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1.1 Introduction

This Environmental Impact Statement (EIS) was prepared in response to an SF 299 application for the Ely Energy Center (EEC) and Electric Transmission Support submitted on June 5, 2006 by Nevada Power Company (NPC), in conjunction with Sierra Pacific Power Company (SPPC). Together, these companies are referred to in this document as the Proponents. The purposes of the EIS are for the U.S. Bureau of Land Management (BLM) to evaluate and disclose potential impacts of the proposed development of the EEC power generation plant and associated facilities, and determine whether to grant rights-of-way and convey lands through direct sale.

The Proponents are proposing to develop a company owned and operated coal-fueled generating facility about 15 miles north of Ely, in Steptoe Valley, White Pine County, Nevada. The power generation site would be developed in two phases. Phase 1 would include construction and operation of two 750 megawatt (MW) ultra-supercritical, pulverized-coal fired generating units with associated support facilities. Phase 1 would also include two 500 kV electric transmission lines from the power plant to Robinson Summit; a connection at Robinson Summit to an existing 345 kV transmission line; and one 500 kV transmission line from Robinson Summit to the Harry Allen Substation, about 250 miles south in Clark County. Also included in Phase 1 would be an 8,000 acre feet per year (ac-ft/yr) well field in Steptoe Valley to supply water for the power plant and a rail lead connection to the reconstructed Nevada Northern Railway (NNRy) for transportation of coal from the NNRy connection with the Union Pacific Railroad at Shafter, in Elko County. Coal would be transported via rail from Wyoming. Phase 2 would include construction and operation of two coal gasification 500 MW generating units within the same plant site as Phase 1, additional water supplies as needed, and another 500 kV transmission line from Robinson Summit to the Harry Allen Substation (generally parallel to the Phase 1 transmission line). These project components are shown in **Figure 1.1-1**.

This EIS addresses impacts from the construction, operation and maintenance of Phase 1 of the EEC project, as well as those aspects of Phase 2 that are known at this time (40 CFR 1502.22). The Phase 2 aspects evaluated in this EIS are those related to surface disturbances from the Phase 2 power plant and transmission line. This document was prepared in compliance with the *Council on Environmental Policy*, *National Environmental Policy Act* (NEPA), (40 CFR Sec. 1500-1508); the *NEPA Handbook*, H-1790-1; and the BLM's *Ely District Office Environmental Analysis Guidebook.*

1.2 Purpose of the Proposed Action

1.2.1 BLM's Purpose for the Proposed Action

The purpose of the action is to provide public land for the development of energy production by allowing for the construction of a coal-fueled power generating plant on public lands managed by the BLM. The multiple-use mission of the BLM includes authorizing and managing activities such as mineral development, energy production, recreation, and grazing, while conserving natural, historical, cultural, and other resources on public lands. The BLM's objective is to meet public needs for use authorizations such as right-of-ways (ROWs), permits, leases, and

easements while avoiding or minimizing adverse impacts to other resource values. The proposal to construct, operate, and maintain a coal-fired power plant on public lands would be in accordance with this objective.

1.2.2 Proponents' Purpose for the Proposed Action

The purpose of the EEC is to supply 1,500 MW of reliable baseload electricity to meet baseload energy and electrical transmission needs in Nevada and the western United States, according to the PUCN Directive. To achieve this purpose, the EEC must:

- Provide at least 1,500 MW of baseload power generation capacity
- Use commercially proven and reliable technology
- Diversify energy portfolio away from natural gas
- Provide load sufficient to connect SPPC and NPC systems
- Be compatible with local conditions and available resources
- Meet the PUCN Directive

In addition to the new generation plant, a major transmission line would be developed on public lands from the Ely area south to the Las Vegas area to deliver power from the EEC and would interconnect the Proponents' electrical systems. The proposed transmission line would allow the Proponents to improve system reliability, promote diversity of supply resources, interconnect their systems, and access renewable resources in northeastern Nevada. The EEC facilities would primarily be located on federal land administered by the BLM's Ely, Elko, and Southern Nevada District Offices.

1.3 Need for the Proposed Action

1.3.1 BLM's Need for the Proposed Action

On June 5, 2006, the Proponents submitted an SF 299 *Application for Transportation and Utility Systems and Facilities on Federal Lands* to the BLM for the EEC and ancillary facilities. The need for BLM action is established by the Federal Land Policy and Management Act (FLPMA) to respond to SF 299 applications for ROW Grants and a request for land disposal. **Section 2.2.1**, *Description of BLM Actions*, describes in detail the BLM actions that would occur in response to the application for ROWs submitted for the EEC. The BLM is required to evaluate and make a decision regarding disposition of lands and the granting of rights-of-way in response to the SF 299 application for the EEC as filed by the Proponents. Under the FLPMA, the BLM is authorized to dispose of tracts that will "serve important public objectives" (43 U.S.C. 1713) and to grant rights-of-way under Title V of the Act (43 U.S.C. 1761-1771).

1.3.2 Proponents' Need for the Proposed Action

Nevada and the western United States have increasing power needs. In order for the Proponents' to meet electricity demands, as well as to improve long-term reliability and assurance of supply, construction of a new power generation plant and transmission facilities is required. The EEC would provide baseload power. A baseload facility is one that operates near full capacity 24 hours per day 7 days per week. A baseload facility must be efficient, highly reliable, and economize fuel. Often large-scale baseload facilities are fueled by coal, gas, nuclear, or hydropower.

Figure 1.1-1. General Project Area

The Public Utilities Commission of Nevada (PUCN) Order (November 2006; revised January 2007) acknowledges the following regarding the Proponents' objectives (PUCN 2007 p. 44 paragraph 166):

- Reduce their growing open position (the difference between power supply available from company-owned generation and/or contractual arrangements and the amount of power needed to cover customer demand plus an additional reserve requirement to cover uncertainties) at a time of impending capacity shortages;
- Upgrade and modernize their resource portfolio by adding Company-owned or controlled baseload capacity; and
- Diversify their current resource mix to provide a hedge against natural gas price volatility.

As stated in the PUCN Order (PUCN 2007 p.50 paragraph 177):

> *The stipulated load forecast…indicates that both Companies [i.e. the Proponents], and NPC in particular, will need additional baseload resources. There is also a need for the Companies to diversify their generation portfolio so that there is less reliance on natural gas and purchased power. At this time, the only practical and commercially available proven baseload resources that do not use natural gas are subcritical and supercritical coal technologies. Of these two options, supercritical technologies provide state-of-the-art emission control technology.….Therefore, the Commission finds that a supercritical coal generation facility as proposed by the Companies is the best option to provide an adequate supply of electricity at a predictable price with acceptable environmental impacts for the residents of Nevada.*

In addition, the PUCN Order acknowledged the need for the Proponents' to meet their statutory obligations by providing renewable energy developers with a transmission pathway to the market (see **Section 1.6.3**).

> *The Intertie will promote reliability, promote diversity of supply resources, assist with development of renewable resources, and promote retail price stability. It is the delivery mechanism for the output from the EEC to both Northern and Southern Nevada. In addition, the Intertie will aid in the development of renewable energy resources by allowing electricity generated by non-solar renewable resources in Northern Nevada to be delivered to Southern Nevada and electricity generated by solar resources in Southern Nevada to be delivered to Northern Nevada. Further, the Intertie will allow for the development of wind resources in Eastern Nevada to both Northern and Southern Nevada. Therefore, the Intertie will assist both NPC and SPPC to meet its statutory obligations by providing renewable energy developers with a pathway to market. (PUCN Revised Order page 58, paragraph 200).*

In order for the Proponents to meet the directives of the PUCN, the EEC has been proposed. Additional information regarding the background for the Proponents' objectives for the project is presented in **Section 1.6**.

1.4 Regulatory Authority and Decisions to be Made

The BLM has administrative responsibilities for the Federal lands upon which the Project would be located. The BLM serves as the lead agency and has included other agencies or entities to participate as cooperating agencies for purposes of EIS preparation, including the Environmental Protection Agency (EPA), the National Park Service (NPS), and White Pine County. Originally the Nevada Department of Wildlife (NDOW) and the U.S. Fish and Wildlife Service (USFWS) accepted cooperating agency status but later dropped out. The Confederated Tribes of the Goshute were also invited; however, they have not yet signed an MOU to have cooperating status. CEQ regulations emphasize agency cooperation early in the NEPA process and state that any other Federal agency, which has jurisdiction by law shall be a cooperating agency (40 CFR 1501.6).

The BLM will determine whether to authorize the requested land disposal and grant rights-of-way for the Project. The BLM will issue a Record of Decision based on analyses provided in the Final EIS.

1.5 Proposed Action Summary

The Proponents have applied to the BLM for ROWs that would allow for the development of the EEC Project. In addition to the new generation resources, the Proponents are seeking permission to develop a major transmission line from the Ely area to the Las Vegas area and to interconnect their two electrical systems for the first time within the state, allowing the two utilities (NPC and SPPC) to share generation resources, access renewable resources in northeastern Nevada and increase the diversity of power supply options. These facilities would primarily be located on federal land administered by the BLM's Ely, Elko, and Southern Nevada District Offices.

The proposed general project area is shown in **Figure 1.1-1**. The Proposed Action (South Plant Site) and the North Plant Site Alternative for the EEC power plant are both located in the Steptoe Valley of White Pine County, Nevada. Water supplies would include wells and pumping facilities, water pipeline(s) and related facilities in Steptoe Valley. Linear project elements providing rail service would reach north into Elko County and electric power transmission would reach south through Nye and Lincoln Counties to terminate in Clark County.

The EEC Project would be developed in two phases. Phase 1 of the project includes the construction of a new 1,500 MW coal-fueled electrical generation facility (two 750 MW units) and the associated water supply, electrical transmission, switchyard, communication facilities, and road and railway infrastructure.

Phase 1 of the EEC would include:

- Two coal-fueled 750-MW ultra-supercritical[1] steam turbine units and associated site facilities.

[1] "Ultra-supercritical" is a reference to the physics of generating steam at higher pressure and temperature; beyond these points, steam is no longer a mixture of steam and water requiring separation in a traditional drum design, and is physically a single fluid that passes through a boiler to drive a steam turbine generator. This new technology reduces fuel consumption and emissions by 5 to 10 percent over conventional "sub-critical" technologies, providing previously unrealized efficiency and operating cost benefits.

- Water supply, including water wells, surge tanks, pipelines, pipeline access road and pumping stations to the EEC, and a raw water storage pond on the plant site.
- Communications systems and a 69-kV power line to provide electrical service for the water supply pump stations, construction workforce temporary housing, and construction power to the EEC.
- Rail line and associated facilities and infrastructure for connection from the power plant to the existing Union Pacific RR at Shafter in Elko County. This would consist of a rail lead connection to the reconstructed NNRy, if available, or construction of an alternate new rail line from the power plant to Shafter.
- Permanent and temporary access roads from the public road system to the facilities.
- Water well at the plant site for construction water for the EEC.
- Temporary housing ("worker village") for the construction workforce (on private property).
- Access roads into and along all of the linear facilities.

The electrical transmission facilities associated with Phase 1 would include:

- A new 500-kV switchyard at the EEC.
- A new 500/345-kV substation near Robinson Summit and two 500-kV transmission and fiber optic lines from the EEC to Robinson Summit Substation;
- A loop-in of the existing SPPC Falcon – Gonder 345-kV transmission line.
- A 500-kV transmission and a fiber optic line from Robinson Summit Substation to Harry Allen Substation.
- An expansion of the 500-kV Harry Allen Substation.
- Access roads into and along all transmission lines.

Phase 2 of the EEC would include:

- Two coal gasification 500-MW units and associated site facilities at the same plant site as Phase 1.
- Additional water supplies as required.
- A 500 kV transmission and a fiber optic line from Robinson Summit to the Harry Allen Substation, generally parallel to the Phase 1 transmission line.

The Proposed Action evaluated in this EIS includes all components of Phase 1 and the surface disturbances related to the Phase 2 power plant and transmission line. Phase 2 would require further NEPA analysis in the future when the generation and water supply facilities for Phase 2 have been designed.

A more complete description of the Proposed Action elements and other project alternatives is included in **Chapter 2**.

1.6 Background

1.6.1 Population Growth in Nevada

The 2004 and 2005 population estimates from the U.S. Census Bureau showed Nevada as the fastest growing state in the United States. For the 19th consecutive year, Nevada has led the nation in population growth. Nevada's population grew by 24.9 percent from April 1, 2000 to July 1, 2006. This compares to the nation's population rise of 6.4 percent over the same period (U.S. Census Bureau 2006).

The Proponents' service territory comprises over 95 percent of the state's population; 71.5 percent of the state's population resides in Clark County, and approximately 23.5 percent reside in Northern Nevada.

1.6.2 Proponent History

Nevada Power Company and Sierra Pacific Power Company are wholly owned subsidiaries of Sierra Pacific Resources, a holding company incorporated under the laws of the State of Nevada. Their combined service areas cover approximately 54,000 square miles with more than 1 million customers throughout Nevada and in northeastern California.

Specifically, NPC serves more than 770,000 electricity customers in Las Vegas, North Las Vegas, Henderson, and other communities and homes in Clark and Nye Counties. NPC's service territory encompasses nearly 4,000 square miles. NPC faces the challenge of a phenomenal 6 percent annual growth rate, the highest of any electric utility in the country.

SPPC encompasses more than 50,000 square miles in western, central and northeastern Nevada and northeastern California and serves approximately 300,000 customers. The annual growth rate of SPPC's service territory is approximately 2 percent. The combined 5 percent growth rate of both Companies translates to a need of approximately 250 to 300 MW of additional electricity generating capacity each year.

1.6.3 Regulatory Requirements

The Proponents are regulated by the PUCN and the Federal Energy Regulatory Commission (FERC). Nevada adopted its first comprehensive statutory least-cost utility planning process in 1983. This is now referred to as the Integrated Resource Planning Process. This planning process requires all Nevada retail electric distribution utilities under the jurisdiction of the PUCN to file an Integrated Resource Plan (IRP) every two years detailing their future 20-year resource acquisition strategy to meet customer growth. The IRP is based on forecasts of customer load requirements, and is required by statute to include plans to meet load growth.

In 2006, the Proponents developed their IRP to optimize energy supply using a portfolio approach (diversity of fuel supply, renewables, and conservation), which sought to balance the cost of electricity, supply, reliability, fuel, short-term and long-term power market volatility, and environmental acceptability. The 2006 IRP made significant progress toward reducing the Proponents' dependence on natural gas generated electricity and the customers' exposure to volatile gas and power markets.

In the IRP, the Proponents proposed:

- Ultra-supercritical pulverized coal units for the EEC.
- An aggressive conservation program.

- Commitments to promote renewable energy development.
- Investments in transmission infrastructure to bring new, renewable energy resources to market.

In June 2006, NPC filed its IRP for 2007-2026, followed by SPPC's July submittal of the 13th Amendment to their 2005-2024 IRP (Docket Nos. 06-06051 and 06-07010). The IRP filings reflected the electrical needs of the state for the next 15 years. The PUCN subsequently consolidated the filings and issued an Order in November 2006 (a Revised Order was issued January 2007), which approved the Proponents' request to proceed with the development of Phase 1 of the EEC and accompanying transmission line - including the expenditure of $300 million for permitting, railroad upgrades, and equipment purchases. The PUCN focused its Order on:

- The Proponents' large and growing "open position" (the difference between available power supply and customer demand plus reserve) at a time of impending capacity shortages.
- The Proponents' aging fleet of coal-fueled plants.
- The need to upgrade and modernize the Proponents' resource portfolio by adding company-owned or controlled baseload capacity.
- Diversification of the resource mix to provide a hedge against natural gas price volatility.
- The cost consequences associated with a delay in the development of coal-fueled generation, expected to be between $200 and $300 million per year.
- The lack of PUCN control over independent power producers' generation development.

1.6.4 Growth in Forecasted Demand

The need for additional generating resources in Nevada is well supported and recognized by state and local leaders. Consistent with the Nevada Governor's 2001 plan, the Proponents already have constructed almost 3,000 MW of new company-owned generation in Nevada to help offset the reliance on formerly stable energy markets, whose sudden volatility during the Western Energy Crisis had adverse effects on the economy of the state. Most of this generation, however, is natural gas-fired and designed to run during peak need times during the summer. What is still needed is a reliable source of self-generated low-cost "baseload" energy for the year-round demand.

The combined growth rate of the Proponents' energy demand translates to approximately 250 to 300 MW of additional capacity required each year resulting in greater electricity demands per capita than most other regions. Meeting load growth is a requirement of regulated utilities under Nevada State law (NRS 704).

In the early years of this high-growth cycle, the Proponents operated in a regional environment of abundant, low-cost generation. Historically, the Proponents purchased approximately one-half of all the energy delivered to their customers from third-party providers. But given the dramatic price shifts and power shortfalls experienced during the Western Energy Crisis from 2000-2001 there is a need to remedy this heavy reliance on outside purchases.

Due to a deficit of company-owned generation, the Proponents currently compete for both fuel and generation resources within the Western Electricity Coordinating Council (WECC) Desert Southwest and Northwest Power Pool sub-regions. The WECC region encompasses an area of

nearly 1.8 million square miles. It is the largest and most diverse of the eight regional councils of the North American Electric Reliability Council (NERC) serving the 14 Western States, including Nevada and California. WECC and the seven other regional reliability councils were formed to respond to national concerns regarding the reliability of the interconnected bulk power systems, the ability to operate these systems without widespread failures in electricity service, and the need to foster the preservation of reliability through a formal organization. Traditionally, the difference between the amount of generating resources available to the Proponents (from company-owned generation or contractual arrangements) and the amount of power needed to cover customer demand, plus an additional reserve requirement to cover uncertainties is known as the Proponents' "open position." Electricity needed to cover this open position is purchased on the open market through contracts and short-term purchases.

Based on data from the WECC, as load demand in the Proponents' service territories continues to grow, opportunities for Nevada to purchase power from other Western states is projected to diminish, as other electricity generating facilities will be required to serve additional load in their local territories. This expected loss of opportunity to purchase power, the need to reduce price volatility, the importance of increased fuel diversity and assurance of supply, and the need to maintain and improve reliability, requires the Proponents to develop company-owned generation. This self-reliance strategy is in accordance with Governor Guinn's 2001 Nevada Energy Protection Plan that calls for increased development of generation resources within the state to serve customers within Nevada.

The need for additional power sources is due not only to dramatic customer growth in the Proponents' service areas (approximately 55,000 new customers per year), but the fact that individual customers' electricity consumption continues to rank among the highest in the nation. This is due primarily to air conditioning demand during the hot summer months. In 2005, NPC experienced a system peak of 5,563 MW, an increase of approximately 300 MW from the previous year. SPPC experienced a system peak of 1,686 MW, an increase of approximately 50 MW. Forecasted peak loads for 2007 in the Desert Southwest sub-region exceed 7,000 MW. By 2015, peak loads are expected to surpass 9,000 MW (WECC 2006).

1.6.5 Fuel Source Constraints

Following the Western Energy Crisis in 2000-2001, the WECC region responded with new generation construction, but notably 93 percent of the capacity additions were fueled primarily by natural gas. Natural gas pricing has exhibited noteworthy volatility in recent years and the price of fuel used to generate electricity is passed through to the customer by utilities. This continued dependence on natural gas-fueled generation exposes the Proponents' customers to price volatility and uncertainty of adequacy of supply in the long term.

The outlook for new supply sources of natural gas to make up for declining production and serve future growth is uncertain. U.S. domestic production and development of natural gas is forecasted to increase over the next 20 years. At the same time, pipeline imports from Canada, another principal supply source for U.S. gas consumption, are forecasted to decline. The result is a projected increased reliance on imports of foreign sources of natural gas production, referred to as liquefied natural gas (LNG).

This heavy reliance on natural gas fired electricity generation continues through the Proponents' existing fuel sources for the immediate future. It is expected that the energy power sources for the Proponents in 2008 will consist of 41 percent natural gas, 29 percent purchased power, 21 percent coal, and 9 percent from renewable energy sources. Because almost all of the

purchased power is generated by natural gas, nearly 70 percent of the Proponents' total energy will be generated from natural gas sources in 2008. This situation places the Proponents and their customers in a vulnerable position in terms of both cost and availability of baseload energy supply. However, with the completion of Phase 1 of the EEC, the dependence on natural gas would drop with a predicted 2015 power mix of 22 percent natural gas, 12 percent purchased power, 46 percent coal, and 20 percent renewables.

1.6.6 Proponents' Objectives

The Proponents are regulated utilities. As such, the Proponents' objectives below are in direct response to the directives provided by the PUCN in the Revised Order (PUCN Revised Order, pages 55-58) described in **Section 1.6.3**. Specifically, the objectives of the Proponents' Proposed Action are to:

- **Provide a reliable, relatively low-cost electrical supply to meet the high annual population growth of the Proponents' service area through 2015.** Under Nevada State law, the Proponents must meet the load growth due to continued high population growth in the service area. Without new power generation, the gap between the amount of future load and desired reserves and the availability of generation sources will increase. The Proponents' open position (representing the short-term need between the power sources and the peak load and power reserve) would then increase from approximately 2,000 MW to 4,000 MW between 2007 and 2015. The open position would increase after 2012, as older units owned by the Proponents are currently expected to be retired.
- **Comply with legislative and state directives to create new, diverse, baseloaded sources of fuel supply to help insulate customers from volatile price fluctuations of purchased power and provide a balance of resource diversity well into the future.** Because of Nevada's rapid economic growth, plus the lessons learned from over-reliance on the power purchase markets several years ago, the Proponents have committed to deliver a diverse power portfolio, including the EEC, which protects their current and future customers against the volatility of fluctuating natural gas fuel costs and swings in the purchase power markets.
- **Connect the Sierra Pacific Power and Nevada Power electric systems to improve system reliability and flexibility.** This transmission line intertie would allow SPPC and NPC to share energy resources, be more efficient, and better support each other during power emergencies. Today, the Proponents' transmission systems are not connected within Nevada.
- **Provide better access to the state's renewable energy resources.** There are numerous wind energy and geothermal renewable projects in various stages of planning or development in northern and eastern Nevada. A critical part of developing these renewable resources is providing the electric transmission infrastructure to move the power from the sources to the customers. The two high-voltage transmission lines being proposed have capacity to carry all the power generated by the EEC as well as up to an additional 800 MW for the first line and 1,500 MW for both lines together which would enable other power sources, including renewable energy, to interconnect and transmit power from these remote locations to major load centers in Las Vegas and Reno. Nevada's Renewable Portfolio Standard mandates that 20 percent of Nevada's electricity come from renewable sources by 2015 (Nevada Assembly Bill 385 Section 22,

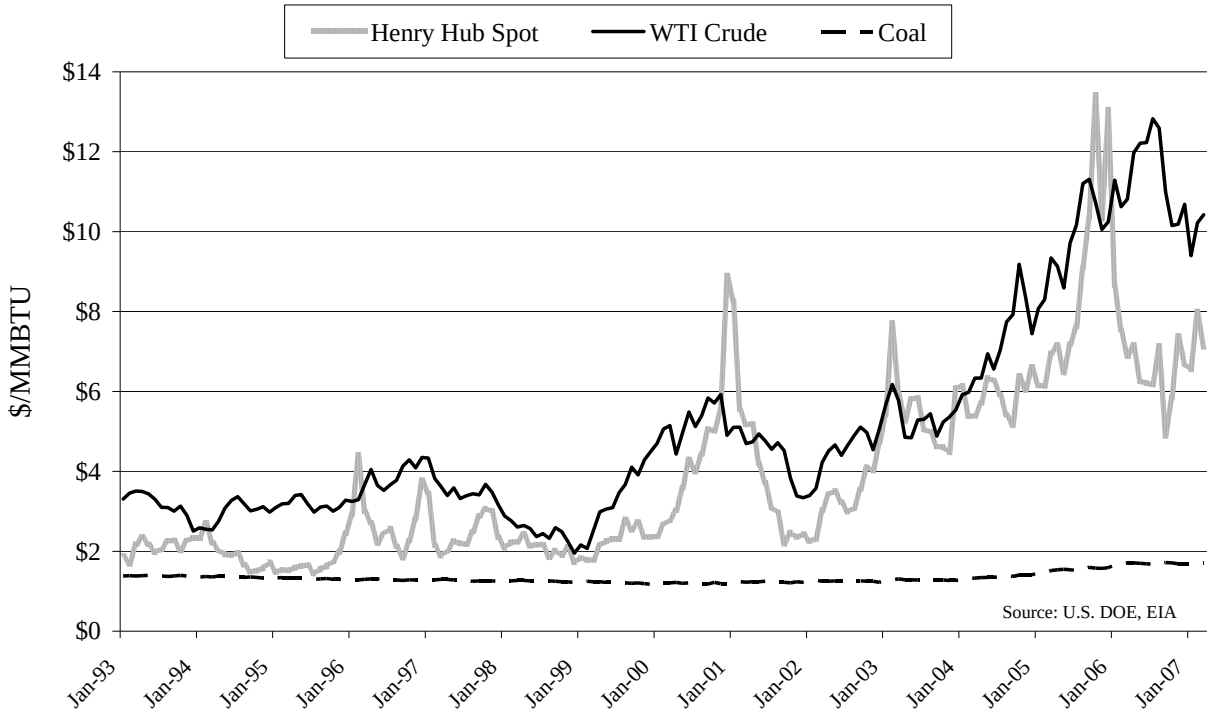
2005). The ability for renewable generation facilities to more easily tie into the existing transmission system is critical to meeting this standard.

- **Decommission older, less-efficient, coal and natural gas plants to conserve natural resources and help to mitigate air emissions.** Some of the Proponents' current generating plants are of older, less efficient designs. These less efficient plants burn more fuel per MW generated than modern, more efficient plants resulting in greater air emissions. After the EEC is built, the Proponents' current plans call for the retirement of three aging coal units at the Reid Gardner Station in southern Nevada.

1.6.7 How the Proposed Action would Respond to the Proponents' Need

The Proposed Action would reduce the need for imported electricity and would diversify the fuel supply portfolio. Development of commercially-proven, coal-fired generation would offset the approximately 70 percent reliance on natural gas generation and the inherent volatility of natural gas prices in the marketplace. **Figure 1.6-1** shows the recent volatility of prices for energy from natural gas (Henry Hub Spot) and crude oil (WTI Crude) in the marketplace, compared to the relatively stable cost for coal. These fluctuating costs are passed through to ratepayers, and are largely outside of the Proponents' control. Replacing the natural gas components of the fuel mix with self-owned generating capacity using lower cost fuel could reduce these volatile price risks to the Proponents' customers. The Proposed Action would provide an immediate addition of new baseloaded, commercially proven, power generation to alleviate the shortage of existing capacity and allow the flexibility to more easily add power generated from renewable resources in the northern portions of the State. Nevada's Renewable Portfolio Standard mandates that 20 percent of Nevada's electricity come from renewable sources by 2015 (Nevada Assembly Bill 385 Section 22, 2005).

Developing new coal-fired generation capacity using environmentally and technologically efficient units would allow for the retirement of older, less efficient units currently in service. These older units also do not utilize state-of-the art pollution-control equipment. Retiring these units and effectively replacing them with more efficient generation units would conserve the use of natural resources and help reduce overall emissions, including greenhouse gases. After the EEC is built, the Proponents are planning to retire the current operation of three aging coal units at the Reid Gardner Station in southern Nevada. With the anticipation of EEC, NPC would also not participate in efforts to restart the coal-fired Mojave Power Plant.



Henry Hub Spot = natural gas
WTI Crude = crude oil

Figure 1.6-1. Historic oil and natural gas wholesale prices in the U.S.

1.7 About This Document

This document follows regulations promulgated by the Council on Environmental Quality (CEQ) for implementing the procedural provisions of the National Environmental Policy Act (NEPA) (40 CFR 1500-1508); the BLM NEPA Handbook, H-1790-1; the Ely District Office Environmental Analysis Guidebook; and Sections 201, 202, and 206 of the Federal Land Policy and Management Act of 1976 (FLPMA) (43 CFR 1600). This EIS describes the components of and reasonable alternatives to the Proposed Action, and environmental consequences of this action and the alternatives.

In order to provide the BLM with flexibility in developing an Agency Preferred Alternative, the alternatives were broken down into individual components or elements for the environmental impact analysis.

The EIS is divided into several chapters for ease of reading and to better organize information for decision-making.

Chapter 1 provides general background, the purpose of and need for the Proposed Action; roles of the BLM and cooperating agencies; decisions to be made and authorities regulating the process of analysis and disclosure; a summary of public participation in the EIS process; and key issues to be addressed.

Chapter 2 presents a reasonable range of alternatives to address the stated need and purpose for the project, including the Proposed Action, No Action, and other alternatives to the Proposed

Action; discusses alternatives not carried forward for detailed analysis; lists potential mitigation actions to reduce or minimize impacts; and discusses the agency-preferred alternative.

Chapter 3 describes the affected human environment in the Project Area.

Chapter 4 discloses potential direct and indirect environmental effects associated with the Proposed Action and other alternatives and discusses potential mitigation measures.

Chapter 5 describes the cumulative effects associated with the Proposed Action and other alternatives when added to other past, present, and reasonably foreseeable future actions in the cumulative effects areas.

Chapter 6 lists state and federal agencies and other governmental bodies that were consulted or contributed to the preparation of the EIS; describes Native American consultations; describes public participation during scoping; lists agencies, organizations, and persons to whom the EIS will be or has been sent; and provides the names and qualifications of those who prepared this document.

Chapter 7 provides the bibliography of existing information that was used to prepare the EIS and an index to the document.

Appendices contain information that supplement or support analyses in the body of the EIS.

1.8 Cooperating Agencies

The BLM sent letters to various agencies on April 18, 2007 to invite their participation as cooperating agencies for the NEPA process and EIS documentation. Later, through further consultation, the Confederated Bands of the Goshute Tribe asked to be a cooperating agency; a Memoranda of Understanding (MOU) between the BLM and the Tribe is in the process of being completed. The list of cooperating agencies includes:

- National Park Service (represented by Great Basin National Park)
- U.S. Environmental Protection Agency
- White Pine County
- Confederated Bands of the Goshute Tribe (invited)

Cooperating agencies are invited to participate in the entire NEPA process including: review of analyses, contribution of technical expertise, and assisting in the response to public comments, required by their jurisdiction or regulatory authority. MOUs were developed between cooperating agencies and the BLM.

1.9 Native American Consultation

The public scoping letter for the EEC Project was sent to tribes and tribal organizations on January 26, 2007. Tribal liaisons have regularly briefed tribes on the EEC Project since then. The tribes received a second correspondence letter (EEC Project Notice) regarding the project on May 4, 2007. As part of Government-to-Government consultation, Native American consultation letters were sent out by the BLM, Ely District Office on July 23, 2007 to the tribes and tribal organizations.

The BLM met with members of the Goshute Tribal Council on February 8, 2007 and March 14, 2008 to discuss the project and potential tribal issues. It was agreed that the parties would have further discussions about the project and the Tribal Council's interests. A meeting was held with

the Ely Shoshone Tribe on April 4, 2007. A meeting with the Kaibab Paiute Tribe was held on July 18, 2007 during the tribal council meeting and with the Wells Band during their tribal council meeting on February 1, 2008. The purpose of these meetings was to brief the tribes on the environmental analysis process, the proposed EEC Project, and to answer questions.

1.10 Plans, Policies, and Programs

1.10.1 Relationship to BLM Plans, Policies, and Programs

This EIS complies with the CEQ regulations for implementation of NEPA (40 CFR 1500-1508) and BLM's NEPA Handbook (H-1790-1).

The proposed project area crosses three BLM Districts administered by the Elko, Ely, and Southern Nevada District Offices. Each has its own land use management plan that needs to be followed, and any project elements that would occur on those lands must adhere to the respective plans. Resources in Elko County are administered by the Elko District Office under the Wells Resource Management Plan that was approved in 1985. Resources in Clark County and the southern portion of Nye County fall under the purview of the Las Vegas Resource Management Plan that was approved in 1998.

The Ely District Office released a Final Resource Management Plan and EIS (BLM 2008a) which consolidates the Schell and Caliente Management Framework Plans approved in 1983 and 1981, respectively, the Caliente Management Framework Plan for the Management of Desert Tortoise Habitat approved in 2000, and the Egan Resource Management Plan approved in 1987. The Final Resource Management Plan was released on August 20, 2008. The other three plans are no longer in force.

The Proposed Action would be in conformance with the land use plans' terms and conditions as required by 43 CFR 1610.5.

1.10.2 Relationship to Non-BLM Plans, Policies, and Programs

The Proposed Action is consistent with other federal, state, and local agency plans, policies and programs by incorporating data, and adopting mitigation strategies and incorporating management recommendations where appropriate. Following is a partial list of state and local plans that have been reviewed:

- Nevada Natural Heritage Program
- Nevada Division of Wildlife - Big Game Status and Quota Recommendations
- Governor's Sage Grouse Conservation Management Plan
- Nevada Recreation Management Strategy and Implementation Plan
- Statewide Comprehensive Outdoor Recreation Plan
- Elko County Land Use Plan
- White Pine County Land Use Plan
- White Pine County Elk Plan
- Lincoln County Land Use Plan
- Southeast Lincoln County Multiple Species Habitat Conservation Plan
- Nye County Land Use Plan
- Clark County Land Use Plan

- Clark County Multiple Species Habitat Conservation Plan

1.11 Applicable Laws and Regulations

Table 1.11-1 lists federal and state laws and regulations potentially applicable to the Proposed Action and other action alternatives.

TABLE 1.11-1. LAWS AND REGULATIONS THAT MAY BE APPLICABLE TO THE PROPOSED ALTERNATIVES

LAWS AND REGULATIONS	STATUTORY REFERENCE
FEDERAL	
National Environmental Policy Act (NEPA)	42 USC 4371 et seq.
Council on Environmental Quality (CEQ) general regulations implementing NEPA	40 CFR Parts 1500-1508
Department of the Interior's (DOI) implementing procedures and proposed revisions	65 FR 52211-52241
Bureau of Land Management's (BLM) NEPA Handbook H-1790-1 (2008)	
National Historic Preservation Act (NHPA) and regulations implementing NHPA	16 USC 470 et seq.
Antiquities Act of 1906	16 USC 431 et seq.
Archeological Resources Protection Act, as amended (ARPA)	16 USC 470aa et seq.
Native American Graves Protection and Repatriation Act of 1990 (NAGPRA)	25 USC 3001-30013 et seq.
Clean Air Act (CAA)	42 USC 7401 et seq.
Clean Water Act (CWA)	33 USC 1251 et seq.
Endangered Species Act (ESA)	16 USC 1531 et seq.
Noise Control Act of 1972, as amended (NCA)	42 USC 4901 et seq.
Occupational Safety and Health Act (OSHA)	29 USC 651 et seq. (1970)
Pollution Prevention Act of 1990 (PPA)	42 USC 13101 et seq.
Safe Drinking Water Act of 1974 (SDWA)	42 USC s/s 300f et seq.
Migratory Bird Treaty Act	16 USC 703–711
American Indian Religious Freedom Act of 1978	42 USC 1996
Federal Land Policy and Management Act of 1976 (FLPMA)	USC 1701 et seq.
Lacey Act as amended	18 USC 42
Nuisance Prevention and Control Act of 1990 as amended	16 USC 4701 et. seq.
Federal Noxious Weed Act of 1974 as amended by the Food, Agriculture, Conservation and Trade Act of 1990, Section 1453 "Management of Undesirable Plants on Federal Lands"	U.S.C. 2801 et. seq.
Federal Plant Pest Act	7 USC 150aa et. seq.
Carlson-Fogey Act of 1968	Public Law 90-583
Salt Cedar and Russian Olive Control Demonstration Act	Public Law 109-320
Safe, Accountable, Flexible, Efficient Transportation Equity Act	Public Law 109-59

LAWS AND REGULATIONS	STATUTORY REFERENCE
Noxious Weed Control and Eradication Act	Public Law 108-412
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
Consultation and Coordination with Indian Tribal Governments	Executive Order 13084
Invasive Species	Executive Order 13112
Consultation and Coordination with Indian Tribal Governments	Executive Order 13175
Migratory Birds	Executive Order 13186
Memorandum for the Heads of Executive Departments and Agencies (signed by President Clinton on April 29, 1994)	
Memorandum on Government-to-Government Relations with Native American Tribal Governments of 1994	
Departmental Responsibilities for Indian Trust Resources	512 DM 2.1
Responsibilities, and the Endangered Species Act, Secretarial Order 3206 (June 5, 1997)	
BLM Land Use Permits and Leases	43 CFR 2920
BLM land disposition – sales regulations	43 CFR 2700, 43 CFR 2920
BLM right-of-way regulations	43 CFR 2800, 43 CFR 2920
Resource Conservation and Recovery Act (RCRA)	
Comprehensive Environment Response, Compensation, and Liability Act (CERCLA)	
STATE OF NEVADA	
Nevada Critically Endangered Flora Law	NRS 5.27-5.33
Utility Environmental Protection Act	NRS 704.820-704.900
Control of Noxious Weeds	NAC 555.010

1.12 Permits, Licenses, and Other Requirements

Table 1.12-1 lists federal, state, county, and other permits and approvals that may be needed to implement the Proposed Action or other action alternatives.

TABLE 1.12-1. PERMITS AND LICENSES THAT MAY BE APPLICABLE TO THE PROPOSED ALTERNATIVES

ACTION REQUIRING A PERMIT, REVIEW, OR APPROVAL	PERMIT/ APPROVAL	ACCEPTING AUTHORITY/APPROVING AGENCY	STATUTORY/ REGULATORY REFERENCE
FEDERAL			
All project elements or disturbance on BLM administered lands	Rights-of-Way Grant; Land Disposal;	BLM	43 CFR 2800
Rights-of-Way Grant; Land Disposal	EIS; Record of Decision	BLM	40 CFR Part 1500-et.seq.
Right-of-Way Grant/ Land Disposal	NHPA, Section 106 review and concurrence	BLM; Nevada State Historic Preservation Office	36 CFR Part 800 16 USC 47
Right-of-Way Grant/ Land Disposal	ESA, Section 7 consultation and concurrence	BLM; U.S. Fish and Wildlife Service; Nevada Division of Wildlife	50 CFR Part 17 16 USC 1536
Construction of chimney and structure locations if the structure is more than 200 feet	No Hazard Determination	Federal Aviation Administration	49 USC 1501 14 CFR 77
Operation of proposed facilities	Acid Rain Permit (CAA, Title IV)	U.S. Environmental Protection Agency	42 USC 7401 40 CFR 76
Storage of petroleum	Spill Prevention Control and Countermeasure	U.S. Environmental Protection Agency	40 CFR 112
Storage of hazardous materials	Risk Management Plan	U.S. Environmental Protection Agency	40 CFR Part 68
Dredge or fill activities in Waters of the United States	CWA, Section 404 Permit	U.S. Army Corps of Engineers	33 USC 1344
STATE OF NEVADA			
Surface disturbing activities	Section 106 Determination of Effect Concurrence	State Historic Preservation Office	16 USC 470 et seq. NRS 383
Facilities construction	Utility Environmental Protection Act – Permit to Construct	Nevada Public Utility Commission	NRS 704.820-704.900 NAC 704.9063, NAC 704.9359 – 704.9361
Surface disturbing activities	Rare and Endangered Plant Permit	Nevada Division of Forestry	NRS 527.260-527.300

ACTION REQUIRING A PERMIT, REVIEW, OR APPROVAL	PERMIT/ APPROVAL	ACCEPTING AUTHORITY/APPROVING AGENCY	STATUTORY/ REGULATORY REFERENCE
Surface disturbing activities	Native Cacti and Yucca Commercial Salvaging and Transportation Permit	Nevada Division of Forestry	NRS 527.050-527.110
Surface disturbing activities	Incidental Take Permit	Nevada Division of Wildlife	NRS 503.584-503.589
Facilities construction	Prevention of Significant Deterioration (PSD) / Class I Air Quality Operating Permit to Construct	Nevada Division of Environmental Protection	NRS 445.401-445.601 NAC 445B.001-445B.395
Construction of proposed facilities	Construction Permit	Nevada Division of Environmental Protection, Bureau of Air Pollution Control	NAC 445B 42 USC 7401
Operation of proposed facilities	Operating Permit (CAA, Title V)	Nevada Division of Environmental Protection, Bureau of Air Pollution Control	NAC 445B 42 USC 7401
Impacts to water quality associated with discharges to Waters of the United States	CWA, Section 401 Permit	Nevada Division of Environmental Protection, Bureau of Water Quality Planning	33 USC 1251 et seq.
Impacts to groundwater quality associated with discharges	Ground Water Discharge Permit	Nevada Division of Environmental Protection, Bureau of Water Pollution	NRS 445A.300-445A.730 NAC 445A.070-445A.348 NAC 445A.810-445A.925
Facilities construction	CWA, Section 402 National Pollutant Discharge Elimination System (NPDES) Notification for Stormwater Management during Construction	Nevada Division of Environmental Protection	33 USC 1251 et seq.
Facilities operation	CWA, Section 402 NPDES during Operation	Nevada Division of Environmental Protection	33 USC 1251 et seq.
Surface disturbing activities	Surface Area Disturbance Permit	Nevada Division of Environmental Protection	NRS 519A.180 (for small sites) NAC 445B
Construction of access road to U.S. Highway 93 (US-93) and crossing of a U.S. Highway with a transmission line and/or railroad line	Right-of-way Occupancy Permit	Nevada Department of Transportation	NRS 408.423, 408.210 NAC 408
Transportation of Hazardous Materials	Uniform Permit	Nevada Department of Public Safety	NAC 459.979

ACTION REQUIRING A PERMIT, REVIEW, OR APPROVAL	PERMIT/ APPROVAL	ACCEPTING AUTHORITY/APPROVING AGENCY	STATUTORY/ REGULATORY REFERENCE
Application for water rights	Assignment of Water Rights	Nevada Division of Water Resources (State Engineer)	NRS 533-534
Surface disturbing activities	Dust Control Permit	Nevada Department of Environmental Quality	NAC 445B
Construction of evaporation ponds	Industrial Artificial Pond Permit	Nevada Department of Wildlife	NRS 502.390
LOCAL/COUNTY			
Construction and operation in Clark County	Special Use Permit	Clark County Board of Commissioners	Clark County Zoning Ordinance
Construction/fugitive dust – PM_{10} in Clark County	Dust Control Permit	Clark County Department of Air Quality Management	321.001, 40 CFR Subpart C, 42 USC 7408-7409
Construction and operation in Elko County	Special Use Permit	Elko County Board of Commissioners	Elko County Zoning Ordinance
Construction and operation in Lincoln County	Special Use Permit	Lincoln County Board of Commissioners	Lincoln County Zoning Ordinance
Construction and operation in Nye County	Special Use Permit	Nye County Board of Commissioners	Nye County Zoning Ordinance
Construction and operation in White Pine County	Special Use Permit or Zoning Change	White Pine County Board of Commissioners City of Ely	White Pine County Zoning Ordinance

1.13 Summary of Public Scoping and Issue Identification

1.13.1 Public Scoping and Issues

The issues evaluated in this EIS are derived from public comments made during the scoping period and summarized in the EEC EIS Scoping Summary issued in April 2007 (BLM-JBR 2007). In that document, the comments received during scoping from agencies and the public were summarized into categories, which became the basis for defining issues and indicators. The defined issues are presented under the components of the human and natural environment that are customarily addressed in impact analysis, along with the section of the EIS that addresses that particular issue.

Additional information on the scoping process is provided in **Section 6.1**.

1.13.2 Issues Raised During Scoping

Air Resources

- Construction and operation of the project may increase air borne pollutants and negatively affect human health, local economies, wildlife and special status species. (**Section 4.6**)
- Construction and operation of the project may impact regional air quality in the Great Basin and “down-winders”. (**Section 4.6**)

- Steam from plant operation may create/increase fog, smog, and weather inversions in Steptoe Valley. (**Section 4.6.2.1**)
- The Project could cause air quality impacts to Great Basin National Park, nearby designated wilderness areas, and other protected or important airsheds. (**Section 4.6.2.1**, Operations, Ambient Air Quality Impacts)
- The project may contribute to global warming. (**Section 4.6**)

Cultural Resources

- Cultural resource sites, historic properties, historic buildings, and heritage values may be impacted (directly and/or indirectly) in the Project Area. (**Section 4.10**)

Cumulative Effects

- The cumulative impacts of the project need to be disclosed. (**Chapter 5**)

Environmental Justice

- Environmental justice considerations need to be addressed in the EIS. (**Section 4.18**)
- The negative environmental impacts of the proposed project may be borne by local residents while the benefits of the power produced will be exported to other communities. (**Section 4.18**)

Geology and Minerals

- The project may affect locatable and saleable mineral deposits and operations, and oil & gas and geothermal leases. (**Section 4.3**)

Hazardous Materials and Solid Wastes

- Construction and operation of the project may release hazardous compounds into the air, water, and soil that may affect human and environmental health. (**Sections 4.6 and 4.19**)

Land Use and Access

- The project could negatively impact the limited amount of private property available in the area. (**Section 4.12**)
- The project may change the rural character of the area and the traditional and historic land use patterns. (**Section 4.12**)
- Additional roads/access created by the project may increase recreational access and risk of fire and weed invasion. (**Sections 4.7, 4.12, and 4.14**)
- Transmission towers and electromagnetic emissions may pose a hazard to low flying military aircraft in the Low Altitude Tactical Navigation Area. (**Section 4.12.4.2**)

Native American Concerns

- Construction and operation of the project may impact Native American Tribes in the area. (**Section 4.11**)
- The project may impact Indian Trust Assets. (**Section 4.11**)
- There may be Environmental Justice Impacts to local Native American Tribes. (**Sections 4.11 and 4.18**)

Noise

- Construction and operation may cause noise impacts on surrounding areas. (**Section 4.16**)

Paleontology

- No issues were identified in the public scoping process regarding paleontology. However, potential impacts to paleontological resources are addressed in **Section 4.4**.

Public Health and Safety

- Air pollution may cause health problems for people in surrounding communities and distant locations. (**Section 4.6**)
- The project may cause public safety hazards such as traffic accidents due to colder weather, inversions, fog, and black ice. (**Section 4.6.2.1** and **Section 4.20**)
- The medical and emergency care providers/facilities may not be adequate for the influx of workers and increased population associated with the project. (**Section 4.17**)

Range Resources

- The project may cause health and safety impacts to livestock. (**Section 4.9**)
- Grazing allotments may be degraded and will be fragmented by project construction and operation activities. (**Section 4.9**)
- The project may cause socioeconomic hardships on livestock operators/ranchers. (**Sections 4.9 and 4.17**)

Recreation

- The area may be less desirable for outdoor recreation and tourism. (**Section 4.14**)
- Short-term residents, such as construction workers, may have little concern or value for public lands and sensitive areas. (**Section 4.14**)

Socioeconomic Resources

- The project may impact socioeconomic conditions of local communities. (**Section 4.17**)
- The project may cause a utility rate increase. (**Section 4.17**)

Soils

- The project may increase soil erosion. (**Section 4.5**)
- Air emissions deposition from the project may pollute the soil. (**Sections 4.5 and 4.6**)

Special Designations and Sensitive Areas

- The ecological integrity, scenic quality, and pristine characteristics of nearby wildernesses, national parks, national forests, national wildlife refuges, wildlife management areas, and areas of critical environmental concern may be negatively affected by the project. (**Section 4.13**)

Special Status Species

- The project may negatively affect the life cycle and habitat of species identified by state or federal agencies as threatened, endangered, or sensitive. (**Sections 4.7 and 4.8**)

Transportation

- The project may create hazardous driving conditions for local and interstate drivers. (**Section 4.20**)
- Increased traffic increases wear and tear on roads which may need more maintenance, upgrades, and improvements. (**Section 4.20**)
- The railroad may be a hazard to livestock and wildlife. (**Sections 4.8, 4.9, and 4.20**)
- The project could create hazardous conditions for local air traffic. (**Section 4.20**)

Vegetation

- Surface disturbance, air pollution, and water use from the project may negatively affect wetland, riparian, and upland vegetation communities. (**Section 4.7**)
- Surface disturbance and ongoing operation and maintenance activities would increase the spread of exotic plants. (**Section 4.7**)

Visual and Aesthetic Resources

- The scenic quality of Steptoe Valley may be negatively impacted by the project and the pollution it creates. It may impact views within the valley or into the valley from sensitive sites (e.g., Duck Creek Basin, wilderness areas, Great Basin National Park). (**Section 4.15**)
- The project may contribute to light pollution and the degradation of dark skies. (**Section 4.15**)

Water Resources

- The project may negatively impact water quality. (**Section 4.2**)
- The quantity of water used by the project may negatively impact the availability of water to surrounding communities and the environment. (**Section 4.2**)
- The drawdown of groundwater could affect playas and seasonally wet basins, which could dry up and release salt and metal laden fugitive dust. (**Section 4.2**)
- Wastewater discharged from the project could affect surface water quality. (**Section 4.2**)

Wild Horses and Burros

- The project may negatively affect Wild Horse/Burro populations. (**Section 4.9**)

Wildlife Resources

- The construction and operation of the project may directly or indirectly impact wildlife through direct disturbance, habitat fragmentation or air pollution. (**Section 4.8**)
- Water use from the project may negatively affect ground and surface water flows and potentially affect species dependent on springs, seeps, wetlands, or riparian habitat. (**Section 4.8**)
- The construction and operation of the project may impact game species and wildlife populations and indirectly affect hunting, fishing, and wildlife watching activities. (**Section 4.8**)
- The construction and operation of the project may impact migratory birds. (**Section 4.8**)