



1.0 INTRODUCTION

This environmental impact statement (EIS) is being prepared in compliance with the National Environmental Policy Act (NEPA) to analyze and disclose probable environmental effects that could occur with the implementation of the proposed Desert Rock Energy Project (also referred to as the proposed project). The three project proponents—Diné Power Authority (DPA), Desert Rock Energy LLC¹, and BHP Navajo Coal Company (BNCC)—are proposing the following:

- DPA and Desert Rock Energy propose jointly to develop, construct, and operate a coal-fired electrical power plant with a capacity to generate up to 1,500 megawatts (MW) of power. Supporting facilities would include a well field that would draw 4,500 acre-feet per year (af/yr) from the Morrison Aquifer for project-related purposes (and an additional 450 af/yr for local municipal use), water-supply pipeline from the well field to the power plant, 500 kilovolt (kV) transmission lines, a receiving electrical substation, other upgrades and ancillary facilities required for the production and transmission of electricity, and new access roads.
- BNCC proposes to expand existing surface-coal-mining operations at the Navajo Mine, which is located within the existing BNCC lease area to provide fuel for the Desert Rock power plant (mining activities and associated facilities would extend into coal resource Areas IV North, IV South, and V). These operations would create the need to dispose of coal-combustion byproducts (CCB) and require construction of additional facilities. All mined areas would be reclaimed as mining operations are completed.

A lease between DPA and Navajo Nation was executed on May 23, 2006. DPA and Navajo Nation propose to enter into a lease for the site for 25 years, which includes a development period not to exceed 10 years, and for a properly exercised renewal term of 25 years. The development period is a period of time, not to exceed 10 years, beginning on the effective date and ending on the commercial operation date. The proposed project is located entirely within the Navajo Indian Reservation approximately 30 miles southwest of Farmington in San Juan County, New Mexico. The power plant would occupy approximately 149 acres of a 592-acre parcel of land immediately adjacent to and west of the BNCC lease area. The coal fuel supply would be mined from Areas IV South and V (approximately 17,500 acres) and transported by conveyor system to a proposed coal preparation facility that would be located in Area IV North of the BNCC lease area near the power plant. The Navajo Nation cannot, under Title 25 of the United States Code Section 415 (25 USC 415), convey an interest in Reservation land held in trust without the approval of the United States. Therefore, the Department of the Interior's Bureau of Indian Affairs (BIA) must review and either approve or disapprove the lease.

BIA has determined that approval of the lease and other aspects of the proposed project would be a major Federal action and thus require the preparation of an EIS. The BIA is the lead Federal agency responsible for the preparation of this EIS. Other Federal agencies and the Navajo Nation are cooperating with BIA in preparation of this EIS: the Bureau of Land Management (BLM), Office of Surface Mining Reclamation and Enforcement (OSM), U.S. Environmental Protection Agency (USEPA), and U.S. Army Corps of Engineers (USACE). This EIS is intended to satisfy NEPA requirements with respect to each agency's decision-making responsibilities related to the siting, construction, operation, and maintenance of the

¹ Desert Rock Energy LLC is a wholly owned affiliate of Sithe Global Power LLC, a privately held, independent power company.

proposed project and to aid other Federal, Navajo Nation, State, and local permitting authorities with their permitting responsibilities including surface coal mining, CCB disposal, and reclamation activities that would take place on the BNCC lease area under the Surface Mining Control and Reclamation Act of 1977 (SMCRA).

The action proposed in this EIS is the completion of the approval processes of the Federal agencies, as described in Section 1.1. The purpose of the action is to enable the Navajo Nation to build the Desert Rock power plant and develop its coal resources. The need for the action, as described in Section 1.2, is for (a) Navajo Nation economic development (b) through use of Navajo Nation coal resources to (c) generate electricity to provide a more economically stable and predicable power supply in the Southwest.

The following chapter sections summarize the authorizing actions that may be implemented by the BIA (as lead agency) and the cooperating agencies, the need for the action, and the issues identified through public comments solicited early in the EIS process.

1.1 FEDERAL AND TRIBAL AUTHORIZING ACTIONS

The proposed Desert Rock Energy Project includes several components that require approvals, grants of rights-of-way, or permits by Federal agencies and/or the Navajo Nation. The Federal agency decisions, approvals, and permits for the different components of the proposed project are specific and varied. BIA, other Federal agencies, and the Navajo Nation have certain authorities and/or actions (decisions) to perform in order to achieve project approval. Some of these actions or decisions require review through the NEPA process. Others are part of consultations required by laws independent of NEPA but implemented parallel to the NEPA process. The agencies and the Navajo Nation must meet their obligations to review the proposal and consider their respective authorizing actions. The authorizing actions required by each agency and the Navajo Nation are described below.

1.1.1 BIA Authorizing Actions

The BIA's action is to decide whether to approve, approve with conditions, or disapprove the long-term business land lease between Desert Rock Energy and the Navajo Nation and whether to grant the rights-of-way requested for the proposed project within a record of decision (ROD). In making these decisions, BIA also must meet its obligations under applicable laws and regulations, including complying with the provisions of NEPA and other environmental requirements. After completing its regulatory review, including this EIS, BIA will issue a ROD. The lease cannot be approved or disapproved until this EIS is completed, and commitments to mitigation measures in the BIA ROD are made.

The purpose of BIA's action is to promote the economic development objectives of the Navajo Nation. The need for BIA's action is its government-to-government relationship with and trust responsibility (including consideration of environmental impacts) to the Navajo Nation. As part of its government-to-government relationship with the Navajo Nation, BIA's NEPA review is limited to the scope of the proposed lease negotiated between the parties, rather than an evaluation of activities outside of the lease (e.g. coal mining). Similarly, the range of BIA's reasonable alternatives is limited to those that will serve the Navajo Nation's economic development goals, consistent with the BIA's trust responsibility (i.e. the approval of the proposed site location on the Reservation, or no action – disapproval of the lease). If BIA identifies a preferred alternative that is not consistent with Navajo Nation's approved lease, it would require the Navajo Nation and DPA to amend the Navajo Nation's approved lease.

1.1.2 OSM Authorizing Actions

The OSM's action is to approve, approve with conditions, or disapprove revisions to BNCC's current SMCRA permit to allow development of coal processing facilities, conveyance systems, and infrastructure in Area IV North of the BNCC lease area; and to approve, approve with conditions, or disapprove a future SMCRA permit application to allow coal mining, CCB disposal, and reclamation activities in Area IV South and Area V of the BNCC lease area.

1.1.3 BLM Authorizing Actions

The BLM's action is to decide whether to approve, approve with conditions, or disapprove the Resource Recovery and Protection Plan or a Mine Plan of Operations for Area IV South and Area V of the BNCC lease area.

1.1.4 USACE Authorizing Actions

The USACE's action is to decide whether to approve an individual permit for the proposed power plant and associated facilities under Section 404 of the Clean Water Act (CWA) and to ensure compliance with Section 404 of the CWA. The USACE also will need to decide whether to approve nationwide permits or an individual permit under Section 404 of the CWA for the mining operations in Area IV South and Area V, and to ensure compliance with Section 404 of the CWA. USACE will consider this matter upon receipt of BNCC's permit application. (Note: Whenever a Section 404 certification is issued, the Navajo Nation Environmental Protection Agency [NNEPA] needs to issue a Section 401 certification.)

In its Section 404 permit process (and associated NEPA process); the USACE looks at both a basic project purpose and a larger overall project purpose to determine a reasonable range of alternatives to be evaluated. USACE is required to permit the practicable alternative—in light of cost, logistics, and existing technology—that would have least adverse impact on waters of the United States. The USACE has determined that the basic project purpose is economic development. The overall purpose of the proposed Desert Rock Energy Project is economic development through generation of power within the boundaries of the Navajo Indian Reservation. While the use of Navajo Nation coal reserves is the primary part of the purpose of and need for the proposed project evaluated in this EIS, it cannot be considered part of the overall project purpose under the USACE 404(1)(b) permit process. The USACE is completing this analysis, which will be documented in the Final EIS.

1.1.5 USEPA Authorizing Actions

The USEPA Region IX's action is to decide whether to approve a significant revision to the BNCC's National Pollutant Discharge Elimination System (NPDES) permit associated with the mining and reclamation operations and coal preparation facilities. The determination as to whether this constitutes a new source permitting action subject to NEPA is determined by the criteria set forth in Title 40, Code of Federal Regulations, Part 122.29(b) (40 CFR 122.29 (b)). USEPA will consider this matter upon receipt of the permit revision application².

² USEPA has regulatory authority for the Desert Rock Energy Project Clean Air Act (CAA) Prevention of Significant Deterioration (PSD) permit; however, this is not a major Federal action subject to NEPA. The PSD process is occurring separately and is exempted from NEPA per the Energy Supply and Environmental Coordination Act of 1974 (Section 7(c)(1)).

1.1.6 Navajo Nation Authorizing Actions

The Navajo Nation approved a land lease package with DPA, which included a sublease with Desert Rock Energy LLC. The Navajo Nation Environmental Protection Agency (NNEPA) has regulatory authority delegated from USEPA for issuance of a Title V Operating Permit to Desert Rock Energy, and to certify the proposed project in accordance with Section 401 of the CWA.

1.1.7 Summary

These authorizing actions, taken together, constitute the proposed action for this EIS. The proposed action, if taken, would result in an approval for implementation of the proposed project, which consists of the construction, operation, and maintenance of the Desert Rock Energy Project, and the associated water-supply wells, water-supply pipelines, transmission lines, other facilities required for the generation and distribution of electrical power, access roads, and the approval of mining and reclamation operations to supply coal to the Desert Rock power plant. Because these are all actions connected to the proposed project, they are all addressed as part of the scope of this EIS.

Table 1-1 is a summary list of major agency authorities or actions that are required for various components of the Desert Rock Energy Project prior to implementing the proposed project.

Table 1-1 Agency Authorities and Actions

Agencies	Project Component				
	Power Plant and Associated Facilities	Coal-Supply and Coal-Combustion Byproduct Disposal	Water-Supply System	Power Transmission Lines	Access Roads
BIA	Grant business land lease, right-of-way for power plant.	NA	NA	Grant right-of-way	Grant right-of-way
USEPA	Issue Prevention of Significant Deterioration (PSD) permit Issue National Pollutant Discharge Elimination System (NPDES) permit under Section 402 of the Clean Water Act (CWA).	Approve modification of NPDES permit for the BHP Navajo Coal Company (BNCC) lease area.	NA	NA	NA
U.S. Fish and Wildlife Service	Issue Biological Opinion	Issue Biological Opinion	Issue Biological Opinion	Issue Biological Opinion	Issue Biological Opinion
OSM	NA	Approve, approve with conditions, or disapprove revisions to BNCC’s current Surface Mining Control and Reclamation Act (SMCRA) permit to allow development of coal processing facilities, conveyance systems, and infrastructure in Area IV North of the BNCC lease area; and, to approve, approve with conditions, or disapprove a future SMCRA permit application to allow coal mining, coal combustion byproducts (CCB) disposal, and reclamation activities in Area IV South and Area V of the BNCC lease area.	NA	NA	NA
USACE	Issue permits under Section 404 of the CWA.	Issue permits under Section 404 of the CWA.	Issue permits under Section 404 of the CWA.	Issue permits under Section 404 of the CWA.	Issue permits under Section 404 of the CWA.
BLM	NA	Approve modification of existing mining plan for the Navajo Mine Extension Project.	NA	NA	NA
Navajo Nation					
Navajo Nation Department of Water Resources	Approval of land lease package.	NA	Approval for use of tribal water sources, approval of land lease package and associated rights-of-way.	Approval of land lease package and associated rights-of-way.	Approval of land lease package and associated rights-of-way.
NNEPA	Issue Title V air quality permit post construction. Issue water quality certification under Section 401 of the CWA.	Issue water quality certification under Section 401 of the CWA.	Issue water quality certification under Section 401 of the CWA.	Issue water quality certification under Section 401 of the CWA.	Issue water quality certification under Section 401 of the CWA.
Tribal Historic Preservation Office	Issue concurrence of findings from cultural resource studies.	Issue concurrence of findings from cultural resource studies.	Issue concurrence of findings from cultural resource studies.	Issue concurrence of findings from cultural resource studies.	Issue concurrence of findings from cultural resource studies.

NOTE: NA = not applicable

1.2 NEED FOR THE ACTION

The Navajo Nation is encouraging development of the proposed Desert Rock Energy Project as part of a broader effort to generate jobs, increase self-sufficiency, and improve the quality of life on the Reservation for the Navajo people. The proposed project would support the Navajo Nation's objective for economic development by providing long-term (1) employment opportunities and (2) revenue cash-flow streams from the sale of power and Navajo Nation natural resources to support the project (e.g., coal, water).

Development of these resources has long been an aim of the Navajo Nation. The Navajo Tribal Council established the DPA in 1985 as an enterprise of the Navajo Nation to engage in energy development for the benefit of the Navajo Nation (21 Navajo Nation Code [NNC] Section 201). Specifically, Section 201 charters DPA to "provide an instrumentality of the Nation to participate in the development of a major coal-fired, mine-mouth steam electric generating station to be located within the extended boundaries of the Navajo Nation in northwestern New Mexico." DPA's goals for the Desert Rock Energy Project are to facilitate tribal self-sufficiency, create significant economic development opportunities, and improve the socioeconomic conditions on the Reservation through responsible and sustainable development of Navajo Nation resources, by generating high-quality jobs and substantial long-term revenues. Because DPA was established on behalf of the Navajo people, the consideration of potential project impacts on tribal members were taken into account during the evaluation of each potential site.

DPA entered into an agreement with Desert Rock Energy to assist in developing the proposed project. The agreement with Desert Rock Energy provides the Navajo Nation with the financial support and resources to develop the Navajo Nation's natural resource of coal. Together, DPA and Desert Rock Energy propose to generate and sell electrical power at competitive prices, using Navajo coal reserves, for the purpose of (1) meeting the forecasted energy demands of the growing populations of the southwestern United States, particularly those in Arizona, New Mexico, and southern Nevada and (2) provide fuel diversity and a stable predictable power supply for utilities in the Southwest.

The need for the proposed project is described in more detail below.

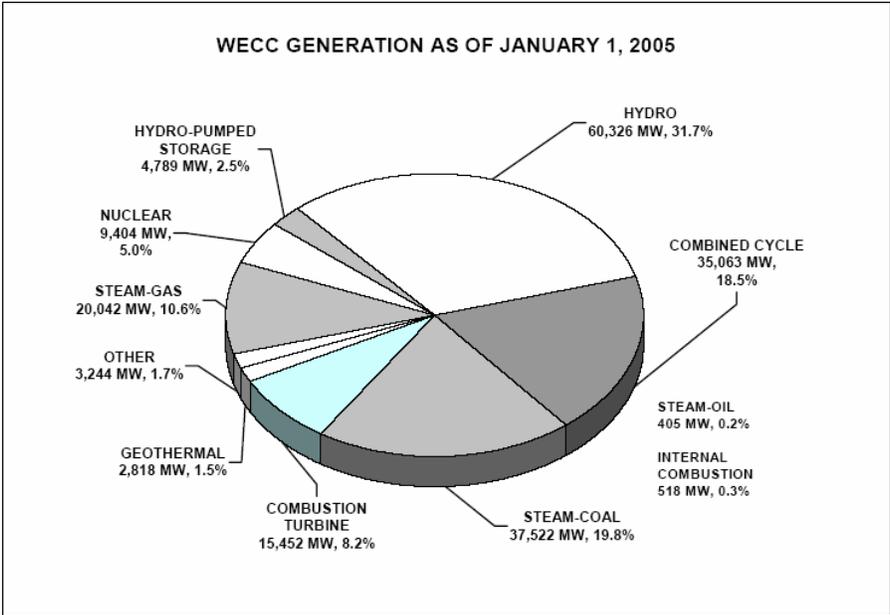
- ***Support the Navajo Nation's objective for economic development by providing long-term employment opportunities and revenue cash-flow streams from the sale of Navajo natural resources (e.g., water, coal).*** The Desert Rock Energy Project would create new employment opportunities and significantly expand the tax base of the Navajo Nation. The project could generate up to 1,600 jobs during the 4-year construction period. In the long term, the project would employ up to 200 people at the power plant and an additional 200 people at the BNCC mine expansion. The project could deliver more than 400 jobs with long-term, direct employment at wage levels averaging more than two times the current full-time Navajo workers' annual average wage of \$28,152 (according to the 2000 census). The Desert Rock Energy Project could support direct and indirect economic development for several decades to come.

Economic benefits to the community would include (1) wage income from new employment at the plant and the mine, (2) income for existing and new businesses from project-related purchases of goods and services and from new wage income circulating in local economies, (3) tax and royalty revenue for the Navajo Nation from the power plant and mine expansion, and (4) additional locally owned businesses developing to support the power plant, mine expansion, and their employees.

Economic development is one of the key goals of the Navajo Nation Government since the economic condition of Navajo tribal members is well below the U.S. average. Based on the 2000 Census, 38.5 percent of all families residing on the Navajo Indian Reservation have a household income below the national poverty level of \$16,895 per year. The average per family annual income of \$23,992 is a multiple of the average per capita income of \$7,578 per year; most families have more than one wage earner contributing to the total. Unemployment rates on the Navajo Indian Reservation exceed 50 percent, and many educated tribal members are unable to return to their homes because of the lack of jobs.

- ***Use Navajo Nation coal to generate electricity.*** The Desert Rock Energy Project would be sited to cost-effectively use Navajo Nation coal resources to fuel the power plant. More than one-half of the total annual direct revenues to the Navajo Nation and one-half the permanent jobs created by the project are a direct result of the use of Navajo Nation coal. Mine-mouth power plants are cost-effective in this region due to the lack of access to rail transportation infrastructure, the higher production costs of Navajo Nation coal, and the lower coal quality (high ash content), as compared to coal resources by rail from the Wyoming Powder River Basin. A mine-mouth power plant is one of the few practical ways to use the Navajo Nation coal resource for the benefit of the Navajo people. It is estimated that the Navajo Indian Reservation overlies abundant coal resources that could be used for power generation. The Desert Rock Energy Project is projected to consume an average of 6.2 million tons per year over the 50-year life of the project.
- ***Help meet the demand for up to 2,000 MW of electrical power in the rapidly growing southwestern United States.*** A new, baseload power plant would provide a reliable and predictable power supply to a region experiencing escalating demand. Between 1990 and 2000, the population of the western region of the United States grew by nearly 20 percent (Perry and Mackun 2001). The Western Electricity Coordinating Council's (WECC) 2005 Ten-Year Coordinated Plan Summary³ identified the Arizona/New Mexico/Southern Nevada sub-region of the western United States (of which the Four Corners area is a part) as an area in need of additional power generation to sustain growth.
- ***Provide fuel diversity, and provide a more economically stable and predictable power supply for utilities in the Southwest.*** Natural-gas-fired generation presently contributes about 37.3 percent of total generating capacity in the WECC (WECC 2005). Figure 1-1 represents the existing, or installed, generation sources within the WECC as of January 2005. In addition, Figure 1-2 shows WECC planned resource additions for the period from 2005 to 2014. Note that net additions of natural gas resources exceed 80 percent of new resources. The Desert Rock Power Plant and other coal-fired projects currently being permitted or proposed in the Southwest that are not currently included in WECC's planned resources can increase fuel diversity by reducing the need for new natural gas resources. Natural gas prices have increased substantially over the last 3 years and prices have been volatile. The average cost of coal sold to the power plant under long-term contract is forecast to be less than one-third of the cost of natural gas on a per-MMBtu (million British thermal unit) basis. Because this fuel supply can be contracted for as long as 25 years, a coal-fired power plant is exposed to significantly reduced price volatility as compared to natural gas, which is sold typically under maximum contract lengths of three years.

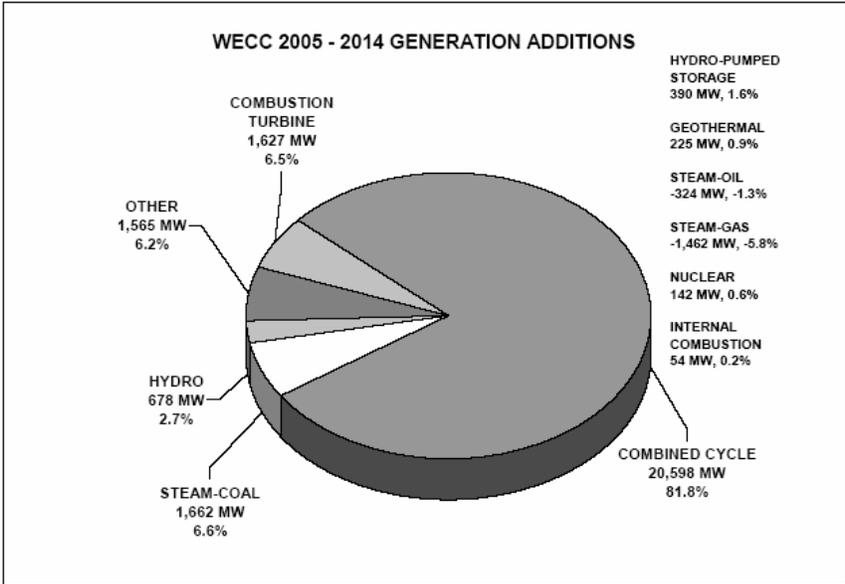
³ Western Systems Coordinating Council (WSCC) was formed with the signing of the WSCC Agreement on August 14, 1967 by 40 electric power systems. Those "charter members" represented the electric power systems engaged in bulk power generation and/or transmission serving all or part of the 14 Western States and British Columbia, Canada. Now known as the WECC, it continues to be responsible for coordinating and promoting electric system reliability as had been done by WSCC since its formation. In addition to promoting a reliable electric power system in the western interconnection, WECC will support efficient competitive power markets, assure open and non-discriminatory transmission access among members, provide a forum for resolving transmission access disputes, and provide an environment for coordinating the operating and planning activities of its members as set forth in the WECC bylaws.



SOURCE: Western Electricity Coordinating Council 2005

NOTE: Combined cycle: In a combined cycle power plant, a gas turbine generator is combined with a steam turbine power plant with the objective to increase the efficiency of electricity generation. Electricity is produced from otherwise lost waste heat exiting from one or more gas (combustion) turbines. The exiting heat is routed to a conventional boiler or to a heat-recovery steam generator for use by a steam turbine in production of electricity.

Figure 1-1 WECC 2005 Installed Generation



SOURCE: Western Electricity Coordinating Council 2005

Figure 1-2 WECC 2005 Planned Generation

About 50 percent of the electricity in the United States is generated by coal, compared with 20 percent in the WECC area (DOE EIA 2006).

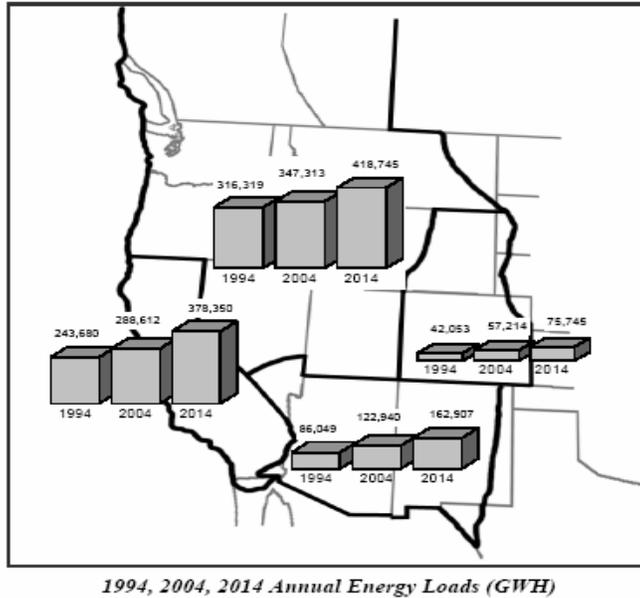
The WECC and EIA have raised concerns about possible natural-gas shortages that could persist for a number of years, as well as a concern about pipeline system capacity (DOE EIA 2006; WECC 2005). The domestic supplies of natural gas are expected to go into decline in the next decade and, as supplies decline, it is expected that prices will increase. In contrast to natural gas, the U.S. has vast coal reserves that exceed 268 billion tons (USEPA 2006a).

In addition to the need for continued growth of economic development, the Navajo Nation will lose substantial revenue in the coming years as a result of the closure of the McKinley Mine in 2009. Another revenue loss from mine closures currently is being felt by the suspension of operations at the Black Mesa mining operation in December 2005, and the future of the Black Mesa mining operation (and the Mohave Generating Station that the mine supplies) is uncertain. Loss of the revenues from these coal mining operations directly affects the ability of the Navajo Nation to improve the quality of life on the Reservation and for the Navajo people. These losses come at a time when an increase in revenue is being sought to meet current and growing fiscal requirements of the Navajo Nation. Development of Navajo Nation coal and water and electrical power transmission can help meet that fiscal objective. DPA and Desert Rock Energy can deliver project development resources including advanced technology, project and asset management, and strong financial backing. Revenue from the proposed project would be used to meet current and future fiscal requirements of the Navajo Nation through a direct Navajo Nation equity investment in the proposed power generation facility.

As outlined in Section 1.1, the proposed project would respond to a projected need for power in the southwestern region of the United States, estimated at an additional 2,000 MW of baseload electric power by the year 2010. The WECC 2005 Ten-Year Coordinated Plan Summary projects the following demand:

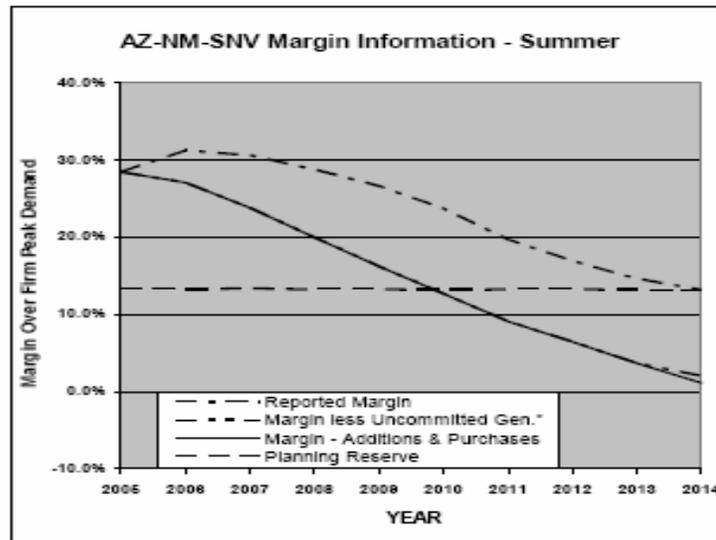
“Over the period from 2005 through 2014, peak demand and annual energy requirements are projected to grow at respective annual compound rates of 3.0 percent. Resource capacity margins for this summer peaking area range between 11.7 percent and 23.8 percent for the next ten years. As with other areas within the WECC, the future adequacy of generation supply over the next ten years in the area will depend on how much new capacity is actually constructed.”

The summary forecasts that the demand for new generation in the Arizona, New Mexico, and southern Nevada subregion will increase from 26,972 MW in 2004 to 35,060 MW in 2014, an increase of 8,088 MW (Figure 1-3). Most state public service commissions require a minimum reserve margin of between 12 and 15 percent. Without additional power generation, the Southwest reserve margins would drop to under 10 percent by 2008. Reserve margins after all planned resource additions in 2014 are 13.2 percent in the Southwest (WECC 2005) (Figure 1-4).



SOURCE: Western Electricity Coordinating Council 2005

Figure 1-3 WECC 1994, 2004, 2014 Annual Energy Loads (gigawatt hours)



SOURCE: Western Electricity Coordinating Council 2005

Figure 1-4 WECC 2005 Reserve Margins

The purchasers of electricity generated by the Desert Rock Energy Project are expected to be the major utilities in New Mexico, Arizona, and Nevada. Table 1-2 shows the major utilities and their estimated annual load growth.

Table 1-2 Southwest Utilities and Estimated Annual Load Growth

Utility Name	2006 Peak Load (MW)	Generation (MW)	Annual Load Growth (MW)
Salt River Project	6,300	5,122	250
Arizona Public Service Company	6,400	6,257	250
Nevada Power Company	6,141	3,066	300
Public Service Company of New Mexico	1,675	1,875	50
Tucson Electric Power	1,900	1,999	50
El Paso Electric	1,282	1,622	50
Navajo Tribal Utility Authority	150	0	5
Total			955

SOURCE: Western Electricity Coordinating Council 2005

Salt River Project (SRP) has issued a request for proposals (RFP) for baseload resources. SRP defines baseload resources as those with a very high availability factor, with availability in the summer being the most critical. SRP would expect at least a 95 percent availability factor in the summer months (June through September). Availability during other months of the year could be reduced to allow maintenance. The products requested would be for a 20-year term, deliverable to the SRP Valley transmission system. The RFP calls for a total of 600 MW of baseload resources in the years 2012 through 2016.

Arizona Public Service (APS) issued an RFP on January 24, 2006, for baseload power for delivery as early as 2009 but no later than 2014, and completed a system study for the Desert Rock Energy Project. APS is seeking proposals for unit-specific baseload generating capacity of 100 MW to 500 MW per unit and will consider proposals offering multi-units at a single site with phased in-service dates. APS will consider proposals that have individual units larger than 500 MW but intends to limit its interest to facilities with no more than 500 MW per unit. Proposed generators must have the ability to operate at or above an 85 percent annual capacity factor. The baseload capacity offered may be for deliveries beginning as early as 2009, but delivery must begin no later than 2014. APS is expected to purchase or self build up to 1,000 MW to meet their project baseload requirements through 2014.

Public Service Company of New Mexico issued an RFP on May 10, 2006, for 229 MW of capacity by 2010. In addition, the RFP indicated a planned capacity need of 515 MW in 2012.

The Southwest Public Power Resources Group, which represents 39 southwest public power utilities, issued an RFP on June 30, 2006, for 400 MW of baseload needs by 2012.

Navajo Tribal Utility Authority has stated an interest in purchasing about 50 MW from the Desert Rock Energy Project to replace a contract they have with Tucson Electric Power that will expire in 2009.

1.3 ISSUES IDENTIFIED DURING SCOPING

As the lead Federal agency, BIA has a responsibility to solicit comments from the public regarding the proposed project and to consult with relevant Federal and State agencies, local governments, and federally recognized American Indian tribes. Scoping is a process that invites public input on the proposed project early in the NEPA process to help determine the scope of issues to be addressed and identify the significant issues related to the proposed action. BIA carried out the NEPA scoping process for the Desert Rock Energy Project.

BIA's notice of intent to prepare an EIS and conduct public scoping meetings was published in the *Federal Register* on November 10, 2004. BIA solicited comments from agencies and the public and hosted public scoping meetings during December 2004 in Phoenix and Flagstaff, Arizona, and Farmington and Gallup, New Mexico. At the request of the public, BIA extended the scoping period and agreed to conduct additional public meetings. A second notice of intent was published in the *Federal Register* on March 10, 2005, announcing the extension of the scoping period and the additional public meetings. The meetings were held in Cortez, Colorado, and Burnham, Sanostee, Shiprock, and Albuquerque, New Mexico in March 2005. The duration of the scoping period, required to be a minimum of 30 days, was 150 days.

Comments received during the scoping period were analyzed and documented in the Desert Rock Energy Project Summary Scoping Report issued in July 2005 and can be found at www.desertrockenergy.com. By the end of the scoping comment period, BIA had received 106 statements made by speakers at public meetings attended by 372 people, and received 1,117 written or electronically mailed submissions.

1.3.1 Summary of Comments

A tribal member of the Four Corners area summed up the feeling of many area residents with a declaration that, "We like to smell the clean air and see the beautiful mountains surrounding us." This statement captures the essence of much community concern about the Desert Rock Energy Project—it simultaneously touches on concerns about air pollution and its effects on health and the local ecosystem, haze and its effects on the social and economic environment, and the yearnings of an American Indian community that has for centuries kept rhythm with the subtle processes of nature. There is a continuum of opinions about the Desert Rock Energy Project—from denouncing the project as just another chapter in a history of exploitation of Native American lands and people, to welcoming of economic opportunity. Many appeared willing to take a wait-and-see attitude and to place their confidence in the EIS process, while some strongly urged that the project go elsewhere or not be developed anywhere.

The preponderance of scoping comments indicated anxiety regarding the cumulative environmental effects of coal-fired power plants in the region. Additionally, some comments questioned the continued use of fossil fuels in light of a near-future pending energy crisis stemming from oil production and concerns about global warming. There were many demands for answers about the additional effects the project would have on the region, and actions that would mitigate those effects, should the project go forward. Some were optimistic about the prospect of economic opportunity, while others expressed great skepticism about the reality or the extent of those opportunities. Three major topics of concern emerged from scoping comments: (1) environmental issues, (2) social and economic issues, and (3) concerns about representation. These are described in more detail below.

1.3.1.1 Environmental Issues

Air quality, global warming, and other global atmospheric effects of burning fossil fuels stood out as the issues of greatest concern. Many commenters expressed fear about the effects of project emissions on community and global health and called for a thorough evaluation of the project's expected effects, including a cumulative impacts analysis, on regional air quality and consideration of alternative non-fossil fuels to generate electricity. Asthma, other respiratory diseases, and cancer were cited as concerns. Others were concerned about the accumulation/disposal of fly ash, mercury, and other heavy metals in the ecosystem, including contamination of groundwater, and one commenter complained about the dangers to children from consuming mercury-contaminated fish. Regional haze, another more visible effect of the cumulative mining and production of electrical power in the area, was the subject of many comments.

Many voiced regret about the diminished quality of light in the sky from, as one commenter characterized it, “the most fantastic turquoise” to a present-day “muddy yellow green.” Community distress about haze and its effects on quality of life in general and tourism in particular was reflected in many comments.

Many are concerned about the cumulative effects of the two existing and two proposed power plants in the region (the Four Corners and San Juan Power Plants, and the Mustang [Grants, New Mexico] and Excel Power Plants [Colorado], respectively). A challenge was issued to the power companies and regulators to take the lead in energy conservation.

Some were concerned about the project’s effects on wildlife and vegetation, especially threatened and endangered species, and medicinal plants. Commenters raised issues about the accumulation of toxins in the environment, and potential degradation and fragmentation of habitat. In addition to emissions, the handling and transport of other project-related toxins—including herbicides, acid, and ammonia—were of concern. Some wanted answers about the project’s effects on local streams and groundwater, and others raised the concern that project activities could open the door to invasive plant species.

The visible intrusion of the project also was a concern. Some worried that construction and maintenance of project facilities and increased roads and traffic would generate enough fugitive dust, noise, and vibration to impact residential areas, and the experience at national parks and Class 1 wilderness areas in the region. The effect of vibrations and plant emissions on rock art and other ancient cultural resources was also a subject of concern, with implications for both tourism and preservation of important traditional places.

1.3.1.2 Social and Economic Issues

Many ask to be heard by ears sensitive to the concerns of a Native American community, though opinions vary about which concerns should take precedence. Some view the project as a point of conflict within a community poised between traditional ways and economic imperatives, and many comments reveal frustration about the unknown. Would the project provide local employment or would labor be imported? Why should local communities bear the environmental costs of providing electricity to distant communities when there are many people on the reservation without electricity; would there be adequate compensation? Would the Navajo Nation be “captured” by the project, destroying any prospect for other economic development? Another questioned America’s addiction to fossil fuels and suggested that the EIS should recognize the reality and ripple effects of the peak-oil phenomenon and the impact that dwindling oil reserves will continue to have on oil and gas development.

Some are concerned that skies muddied by power plant emissions and viewsheds interrupted by project facilities would interfere with the development of a more eco-friendly tourism industry. Many want answers about project effects in this respect—would project technology really produce cleaner emissions than other power plants in the region? Some are firmly in favor of the project as a positive opportunity for employment and economic development and a potential for younger tribal members to secure jobs on the reservation. Some offer wary support but want answers first. Some area residents want to participate in the “American dream,” and put their hopes in the project to provide a better quality of life.

Local farmers view the project as a competitor for resources on American Indian lands and are concerned about competition for water in a semiarid environment. In times of water shortage, will preference be given to the proposed plant over the needs of local farmers? Would the quantity and quality of water be affected? What are potential impacts on ground and surface water? Would electromagnetic fields have an impact on livestock or honeybees?

1.3.1.3 Process and Representation

Some see the project as extra environmental stress on a population already burdened with a disproportionate share of the power generating costs for southwestern states. The issue of environmental justice was raised, and there were calls to make the scoping process more accessible to individuals on the Navajo Indian Reservation. Some called on officials of the Navajo and Federal Governments to adequately investigate the project, provide answers, and represent community interests. Others requested scoping meetings in communities downwind of the project (southwest Colorado) and an extension of the scoping period.

Many called for studies that would provide adequate answers, monitoring and testing that would provide adequate protection, and compliance with government emissions standards and permitting requirements that would provide adequate intervention in favor of community interests. Other concerns about representation included concerns about water rights.

There was concern about the proposed project's potential interference in cultural landscapes—including burial grounds and other areas sacred to local communities—and it was strongly requested that American Indians be included in the cultural resource assessments.

Table 1-3 summarizes the issues identified from the scoping comments.

Table 1-3 Issues Raised by the Public and Government Agencies during Scoping

Issues	Section(s) of the EIS Where Addressed
Actions and Alternatives	
Impacts on Four Corners region to meet the needs of distant end-users	Section 5.1.4
Need sufficient demonstration that the project is necessary	Section 1.2
Alternative Fuels and/or Generation	
Consider developing geothermal, solar, wind, and other renewable resources instead of the coal-fired power plant.	Section 2.4
Consider developing a solar photovoltaic manufacturing facility instead of the coal-fired power plant.	Section 2.4
Best Available Control Technology	
Consider integrated gasification combined-cycle and CFB technologies as a clean way to produce power with coal.	Section 2.4
Air Quality	
Identify and assess health impacts associated with air emissions.	Section 4.13
Impacts that exceed visibility thresholds for Class I designated areas at Mesa Verde National Park and the Weminuch Wilderness Area	Section 4.1
Impacts from mercury by the existing coal mines and power plants, and the addition of a new coal-fired power plant	Sections 4.1, 4.2, 4.3, 4.13
Long-term air quality monitoring	Section 4.1
Ensure appropriate evaluations are made for mercury emission projections and employ available mitigation measures.	Sections 4.1, 4.2, 4.3, 4.13
Discuss the potential effects of the project on global warming.	Sections 4.1 (carbon dioxide emissions) and 5.1.2.4
Water Resources	
Impacts over time on the region's water quality and quantity including both surface and subsurface water.	Section 4.2
Impacts on local farmers regarding water rights: would the power plant be given preference in times of water shortage?	Section 4.2
Impacts from fly ash seeping into groundwater supplies and the disposal of fly ash	Section 4.2
Ensure that the project obtains all necessary permits: storm water prevention plan permits, aquifer protection permits, Clean Water Act permits, and National Pollutant Discharge Elimination permits	Table 1-1 summarizes
Impacts on water quality (related to mercury deposition and consumption by humans)	Sections 4.2 and 4.13
Biological Resources (Vegetation and Wildlife)	
Impacts from construction activities, including habitat disturbance, noise, encroachment of invasive species, and stormwater runoff related to soil erosion	Section 4.3
Bioaccumulation of mercury and other project-generated heavy metals in vegetation, water, and wildlife	Section 4.3
Impacts of cooling towers and transmission lines on birds	Section 4.3
Impacts of electromagnetic fields from the transmission lines (related to the migration of honeybees and range animals)	Section 4.13.2.2
Avoidance measures related to threatened and endangered species, Navajo Nation sensitive species, and raptors	Section 4.3
Avoidance of potential impacts that affect traditional medicinal plants or other historical uses	Section 4.3
Land Use and Recreation	
Impacts on existing grazing rights	Section 4.6
Impacts on livestock from electromagnetic fields	Section 4.13.2.2
Impacts on displaced residents	Section 4.4
Visual Resources	
Potential impacts on viewsheds of sensitive viewers	Section 4.7
Impacts on the natural setting	Section 4.7
Employment/Socioeconomics/Environmental Justice	
Identify high-quality management jobs for the Navajo people.	Section 4.8
Impacts on the health of a minority population in the Four Corners region (e.g., respiratory problems)	Section 4.13
Consider that justice of developing power plants on the Nation to serve power needs in other states.	Section 5.1.4
Impacts of environmental hazards near the homes of a low-income population	Sections 4.4 and

Issues	Section(s) of the EIS Where Addressed
Cumulative impacts—project’s contribution to environmental effects of two existing power plants in the Four Corners region	Section 5.1
Availability of electricity for local communities.	Sections 3.8 and 4.8
Cultural Resources	
Impacts on sacred ground and Mother Earth	Section 4.9
Impacts on the Mesa Verde and Chaco National Historic Parks	Section 4.9
Impacts on ethnographic resources, and historic and prehistoric resources within the area of potential effect	Section 4.9
Impacts on all interested tribes in the region	Section 4.9
Traffic and Transportation	
Impacts from increased traffic to support project, including dust, roadway maintenance, and noise	Section 4.11
Impacts on ingress and egress from existing travelways	Section 4.11
Impacts on land, water, and air from increased traffic during construction	Sections 4.1 and 4.2
Impacts on adjacent highways and the agencies responsible for those highways	Section 4.11
Noise	
Impacts on all noise receptors	Section 4.12
Impacts of noise caused by increased transportation, construction and operation of the project, transmission facilities, and BNCC lease area	Section 4.12
Ground Vibration	
Impacts on rock art and ancient structures from vibrations due to increased traffic and energy extraction activities, including blasting, hydraulic fracturing, and other loud or explosive events	Section 4.12
Hazardous Materials	
Consider how chemicals needed for the plant would be transported, and the necessary safety measures.	Section 2.2.2.3
Impacts from solid/hazardous waste disposal on land, air, and water over the life of the project	No solid waste disposal on-site. CCB disposal and spill prevention plan discussed in Section 4.2.
Impacts from using ammonia for the selective catalytic reduction (SCR) as air pollution control technology.	Section 4.1.2.2
Cumulative Effects from Projects in the Region	
Consider implementing the best and latest technology to reduce toxic emissions to the lowest possible levels, and the two existing plants should be either taken off line or retrofitted with technology to reduce their toxic emissions to the lowest possible levels.	Sections 4.1 (mitigation) and 5.1.1
Impacts from increased oil and gas development will further degrade poor air quality (particulates and ozone) in the region.	Section 5.1.1
Identify all other ongoing, planned, and foreseeable projects in the study area that may contribute to cumulative impacts.	Section 5.1
Scoping Activities	
Project should be widely advertised in advance of public meetings.	Chapter 6
The project description and summary of impacts should be developed in the Navajo language.	Navajo translation will be available at the public hearings.