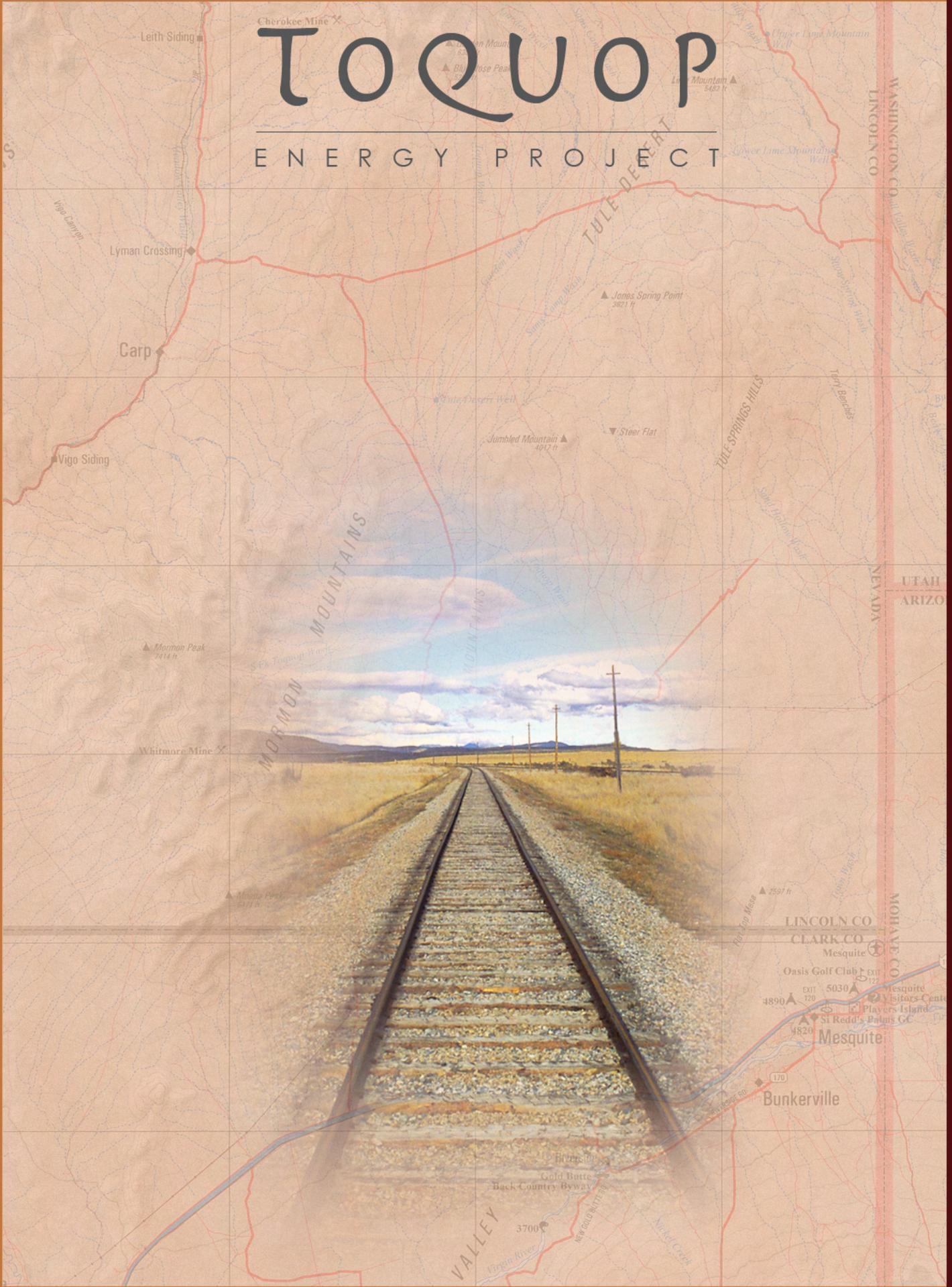


TOQUOP

ENERGY PROJECT



EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

In April 2003, the Bureau of Land Management (BLM) issued a Record of Decision on the Final Environmental Impact Statement (EIS), hereinafter referred to as the 2003 EIS, for the Toquop Energy Project proposed by Toquop Energy, Inc. This project was outlined and analyzed in the 2003 *Proposed Toquop Land Disposal Amendment to the Caliente Management Plan and Final Environmental Impact Statement for the Toquop Energy Project*. The project was to include construction and operation of a 1,100-megawatt (MW) natural-gas-fired electric-power-generation plant and associated facilities in Lincoln County, Nevada. The stated goal for the project was to generate electrical power at competitive prices, as a solution to the near- and long-term power shortages projected for the western United States. The Record of Decision accompanying the Final EIS approved the following rights-of-way (ROWs):

- 100 acres for the power plant site and access road to the power plant from the main access road, plus additional temporary ROW during construction
- 87 acres for improvements to the existing access road from I-15 to the power plant site boundary, plus additional temporary ROW during construction
- 45 acres for a 24-inch buried pipeline and buried electric line between the power plant and the well field, plus additional temporary ROW during construction and 6 acres for storage sites

Since 2003, the price of natural gas has increased substantially and natural-gas prices are projected to remain unstable due to increasing demand coupled with higher exploration and development costs. This, together with the fact that newer technology has improved the efficiency and environmental performance of modern coal-fired plants, has caused the proponent to reconsider the original proposal in favor of a new strategy that would offer greater economic stability by using coal instead of natural gas. In line with the project's original aim to provide power at competitive prices, Toquop Energy Company, LLC. (Toquop Energy) now proposes to construct a 750-MW coal-fired power plant in the same location.

The new coal-fired power plant project has a number of components that differ from the original natural-gas-fired power plant project, and the BLM has determined that preparation of a new EIS is warranted. The new project differs from the original project in the following key respects:

- Plant capacity would decrease from 1,100 to 750 MW.
- The plant site would require use of more surface area to accommodate the storage and handling of coal and the disposal of ash.
- A rail line to transport coal to the site would need to be constructed.

The project would be located on 640 acres of public land currently managed by the BLM Ely Field Office. This site is approximately 12 miles northwest of Mesquite, Nevada, and 50 miles south-southeast of Caliente, Nevada, in southern Lincoln County (Draft EIS Map 1-1). The rail line would depart from the existing Union Pacific Railroad (UPRR) line and would cross about 31 miles of BLM-administered land on its route to the power plant site.

The purpose of the action is to provide public land for the development of energy production by allowing for the construction of power plants on public lands managed by the BLM. The multiple-use mission of the BLM includes managing activities such as mineral development, energy production, recreation, and grazing, while conserving natural, historical, cultural, and other resources on the public lands. BLM's objective is to meet public needs for use authorizations such as rights-of-way, 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.

The need for the action is established by BLM's responsibility under the Federal Land Policy and Management Act of 1976 to respond to applications for ROW Grants and a request for land disposal. The BLM will: (1) respond to the request for a ROW for the rail line that would be required to transport coal to the power plant site, and (2) respond to the request to amend the ROW for the power plant site required for the construction and operation of a coal-fired power plant. The rail line would require a corridor 31 miles long across BLM-managed land, with ROW access to a width of 200 feet temporarily during construction and 100 feet wide for long-term use of the rail line. A 100-acre ROW was originally granted for the gas-fired plant; however, an amendment to the ROW is needed to accommodate the proposed 475-acre coal-fired plant. As part of the Proposed Action Alternative, BLM would dispose (by sale) of the 640-acre parcel that the power plant would occupy.

Some of the ROWs granted in the BLM's 2003 Record of Decision would not be changed under the current proposed project. Specifically, the proponent has not requested any action by BLM related to the existing ROW grants for the water pipeline, access road, and disposal of the 640-acre site. Accordingly, this EIS will be tiered to the 2003 EIS to incorporate by reference the relevant aspects of the earlier analysis. The current EIS is focused on the issues and impacts that were not addressed in the previous EIS, or builds upon the 2003 analysis to adequately consider the impacts that could result from the grant of additional ROW or a ROW amendment.

PROPOSED ACTION AND NO-ACTION ALTERNATIVES

Two alternatives are evaluated in this Draft EIS:

- The No-Action Alternative—to revert to a 1,100-MW natural-gas-fired plant and associated facilities, (i.e., the Proposed Action described in the 2003 EIS)
- The Proposed Action Alternative—to construct and operate a 750-MW coal-fired plant and associated facilities

A number of alternative locations, technologies, and alternative rail alignments were evaluated and eliminated from the detailed analysis. These alternatives and the reasons why they were eliminated are described.

No Action Alternative

Under the No-Action Alternative, a 1,100-MW natural-gas-fired power plant would be constructed and operated on a site in southern Lincoln County, Nevada, as permitted in the 2003 EIS. Ancillary facilities would include a 14.4-mile-long access road and a water-supply system, including a well field and 12.50-mile-long water pipeline (Draft EIS Map 1-1).

Power Plant and Associated Facilities

The plant would use a combined-cycle technology to generate electricity, which would be transmitted to the existing Navajo-McCullough electric transmission line that passes through the southeastern corner of the site. The power plant, switchyard, equalization and evaporation ponds, and other associated facilities would cover about 100 acres on the site, and would be enclosed within an 8-foot-high chain-link fence, incorporating tortoise fencing to exclude the desert tortoise from the plant site. The project area included in the No-Action Alternative is the same 640-acre site included in the Proposed Action of the 2003 EIS. Rights-of-way would be issued by BLM for the construction and operation of the power plant and all

related facilities. Several primary elements of the No-Action Alternative also include the construction and operation of a natural-gas-fired, water-cooled electric-power-generation plant with a maximum combined cycle of 1,100 MW, connected to a natural gas pipeline and electric transmission lines. The No-Action Alternative for the power plant employs combined-cycle technology, which would use four combustion-turbine generators in series with four heat-recovery steam generators and four steam-turbine engines. Exhaust gas would pass through a series of emissions-control systems and would be vented through an elevated exhaust stack that is 180 feet high. A 5-acre uncovered equalization pond would be constructed on site to keep the water chemistry balanced for use in the cooling system, and a 20-acre evaporation pond also would be constructed to handle the wastewater disposal.

The power generation operations would be fueled by natural gas arriving to the site via the 36-inch-diameter Kern River Gas Transmission Company pipeline, which currently passes through the southeastern corner of the site. A tap, meter station, and connective pipeline would be constructed and connected to the existing gas line to provide natural gas to the site.

Water-Supply System

A new well field and new water pipeline would be developed in the Tule Desert hydrologic basin to supply groundwater for use in an evaporative wet-cooling tower system. Facilities would include 15 deep wells, each approximately 1,000 to 1,500 feet deep; a manifold system to connect the output from these wells to a single, 24-inch-diameter buried pipeline; the extension of this buried pipeline and buried electrical distribution lines to the plant site; and a storage tank with a capacity of approximately 500,000 gallons. Although the exact location of each well is not yet known, they would be dispersed spatially in the southern third of the Tule Desert and would be located as close as possible to one of the several existing dirt roads in the area. It is estimated that under the No-Action Alternative, the natural-gas-fired power plant could require up to 7,000 acre feet per year (af/yr) of water. More than 90 percent of this water (approximately 6,300 acre-feet) would be used by an evaporative cooling tower system. The length of the 24-inch-diameter water pipeline would be 12.5 miles, partially located along an existing road, requiring a permanent ROW with a width of 30 feet. The pipeline would be buried deep, well below potential streambed scour, erosion, and exposure, and away from potential lateral bank migration. New access roads would be constructed to the wells and storage tank as necessary for use during construction and maintenance activities.

Construction Activities

Under the No-Action Alternative, construction activities would occur over approximately 26 months. The average construction crew would total about 500 people. Construction activities related to the power plant facilities would be completed within the 640-acre power plant site in four phases, including (1) site clearing and preparation, (2) foundation construction, (3) building and equipment installation, and (4) site cleanup and project startup.

About 14.4 miles of an existing dirt-and-gravel road would be upgraded by paving to a width of 24 feet, and some sections would be straightened to facilitate truck access between Interstate 15 (I-15) and the plant site (see Draft EIS Map 1-1). The permanent ROW for the access road would encompass 138 acres (50 acres in Clark County and 88 acres in Lincoln County).

The access road that would serve the power plant is currently used to maintain a microwave station, communications equipment fiber-optic lines, natural-gas pipelines, and electric transmission lines located on the southern end of the East Mormon Mountains. Construction activities would increase the traffic along this road. Multiple diesel-powered construction equipment such as bulldozers and dump trucks would be used for approximately 120 days each.

Temporary ROW for construction access and staging areas would be required along the access road, water pipeline, and in the well field. The construction ROW for the 14.4-mile access road to the power plant site would vary in width because of terrain, and would occupy a total of 246 acres. The current access road in this location occupies about 30 acres, and the net increase in disturbance due to construction activities would be about 216 acres. Staging areas for road construction would require an additional 20 acres in Lincoln County. The staging areas and temporary road construction ROWs would be reclaimed after construction in accordance with restoration plan requirements of the appropriate BLM field office.

The ROW requirements for each of the proposed wells would be a maximum of 1 acre per well. This would include approximately one-third acre for a new 300-foot-long access road and pipeline (with a construction ROW of about 60 feet) to link the well area and the pipe to existing roads, and about two-thirds of an acre for construction activities at each well site. A 500,000-gallon water-storage tank would be required to maintain flow and pressure to the plant. The maximum disturbed area for the water-storage tank also would be 1 acre. The water pipelines would require a temporary construction ROW of 60 feet to allow for soil disturbance during pipeline trenching, laying, and backfilling operations, and the laying of electrical lines to the well field. Staging areas would include 3 acres near the northern end of the pipeline, 3 acres midway along the pipeline east of Toquop Gap, and 3 acres at the plant site. All areas temporarily disturbed by construction in the ROW and staging areas would be reclaimed.

Operation and Maintenance

Under the No-Action Alternative, permanent water rights to supply up to 7,000 acre feet of water annually would be required. These water rights were included in a joint application by Vidler Water Company Inc. and Lincoln County, which was submitted to the Nevada State Engineer. In Ruling 5181, the State Engineer granted the right to use 2,100 acre feet annually to Vidler Water Company and Lincoln County. A request for the required additional 4,900 acre-feet of water rights was included in a second application by the same proponents. That request is being held for action pending results of additional hydrologic studies requested by the Nevada State Engineer. Most of the water for the power plant would be used in the evaporative wet-cooling system (90 percent, or 3,800 gallons per minute under annual average design operating conditions). The remainder would be filtered, as necessary, to provide service water, potable water, and water for the demineralized water-treatment system. That system would supply the high-purity water needs of the heat-recovery steam generators.

Permanent employees at the plant site would total 25. These employees would travel to the site along the improved access road from I-15.

Occasional maintenance and monitoring of production wells would occur, requiring travel over the access roads to reach the wells. Maintenance of the water pipeline would require periodic inspection of the entire route and routine exercising of all valves in the system. It is anticipated that this activity could be supported using low-impact all-terrain vehicles.

For analysis purposes, the effects of taking no action serve as the baseline of environmental information against which impacts from the proposed project would be predicted to occur if the necessary agency actions are taken.

Proposed Action Alternative

Under the Proposed Action Alternative, facilities and activities include the (1) coal-fired power plant and associated infrastructure, (2) associated construction activities, (3) operation and maintenance activities, (4) construction and operation of the 31-mile-long railroad line, and (5) decommissioning activities.

The proposed facilities would include a 750-MW generation unit and a plant-cooling system, a 31-mile-long railroad line, coal-handling and -processing facilities, power transmission lines and interconnection facilities, a water-supply system, an access road to the plant site, waste-management operation facilities, and other ancillary facilities. Because ROWs have already been granted for the original project (i.e., Proposed Action in the 2003 EIS) and, therefore, the Proposed Action Alternative in this EIS, BLM would need only to approve an additional ROW for the rail line and to amend the power plant site's ROW. A 100-acre ROW was granted originally for the gas-fired plant; however, an amendment to the ROW is needed to accommodate the proposed 475-acre coal-fired plant.

As part of the Proposed Action Alternative, BLM would dispose of the 640-acre land area to Toquop Energy through a sale purchase of the 640-acre parcel of land the plant site would occupy. Table ES-1 summarizes the acreage requirements for construction of each major facility under the action alternatives.

**Table ES-1
Acreages of Proposed and Permitted Project Features**

	Acres	Permitted	Proposed
Power plant site	640		x
Gas-fired power plant footprint	100	x	
Coal-fired power plant footprint	475		x
Water pipeline permanent ROW (30 feet wide)*	45	x	
Water pipeline construction ROW (60 feet wide)*	90	x	
Access road permanent ROW (50 feet wide)*	138	x	
Rail line permanent ROW (100 feet wide)*	356		x
Rail line construction ROW (200 feet wide)*	698		x

SOURCE: Bureau of Land Management 2003a

NOTE: ROW = right-of-way

Power Plant and Related Facilities

Project facilities would include a single 750-MW generation unit and plant-cooling system, a rail line to supply coal to the plant, coal-storage facilities, a water-supply system including a well field and a 12.5-mile-long water pipeline, waste-management operation facilities, and a power transmission interconnection with an existing power transmission line that passes through the southeast portion of the project area. Related facilities also include an administration building, turbine hall, supercritical boiler, maintenance shops, diesel-generator building, coal-unloading station and conveyer, coal-crusher building, dry-cooling towers, solid-waste disposal, oil storage, and an electrical switchyard. The water-supply system, power-interconnection facilities, and improvements to the access road from I-15 to the site would be the same as those proposed in the original project evaluated in the 2003 EIS. All materials used in roadway improvements and other associated project construction, such as gravel, sand, and ballast would be transported to the site from existing sources. No new excavations or pits would result from the project.

Within the same 640-acre site as described in the No-Action Alternative, the power-plant block would occupy 261 acres, the ash disposal would occupy 150 acres, and the topsoil storage areas would occupy 64 acres, while the remaining 165 acres would remain undisturbed.

Water-Supply System

Water would be delivered to the site from the Tule Desert or Clover Valley well field via pipeline and would be stored in the raw water tank. Water would be drawn from this tank and treated by reverse osmosis units and demineralizer systems in the water-treatment building and used in the boiler-feed water

and the cooling-water systems. Water consumption would be minimized by using a Heller system dry, natural-draft cooling tower.

The annual water requirements for power generation under the proposed alternative would total 2,500 acre feet. Previously, 2,100 acre feet of water was approved by the Nevada State Engineer for the power plant proposal on this site. This water supply still would be granted under the proposed action, with an additional 400 acre-feet required to reach the 2,500-acre-foot annual water requirements for the Proposed Action Alternative. The approval for the additional 400 acre-feet is pending.

Lincoln County Water District has proposed the Lincoln County Land Act (LCLA) Groundwater Development Project. If this project is completed, it would develop additional groundwater resources in the Tule Desert and the Clover Valley and water pipelines that would deliver water to the LCLA development area and the Toquop Energy Project. This project's proposed water pipeline, if constructed, would eliminate the need for a separate water pipeline for the Toquop Energy Project and would allow for water from either the Clover Valley or Tule Desert hydrographic basins to serve the needs of the power plant.

Construction Activities

Site preparation activities would be undertaken in accordance with a grading design developed by the construction contractor. Specific plans and/or measures proposed for fugitive-dust control, erosion and sedimentation control, site reclamation, stormwater-runoff control, and the protection of natural and cultural resources would be implemented as identified through National Environmental Policy Act (NEPA) or other permitting processes.

Laydown and storage areas and temporary construction facilities would be located on the 640-acre power plant site. Site laydown areas would be modified based on specific contours of the site, terrain, entry points and exit points, and preventative maintenance and material storage requirements. A 200-foot-wide temporary ROW would be required for construction activities along the rail line. Areas requiring excavation and fill materials could be wider.

The ROWs for the construction staging areas associated with the well field, water pipeline, and the access road would be the same as those evaluated in the 2003 EIS.

Access to the construction ROW would be from either end of the rail line and would use existing roads. Bridges would be needed to cross the Meadow Valley Wash and the Toquop Gap. Additional cut and fill and culverts would be used to span the washes going up from the Meadow Valley Wash Bridge. All construction personnel, equipment and materials would be confined within the 200-foot-wide construction ROW and at either end of the rail line. At this time, it is anticipated that the rail construction period would be 24 months.

Operation and Maintenance

The project life would be 54 years—4 years of power plant construction followed by 50 years of plant operation. Water rights would be exercised at the beginning of plant construction. Operation of the power plant would require up to 3.1 million tons of coal per year. The plant would use natural gas supplied by the Kern River Gas Transmission Company line for the initial startup and for restarts during regular maintenance. Fuel oil would provide a backup source of startup fuel. The power plant would produce its own operating power and would not require nor use external sources of power supply. Low-sulfur coal, derived from northeast Wyoming's Powder River Basin, would be delivered by the UPRR to Leith Siding and then to the power plant site via the new rail line. The coal would be blended, crushed, and pulverized

to a powder for optimized burning in the boilers. The power plant would use a supercritical pulverized-coal boiler. Use of a once-through supercritical steam cycle and other design features would enable this plant to operate with a higher net efficiency than other coal-fired power plants.

A hybrid cooling tower was selected to minimize water consumption. When the ambient temperature is below 80 degrees Fahrenheit, the cooling tower operates as a dry, natural-draft cooling tower. When the temperature exceeds 80 degrees Fahrenheit, the facility has the option of applying water overspray on the heating surfaces inside the cooling tower to provide additional cooling through evaporation. This type of cooling tower has no particulate emissions. Due to the very limited amount of water used in the cooling process, there would be no visible plume emitted from the cooling tower.

As mentioned, from Leith Siding, a 31-mile-long rail line would be constructed, connecting the existing UPRR rail line to the proposed power plant. The permanent ROW for this rail line would be 100 feet wide. To reduce dust, the coal-transfer systems would have filtered-air-collection systems and water fogging for the receipt and transport of coal.

Other materials that would be stored on site include limestone, quicklime, and ammonia. Quicklime would be purchased from local suppliers and delivered to the site by trucks to a pneumatic conveyer that would transport the quicklime to a storage silo. The silo would be equipped with a baghouse to control particulate matter less than or equal to 10 microns (PM₁₀) emissions. Anhydrous ammonia would be purchased from local suppliers and delivered to the site by truck for storage in a pressurized tank. No air pollutants are emitted from pressurized storage tanks.

Improvements to the access road would be the same as those evaluated in the 2003 EIS, including upgrading to paved surface, widening the ROW, and grading/straightening of the existing roadway.

Byproducts from power generation would include fly ash and synthetic gypsum. The fly ash would be collected by the main fabric filter. The pulverized-coal-fired boiler also would generate bottom ash. Fly ash and bottom ash would be stored in separate ash silos. Emissions from the ash silos would be controlled by a fabric filter.

The power plant would employ approximately 110 permanent employees, who would travel to the site along the improved access road. Traffic along the access road also would include deliveries of quicklime, ammonia, and other materials that would be transported in compliance with applicable Federal, state, and local requirements.

Daily rail traffic along the new rail line is expected to be one train with 80 to 100 cars, loaded with coal coming from the UPRR line, and empty heading back toward the UPRR line. Within the rail line ROW, there would be a maintenance road for periodic inspections of the rail and any fencing that might be within the ROW. Access to the rail line ROW would be restricted by installing barriers at existing road crossings.

Alternative Rail Line Alignments

Several alternative rail line alignments were considered but eliminated from detailed analysis, primarily because of grade and slope considerations or potential impacts on specially designated areas (Draft EIS Map 2-3). One route that was considered but eliminated would originate south of Glendale in Moapa Valley (green route on Draft EIS Map 2-3) and would head north across the Muddy River from the UPRR to intersect with the subalternative rail line alignment, then would travel through Mormon Mountains pass to the project site along the same route as the subalternative rail line alignment. This would result in a total track length of 42 miles, including 3 miles on either trestles or bridges. This alternative was

eliminated due to the excessive earthwork that would be required to move the line from a 2.3 percent grade to a 1.5 percent grade and because of potential impacts on wilderness areas.

Another route that was considered but eliminated would originate at UPRR's Hoya Siding with less than 1.3 percent maximum grade, would circumvent the Mormon Mountains by traveling to the south and east, and would cross Mormon Mesa (red route on Draft EIS Map 2-3). This route would approach the project site across Halfway Wash and south of Davidson Peak. Multiple wash crossings would require box culverts. Although this route would require additional track length (a total of 39 miles), the maximum grade would be 1.3 percent. The grade could be reduced with additional minor earthwork. This route was eliminated because it crosses the Mormon Mountain Wilderness and Mormon Mesa Area of Critical Environmental Concern (ACEC) southeast of Davidson Peak.

A third route that was considered and eliminated would begin at UPRR's Hoya Siding with less than a 1.5 percent maximum grade heading south, would turn east through the Mormon Mountains pass (Jacks Pockets) to Mormon Mesa, then would proceed northeast through the East Mormon Mountains pass to the project site (brown route on Draft EIS Map 2-3). The total track length is 35 miles. This route was dismissed as a viable alternative due to the designated Mormon Mountain Wilderness being crossed for approximately 5 miles and Mormon Mesa ACEC.

AFFECTED ENVIRONMENT

Chapter 3 describes the existing conditions of the human and natural environments that potentially could be affected by the No-Action or Proposed Action alternatives. The descriptions of existing conditions are based on the most recent data available in published and unpublished reports, as well as agency databases. Field reconnaissance and interviews were conducted as necessary to verify specific information (such as biological resources, land use, and traditional and cultural resources). The environmental resources described include land use; livestock grazing and rangelands; recreation and access; wilderness and special management areas; visual resources; climate and air quality; noise; geology, soils, and minerals; groundwater resources; surface water resources; biological resources; wild horses and burros; archaeology and historical preservation; Indian trust assets; paleontological resources; public safety, hazardous materials, and solid waste; socioeconomics; and environmental justice.

ENVIRONMENTAL CONSEQUENCES

The potential environmental consequences of each alternative were determined using the description of the existing conditions of the environment provided in Chapter 3 of this Draft EIS as a baseline to identify and measure potential impacts. Best management practices, conservation measures, and the effectiveness of recommended mitigation measures were considered in assessing the impacts on each resource. The full discussion of the impact assessment is provided in Chapter 4 of this Draft EIS. Table ES-3, at the end of this Executive Summary, is a summary of major impacts anticipated under the Proposed Action Alternative and each action alternative by resource area.

The cumulative effects of the project were considered as part of the analysis (Draft EIS Section 4.17). Cumulative effects result from the Proposed Action Alternative's incremental impacts when those impacts are added to the impacts of other past, present, and reasonably foreseeable future actions, regardless of the agency or person who undertakes them (Federal or non-Federal).

The impacts of greatest consequence under the No-Action Alternative stem from the use of large volumes (up to 7,000 af/yr) of water required for the operation of the natural-gas-fired power plant, the disturbance of rangeland, the deleterious effects of the access road crossing designated ACEC, the socioeconomic factors, and the effects of particulate emissions as a result of plant operation. Impacts on recreation and

access; visual and biological resources; noise; geology, soils, and minerals; archaeology and historic preservation; public safety; hazardous materials, and solid waste are considered to be minimal under the No-Action Alternative.

The environmental consequences under the Proposed Action Alternative would include similar effects as the No-Action Alternative with some differences. Chief among these differences is the addition of a 31-mile-long rail line that would enable a coal-delivery route to the project site under the Proposed Action Alternative. The rail line would travel north across the Tule Desert from the project site and would connect to an existing UPRR line at Leith Siding. The rail line would cross several existing dirt roads and pastures that are used mainly for grazing activities and off-highway driving.

Another difference between the No-Action Alternative and the Proposed Action Alternative would be the changes resulting from using and burning coal (Proposed Action Alternative) for power generation instead of natural gas (No-Action Alternative).

The socioeconomic impacts under both alternatives would be related primarily to the economic benefits associated with each project. It is estimated that much of the workforce would originate from the local area, and local municipalities would benefit from the increased population and impacts on local economies. The No-Action Alternative would provide 25 permanent jobs and the Proposed Action Alternative would provide 110 permanent jobs.

Wilderness areas would not be affected, but special management areas would be affected by both alternatives. No aspects of the project would occur within a designated wilderness area under either alternative. However, under the three alternative rail line alignments originally considered, the rail line would cross the Mormon Mountains Wilderness and Mormon Mesa ACEC, thereby eliminating these alternative rail alignments from further analysis. Under both the No-Action Alternative and Proposed Action Alternative, the access road to the project site would cross the Mormon Mesa ACEC. Mitigation measures for protection of the ACEC are included in Chapter 4 of this Draft EIS.

Air quality would be affected by the following under both alternatives: power plant emissions; vehicle emissions; and emission of pollutants from earthmoving activity during construction. Coal-handling operations also would generate fugitive dust. However, mitigation measures are recommended to reduce fugitive dust, particularly during construction, and the Federal National Ambient Air Quality Standards (NAAQS) would not be exceeded under either alternative. See Table ES-2 for a comparison of Maximum Annual Criteria Pollutant Emissions for the No-Action Alternative and the Proposed Action Alternative.

**Table ES-2
Comparison of No-Action and Proposed Action Alternatives Summaries of
Maximum Annual Criteria Pollutant Emissions**

	NO_x	CO	SO₂	VOC	PM₁₀
	Tons/Year				
No Action	355.91	967.48	202.23	79.04	434.97
Proposed Action	1,614.00	2,656.00	1,352.00	82.00	875.00

SOURCE: Bureau of Land Management 2003a; ENSR Corporation 2007a

NOTES: NO_x = nitrogen oxides
CO = carbon monoxide
SO₂ = sulfur dioxide

VOC = volatile organic compound
PM₁₀ = particulate matter equal to or less than 10 microns in diameter

The risks to human health under both alternatives were analyzed, primarily as related to air emissions. The health-protective NAAQS criteria would not be exceeded under either alternative, and risks associated with residential exposure to air emissions would be below the target for health standards.

The primary impacts on biological resources under both alternatives would be associated with surface disturbance—vegetation removal and associated habitat loss or fragmentation and changes to wildlife movement corridors. The amount of surface disturbance would be greater under the Proposed Action Alternative due to the additional area of disturbance at the power plant site and from the rail line. Surface disturbance also could cause soil erosion and affect biological productivity, but mitigation measures and best management practices would be employed to reduce effects on soils. Under both alternatives, impacts on federally listed or sensitive species would be localized. The species would not be jeopardized; however, there may be adverse effects, therefore, a biological opinion is being sought from the U.S. Fish and Wildlife Service. Mitigation measures, including biological monitoring, have been identified and proscribed to protect both the desert tortoise within the Mormon Mesa ACEC and the other species that may inhabit the area.

The project would impact visual resources in the project area under both alternatives, and the addition of the rail line under the Proposed Action Alternative would increase the affected viewshed. Users of the surrounding public land who would be able to view the facilities would be most affected by these changes.

Cultural resources in the project area potentially would be affected under both alternatives. The residual effects (post-mitigation) would be the same under both alternatives. Mitigation would include appropriate placement of facilities to avoid cultural sites as well as application and adherence to the measures outlined in the project-specific programmatic agreement regarding the treatment of cultural properties.

CONSULTATION AND COORDINATION

The analyses for this Draft EIS were completed in consultation with BLM, other agencies, and the public. In March 2006, the BLM sent letters inviting the cooperation of the following agencies: Nevada Department of Wildlife; Nevada Division of Environmental Protections; Nevada State Clearinghouse; the Nevada State Historic Preservation Office; U.S. Fish and Wildlife Service; U.S. Army Corps of Engineers; National Park Service (Lake Mead National Recreation Area); and Lincoln County. The BLM also extended the invitation to the Surface Transportation Board in June 2006.

The BLM hosted a total of four public scoping meetings in March 2006, which were attended by 113 people. A detailed report of comments and issues heard from the public was developed and placed on the proponent's Toquop Energy Project Web site at <http://www.blm.gov/eis/nv/toquop/>. An informational newsletter (also on the Web site) detailing the results of the scoping period and the remaining milestones for the EIS were distributed in February 2006.

AGENCY PREFERRED ALTERNATIVE

BLM is awaiting public input before making a decision on a preferred alternative.

**Table ES-3
Summary of Impact Assessment**

Resource	No-Action Alternative 1,100-Megawatt Gas-Fired Facility	Proposed Action Alternative 750-Megawatt Coal-Fired Facility
Lands	Public land transferred to private ownership would result in a net loss of public land acres. Grazing would be displaced from some locations and range improvements (e.g., fences) would be crossed where facilities are developed. The No-Action Alternative would require a variance or special use permit from Lincoln County to allow construction of this type of facility within an agriculturally zoned area.	Impacts would be the same as for the No-Action Alternative. The proposed rail line would pass through undeveloped areas.
Grazing and Rangelands	The location of the proposed gas-fired plant lies within the Gourd Spring grazing allotment. Livestock grazing was excluded from the power plant site as a result of the construction of the boundary fence meant to protect the Mormon Mesa Area of Critical Environmental Concern (ACEC). No animal unit months (AUMs) would be lost by the construction of the power plant. Construction activities along the water pipeline could disturb up to 90 acres of rangeland that is currently managed for livestock use, with the effect of displacing forage temporarily. Vegetation within the temporary right-of-way (ROW) would be reclaimed after construction. The 2003 Environmental Impact Statement (EIS) includes standard procedures to implement protection of rangelands surrounding the project area.	Impacts on grazing on the power plant site and water-supply system from the Proposed Action Alternative would be similar to those of the No-Action Alternative. The construction of the rail line would displace existing fences in about four locations and directly would impact 356 acres of rangelands.
Recreation and Access	As noted in the 2003 EIS, the effect of the project would not be substantive because recreational use does not require direct use of land proposed for the power plant site. Implementation of the action would provide improved access for individuals who wish to pursue recreation opportunities nearby, as noted by BLM. As the power plant is constructed, a temporary increase in average daily traffic would occur on Interstate 15 (I-15) near the East Mesa interchange.	Effects of the Proposed Action Alternative on recreation and access related to the power plant site would be the same as those of the No-Action Alternative. In approximately 10 locations, the rail line would cross primitive/unimproved roads still associated with grazing and ranching and now also used by off-highway vehicles (OHVs). During the construction phase, the railroad construction activity would disrupt recreational access temporarily and intermittently in these locations. This increase would result from approximately 20 daily vehicle trips (10 trips accessing the project area and 10 trips leaving the project area) needed for delivering and removing construction equipment (BLM 2003a).
Wilderness and Special Management Areas	None of the project facilities would be located within designated wilderness areas or ACECs; therefore, as noted in the 2003 EIS, no direct impacts on wilderness or other special management areas would result. The exception is the permitted access road between I-15 and the power plant site, which would cross the Mormon Mesa ACEC.	Effects of the Proposed Action Alternative on wilderness and special management areas from activities on the power plant site would be nearly the same as that of the No-Action Alternative.

Resource	No-Action Alternative 1,100-Megawatt Gas-Fired Facility	Proposed Action Alternative 750-Megawatt Coal-Fired Facility
Visual Resources	The plant would be visible in the background from I-15, 10 miles south of the site. The power plant may be visible from the ridges in the Mormon Mountains Wilderness, about 5.5 miles away. Nighttime lighting for operational safety and security would create a new source of light in an area of very little night lighting. During construction, temporary impacts on visual resources would result from (1) fugitive-dust generation, (2) presence of construction equipment, and (3) increased light during possible nighttime construction.	Construction of the proposed 750-megawatt coal-fired power plant would result in similar impacts as the No-Action Alternative.
Climate and Air Quality	<p>Construction of the proposed natural gas-fired power plant and associated facilities under the No-Action Alternative would result in direct and indirect impacts on air quality within the project area. Direct effects on air quality would occur from construction activities at the power plant site, along access roads, at the water pipeline, and at the well field. During construction, temporary and localized increases in ambient concentrations of nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter with aerodynamic diameter less than 10 microns (PM₁₀), particulate matter with aerodynamic diameter less than 2.5 microns (PM_{2.5}) and volatile organic compounds (VOCs) would result from exhaust emissions of worker vehicles, heavy construction equipment, diesel generators, and other machinery and tools. In addition, fugitive-dust emissions would result from vehicular travel on unpaved ground surfaces and from excavation and earthmoving activity. Operation of the 1,100-MW power plant under the No-Action Alternative would result in direct and indirect impacts on air quality within the project area. Air pollutant emissions would result from the operation of the following natural gas-fired equipment associated with the power plant. The natural gas and diesel-fired equipment would cause air emissions of the criteria pollutants NO_x, CO, SO₂, PM₁₀, and VOCs. Minor quantities of hazardous air pollutants, such as formaldehyde and benzene, also would be emitted. The cooling towers would cause emissions of PM₁₀.</p> <p>Air quality impacts resulting from plant operations under the No-Action Alternative would be the least of all alternatives considered for NO_x, SO₂, PM₁₀, CO, and lead (Pb).</p>	<p>Impacts on air quality and climate would be similar to the No-Action Alternative. Air pollutant emissions would result from earthmoving activity during construction (fugitive dust, PM₁₀ and PM_{2.5}), tailpipe emissions from vehicles (PM, NO_x, SO₂, CO, and VOC), and coal combustion by the power plant (CO, NO_x, SO₂, and others). The Proposed Action Alternative would comply with Federal air quality standards.</p> <p>Particulate emissions during construction would be temporary and mitigated through adherence to the recommended mitigation measures.</p> <p>The project proponents have committed to voluntary mitigation measures to invest in third-party capital improvements projects to reduce SO₂ in the region.</p>

Resource	No-Action Alternative 1,100-Megawatt Gas-Fired Facility	Proposed Action Alternative 750-Megawatt Coal-Fired Facility
Noise	This alternative was analyzed in the 2003 EIS for which the BLM Ely Field Office issued a Final EIS and Record of Decision. No noise impacts were identified because no noise-sensitive receptors would be close enough to the plant to be adversely affected.	The proposed coal-fired power plant would have a different and larger site plan than the previously analyzed gas-fired plant to accommodate the coal and coal-handling facilities, which would result in additional noise sources. The overall acoustic emission from the 750-MW plant including the coal-processing facilities is estimated to be approximately equal to or lower than the previously approved, higher-power output (1,100-MW) plant. Thus, the Proposed Action Alternative power generation facilities would create an equal or smaller acoustical footprint than the No-Action Alternative. The rail line would traverse areas not previously evaluated for noise or vibration issues. This rail line is proposed to operate one full and one empty train per day (a total of two train passes per day). The trains typically would consist of two to three locomotives and 80 to 100 railcars. The throttle setting of the locomotive was assumed to be in notch 8. The train speed would average 30 miles per hour with a maximum speed of 45 miles per hour. Because there are no public highway and one at-grade railroad crossing along the project route, the sounding of the locomotive warning horn would be rare and would not contribute to the ordinary noise emission of the trains.
Geology, Soils, and Minerals	There are no unique geologic features or geologic resources within the project area that would be impacted by construction of the power plant under the No-Action Alternative (BLM 2003a). The No-Action Alternative would result in soil disturbance on approximately 971 acres at the power plant site and on all construction ROWs. Because the project is designed to minimize disturbance to soils and because temporary ROWs would be reclaimed, 280.7 acres would experience long-term impacts from the construction of project facilities. There would be no impacts on mineral resources or resource uses within the project area under the No-Action Alternative.	Impacts would be the same as the No-Action Alternative, except after reclamation efforts following construction of the plant and rail line, approximately 831 acres would be disturbed over the long term to accommodate the power plant footprint and the permanent right-of-way for the rail line.
Groundwater Resources	Through analysis in the 2003 EIS, it was determined that pumping water from the fractured-rock aquifer in the Tule Desert in the amount and at rates necessary to serve the permitted gas-fired generating plant would not result in a substantial decline of groundwater levels or a significant reduction in groundwater resources.	Under this alternative, the demand for water would be 2,500 acre-feet per year, which is substantially less than that required for the No-Action Alternative. Based on the results of the 2002 analysis by CH2M Hill, the effects from use of 7,000 af/yr of groundwater from the Tule Desert were reviewed in the 2003 EIS and determined to be minimal.

Resource	No-Action Alternative 1,100-Megawatt Gas-Fired Facility	Proposed Action Alternative 750-Megawatt Coal-Fired Facility
Surface-water Resources	Six small, unnamed washes cross the power plant site. The specific disturbed area where the plant structures would be constructed straddles one of these ephemeral washes. That particular wash, therefore, would be filled and its watercourse diverted to one or more adjacent washes. As a result, the amount and rate of flow in the washes that receive the diverted flow would increase when local rainfall amounts are great enough to generate runoff. Construction of a power plant under any of the alternatives would create areas (e.g., rooftops, roads, parking areas) that are impervious to rainfall, which would increase the amount and rate of flow of runoff from local storms. The total power plant area that would be rendered impervious would be approximately 15 acres. Both construction and operation of the power plant potentially would provide the opportunity to affect the surface-water quality of the local washes and, in turn, the Virgin River. Water quality in the washes could be degraded by the addition of both suspended solids (sediment) and dissolved constituents (substances commonly found in stormwater runoff from parking lots and industrial areas).	Impacts on the power plant site would be similar to those described in the No-Action Alternative. Approximately 9,000 gallons of surfactant would be added to coal storage piles per year in order to reduce dust from the piles. The coal storage pile area would be bermed and all stormwater would be directed to a lined evaporation pond designed to 100-year flood event standards.
Biological Resources	Effects on vegetation would occur from disturbance or removal of vegetation at the power plant site, along access roads, at the water pipeline, and at the well field. Surface disturbances resulting from construction under the No-Action Alternative would be the least of all alternatives considered. The principal impacts on terrestrial wildlife likely to be associated with the No-Action Alternative include (1) the disturbance of certain wildlife habitats due to construction activities such as earthmoving at the plant site and access roads, (2) habitat fragmentation, (3) direct mortality and/or displacement of some wildlife species, and (4) an increase in the potential for illegal killing and harassment of wildlife. Construction and operational impacts of the No-Action Alternative on special status plant and wildlife species and their habitats would be similar to those for vegetation communities and wildlife.	Impacts on vegetation under this alternative would be similar in nature to those described for the No-Action Alternative; however, the scope of effects would be increased under the Proposed Action Alternative primarily due to the addition of the rail line. In addition, indirect impacts from nitrogen and mercury deposition from the power plant air emissions may occur.

Resource	No-Action Alternative 1,100-Megawatt Gas-Fired Facility	Proposed Action Alternative 750-Megawatt Coal-Fired Facility
Archaeology and Historic Preservation	Of the 19 cultural resources identified within the No-Action Alternative power plant site, effects on the seven prehistoric rock alignments recommended as eligible for the National Register of Historic Places would be addressed and mitigated through the development and implementation of a historic properties treatment plan that would delineate measures to avoid, reduce, or mitigate those impacts. Mitigation or avoidance would not be required for the 12 ineligible sites or isolated artifacts.	Of the 31 cultural resources identified within the Proposed Action Alternative power plant site and rail line corridor, effects to nine cultural resources recommended as eligible for the National Register of Historic Places would be addressed and mitigated through the development and implementation of a historic properties treatment plan that would delineate measures to avoid, reduce, or mitigate those impacts. Mitigation or avoidance would not be required for the 22 ineligible sites or isolated artifacts.
Public Safety, Hazardous Materials, and Solid Waste	With the implementation of environmental controls outlined in the standard operating procedures for the No-Action Alternative, no environmental impacts related to hazardous and waste materials are anticipated.	Potential wastes that could be generated at the site include domestic non-hazardous solid waste, hazardous wastes or materials, and used wastes that can be recycled. These types of substances, materials, and wastes most likely would be present during stages of construction, development, and operation of the facility. During all stages of plant construction and operation, strict compliance with all Federal, state, and local regulations governing the management of hazardous materials is required by law.
Socioeconomic Resources	The No-Action Alternative would generate revenue by property and sales taxes that would be paid to the State of Nevada, which in turn would redistribute it to all counties. It is anticipated that Lincoln County would collect \$14 million during the construction period, along with a portion generated from a certain percentage of the cumulative tax rate (BLM 2003a). Construction of the facility would last 26 months, and approximately 500 skilled workers would be hired. During peak construction of the first phase, it is anticipated that there would be 1,200 to 1,500 temporary positions open for skilled workers. Employment at the power plant would have a local multiplier effect, generating 25 more jobs. Of those 25 jobs, 10 would be tied indirectly to the power plant, resulting from employment at local establishments that would support the power plant, and the remaining 15 would be from induced employment. For all projects in the region, temporary housing facilities would be needed and the added population during construction could place a burden on local social and public services. During the shutdown phase, there would be a loss of jobs.	Impacts of the Proposed Action Alternative would be similar to those of the No-Action Alternative, although economic impacts would be greater due to a larger workforce. It is anticipated that Lincoln County would collect tax revenues exceeding \$10 million per year at current tax rates. Construction of the facility would last 50 months with an average workforce of 800 jobs. During operation of the power plant, 110 permanent jobs would be added.

Resource	No-Action Alternative 1,100-Megawatt Gas-Fired Facility	Proposed Action Alternative 750-Megawatt Coal-Fired Facility
Environmental Justice	There is no expectation that the No-Action Alternative would have a disproportionate impact on the environmental justice populations in Mesquite, Caliente, and/or St. George. There are no special issues, such as housing, transportation access, or resource use in the project area that would affect the environmental justice population disproportionately.	Impacts would be similar to those listed under the No-Action Alternative.