500-1508)
Department of the Interior's implementing procedures and proposed revisions (August 28, 2000, Federal Register)
National Historic Preservation Act and regulations implementing NHPA 16 USC 470 et seq.
Antiquities Act of 1906 16 USC 431 et seq.
Archaeological Resources Protection Act, as amended 16 USC 470aa et seq.
Native American Graves Protection and Repatriation Act of 1990
Clean Air Act 42 USC 7401 et seq.
Clean Water Act 33 USC 1251 et seq.
Disposition: Sales—43 CFR 2700
Endangered Species Act (ESA) 16 USC 1531 et seq.
Nevada Division of Forestry Critically Endangered Flora Law (NRS 5.27-5.33)
Noise Control Act of 1972, as amended 42 USC 4901 et seq.
Occupational Safety and Health Act 29 USC 651 et seq. (1970)
Mineral Leasing Act
Pollution Prevention Act of 1990 42 USC 13101 et seq.
Safe Drinking Water Act 42 USC s/s 300f et seq. (1974)
Migratory Bird Treaty Act (Migratory Bird Guidance) 16 USC 703–711 Executive Order January 1, 2001
NEPA, Protection and Enhancement of Environmental Quality Executive Order 11512
National Historic Preservation Executive Order 11593
Floodplain Management Executive Order 11988
Protection of Wetlands Executive Order 11990
Federal Compliance with Pollution Control Standards Executive Order 12088
Environmental Justice Executive Order 12898
Indian Sacred Sites Executive Order 13007
American Indian Religious Freedom Act of 1978 (42 USC 1996)
Memorandum on Government-to-Government Relations with Native American Tribal Governments of 1994
Indian Self-Determination and Educational Assistance Act of 1975, Title I
Indian Self-Determination and Educational Assistance Act of 1994, Title IV
Departmental Responsibilities for Indian Trust Resources, 512 DM 2.1
Sacred Sites, 512 DM 3
Consultation and Coordination with Indian Tribal Governments Executive Order 13175
Invasive Species Executive Order 13112
Responsibilities, and the Endangered Species Act, Secretarial Order 3206 (June 5, 1997)
Federal Land Policy and Management Act of 1976 (FLPMA) 43 USC 1701 et seq.
BLM right-of-way regulations 43 CFR 2800

TABLE 1-2

Federal, State, and County Permits and Approvals That May be Needed to Implement the Proposed Action or Alternative 1 of the White Pine Energy Station

Federal Permits and Approvals

Bureau of Land Management NEPA Record of Decision for Proposed Action

Bureau of Land Management Rights-of-Way for electric power generating plant, electric transmission lines and substations, wellfield and water pipeline, electric distribution line, access roads, railroad spur, and other ancillary approvals

U.S. Fish and Wildlife Service, Endangered Species Act Section 7 Consultation and Biological Opinion

Acid Rain (Title IV CAA) Permit

U.S. Environmental Protection Agency, Region IX, Title V (CAA) Operating Permit

U.S. Environmental Protection Agency, Section 402 National Pollutant Discharge Elimination System Notification for Stormwater Management during Construction

U.S. Environmental Protection Agency, Section 402 National Pollutant Discharge Elimination System Notification for Stormwater Management during Operation

U.S. Army Corps of Engineers, Section 404 Excavation or Discharge of Fill Material into Waters of the U.S., Including Wetlands

State of Nevada Permits and Approvals

Nevada State Historic Preservation Office (SHPO), Section 106 review and concurrence, per National Historic Preservation Act for BLM lands, per protocol between BLM and Nevada SHPO

Nevada Department of Wildlife Project Review: Wildlife and Habitat Consultation for Disturbance on BLM land

Temporary Discharge Permit—Nevada Division of Environmental Protection, Bureau of Water Pollution Control

Nevada Public Utilities Commission Utility Environmental Protection Act Permit

Nevada Division of Environmental Protection, Section 401 Water Quality Certification

Water Right Permit-State Engineer—Nevada Department of Water Resources

Prevention of Significant Deterioration Program Major Source Permit—Nevada Department of Environmental Quality

Dust Control Permit—Nevada Department of Environmental Quality

Ground Water Discharge Permit—Nevada Division of Environmental Protection, Bureau of Water Pollution Control

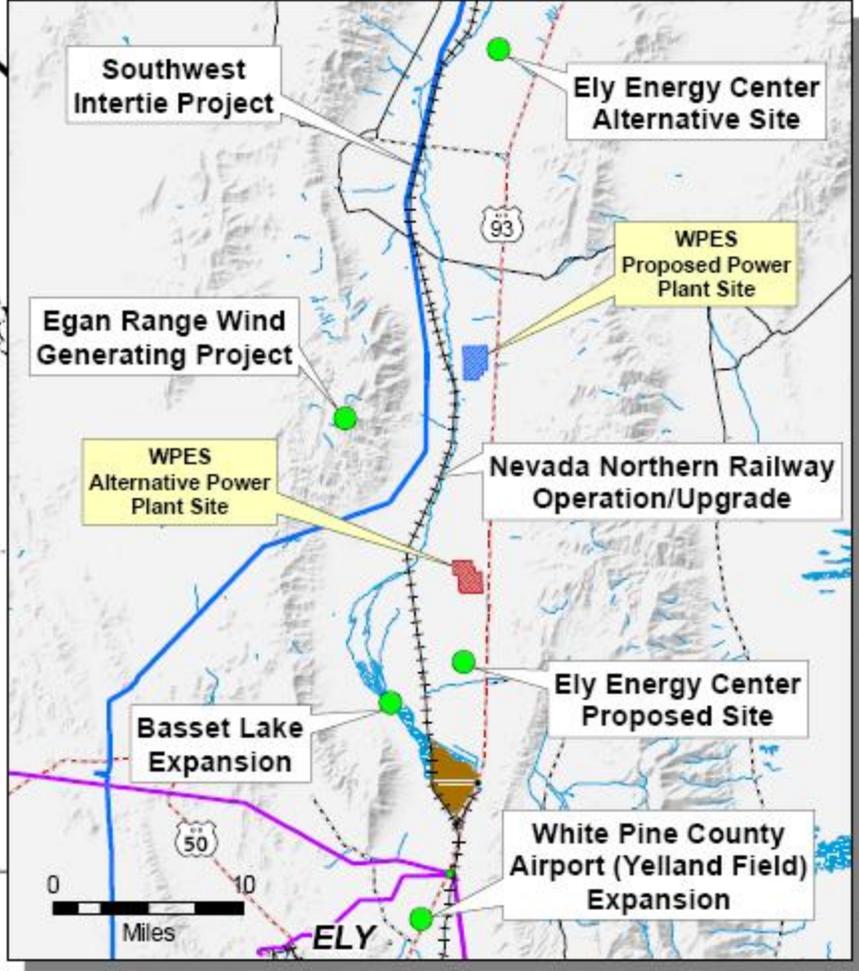
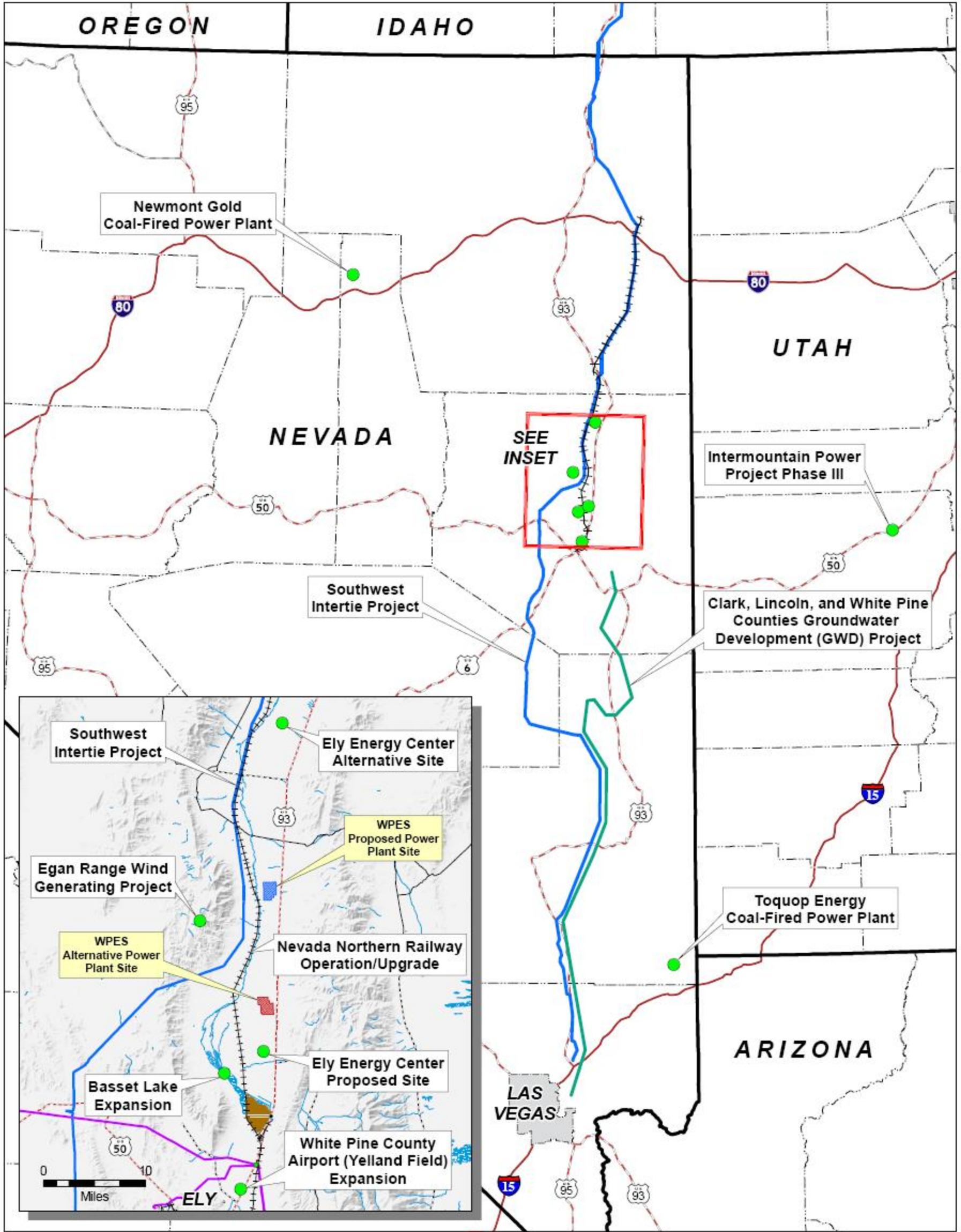
Industrial Artificial Pond Permit—Nevada Department of Wildlife

Nevada Department of Transportation Encroachment Permit

White Pine County Permits and Approvals

White Pine County Master Plan Amendment, Zone Change, and Special Use Permit

Grading permits



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- Non-linear Cumulative Analysis Projects
- Existing Features**
- Existing Transmission Line
- +++ Nevada Northern Railway
- Project Features**
- Proposed Power Plant Site
- Alternative Power Plant Site
- Proposed Features**
- Southwest Intertie Transmission Line
- Clark, Lincoln, and White Pine Counties Groundwater Development (GWD) Project

**Projects Considered for Cumulative Analysis
White Pine Energy Station Project**

Figure 1-2