
Comments on the Desert Rock Energy Project Draft Environmental Impact Statement DOI DES 07-23

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INTRODUCTION

Who we are

The Diné Policy Institute (DPI) is a policy and research center on the Navajo Nation that analyzes pressing issues facing the Navajo Nation and its people from the traditional Navajo philosophical paradigm of *Sa'ah Naghai Bik'e Hozhoon* (SNBH). SNBH is a comprehensive philosophy that promotes living a balanced life with longevity and resilience. DPI was organized by the Navajo Nation Speaker's Office and the Diné College and is based in Tsailé on the Navajo Nation.

Background

The Navajo Nation government is supporting the development of the Desert Rock power plant as a venture to promote economic development on the Navajo Nation. The power plant is supposed to act as a stimulus to jumpstart the Navajo economy. It is estimated that the power plant will pay over \$50 million annually to the Navajo Nation in the form of taxes, fees and royalties. The project is also predicted to create over 1,500 jobs. These will be both industrial and service in nature. It is also forecasted that business development will result from the plant's construction. The power plant is planned to be built within the Nenahezad Chapter boundaries on the Navajo Nation.

In May of 2007, a Draft Environmental Impact Statement (DEIS) was released on the Desert Rock power plant. The Diné Policy Institute prepared these comments in accordance with the "fundamental laws" of the Diné (FLD). These laws state that they "provide the foundation for the *Diné bi nahat'á* and Diné sovereignty."¹ Hence it is fitting and proper for these comments to be made on the proposed power plant project, its shortcomings and its limited perception of Navajo culture.

Purpose

The purpose of these comments is to respond systematically to the most salient deficiencies of the EIS and its process of analysis about the proposed project that will affect the Navajo Nation, Navajo citizenry and the politics surrounding the Navajo Nation.

Deficiencies of the DEIS

The DEIS decision-making process and its methodology of evaluating impacts could have more accurately reflected "consideration[s] of the potential project impacts on [Navajo] tribal members..."² These decision-making processes utilized by both the Navajo Nation and URS,³ though attempting to accommodate the socio-cultural elements of the Navajo people, did not sufficiently consider the fundamental laws of the Diné or the Diné Life Way in its assessment. The utilization of the fundamental laws in the decision-making and evaluation processes is a more culturally appropriate approach to considering the project's potential impacts on tribal members.

The current decision-making process employs assumptions of economic efficiency, which at times are at odds with values found in the fundamental laws. This assumption of efficiency can be

¹ Navajo Nation Code Annotated: Titles 1 to 5 (2005) Section 202.

² Desert Rock Energy Project: Draft Environmental Impact Statement (2007) pg. 1-6.

³ Retained by the BIA to conduct the EIS.

seen within numerous sections of the report,⁴ and within the overall tone of the DEIS in preferring what it calls “Alternative B,” or building the power plant as it is proposed.

Thus, the decision-making and assessment processes used in the DEIS have assumptions that do not comport to the Navajo ways of being. It’s difficult to consider the potential impacts of the proposed power plant on tribal members with untested assumptions about Navajo norms and values. As a result definitions of the environment and culture used in this DEIS are constrained and too narrow to accommodate Navajo understandings and values.

Furthermore, the DEIS offers *only* three alternatives. These alternatives are: 1) do nothing, 2) permit a 1,500 megawatt power plant (as is proposed) or 3) permit a 550 megawatt power plant. Other alternatives were not considered. Using the fundamental laws and broader but more appropriate cultural understandings, and considering the Bureau of Indian Affairs’ (BIA’s) “trust responsibility” for the Navajo Nation, more project alternatives should have been proposed.

In summation the specific deficiencies of the EIS include:

1. The need to consider other alternatives from the three listed in this current DEIS.
2. The need to define a broader set of environmental and cultural impacts; the set of issues are too narrow for Navajo understandings.
3. The need to examine all impacts in light of fundamental values of Navajo Nation in accordance with Navajo law.
4. Lastly, that the supplemental EIS consider other alternatives and the Navajo fundamental law (as understood from the Navajo perspective.)

Understanding the Environment

The Draft Environmental Impact Statement takes the Environmental Impact Agency’s (EPA’s) definition of environment and narrows it to its specific and practical purposes. The EPA defines the environment as “the sum of all external conditions affecting the life, development and survival of an organism.”⁵ This definition, too broad for an assessment requiring measurements and impacts of *all* external conditions, is commonly narrowed-down to two broad components. These components then make-up a more pragmatic and operational definition for the EIS in accessing environmental impacts. These two components are:

1. Natural Environment – this contains effects on the earth specifically as it relates to geology, soils, topography, unique physical features, and erosion. It also includes air which is defined commonly through air quality and odor; water as defined through surface water improvement/quality/quantity, run off/ absorption, floods, groundwater movement/ quantity/quality; plants as defined through unique or sensitive (threatened or endangered species), number or diversity of species; animals as narrowed to unique or sensitive (threatened or endangered species), habitat for numbers or diversity of species, fish/wildlife migration routes; and, energy and natural resources which is narrowed to amount required, rate of use, efficiency source/availability, non-renewable resources, conservation and renewable resources.

⁴ Desert Rock, pg. 1-9.

⁵ <www.epa.gov>

2. Built environment – environmental health which is narrowed to, risk of explosion, releases or potential releases to the environment affecting public health such as toxic or hazardous materials; land and shoreline use which is constrained to relationship to existing land use plans; transportation which is narrowed to transportation systems, vehicular traffic waterborne, rail or traffic, parking movement/circulation of people or goods, and traffic hazards; public services/utilities, which is narrowed to fire, police, schools, parks or other recreational facilities maintenance, communications, water supply, storm water, sewer, solid waste.

This current DEIS analyzes effects on environment limited to: “air, water, geology, soils, wetlands, vegetation, fish and wildlife, cultural, visual, noise, land use, and socioeconomics.”⁶ This conception of the natural environment is considered along with the human environment, conceived in terms of health and socioeconomic effects. This understanding of the environment impoverishes more holistic Navajo notions of environment and thereby creates inadequacies within the EIS report between environment and Navajo culture. The dichotomization and categorization of these two concepts, environment and culture, disengages Navajo notions of an interdependent and living world as is noted in the fundamental laws of the Diné.

Furthermore, the categorization of culture within a list of affected environment demonstrates that culture is viewed separately from the environment.⁷ Notions of environment are constrained to operational definitions that have specific metrics in place to quantify and, thereby, measure impacts found within the current DEIS. By so doing, the DEIS disengages what is valued and important to Navajo. Thus, a broader understanding of the environment must be conceived and operationalized to comport with the fundamental laws of the Diné.

Nashasdzaan doo Yadihiil (The Navajo environment)

The closure of many Blessingway songs,⁸ identifies the relationship between one’s self and the world. “*Sa’ah naghai bik’e hozho nishligo adishni*...I say I am SNBH.”⁹ This pronouncement in the Blessingway song suggests that the person is SNBH and by implication is not separate from the world, rather she is a part of the world and the world is a part of her. Her mind is a part of the world and the world a part of her mind and body. Using traditional principles of *Nitshak’ees*¹⁰ and *Nahata*¹¹, one thinks about her family and her family becomes her planning. Furthermore, the family is a part that individual’s mind or *ani*. This implies that one’s family (human and non-human) and “external” world is an extension of one’s mind. This idea of interconnectedness is fundamental to understanding Navajo concepts of the environment.

This concept is further understood through relational terms as is illustrated in many prayers: *Kodee hozhoodoo, shima Nahasdzann doo shita’ Yadihiil*¹². As the chapeau of most Navajo prayers, these terms illustrate that the environment involves all created elements within one’s Mother Earth and Father Sky. Furthermore, it implicates a status of stewardship for all created elements situated within earth and sky. To further understand this complex relationship, the environment must be understood as interconnectedness.

⁶ Desert Rock, Executive Summary, ES-7. 3-1.

⁷ Ibid, pg. 3-1

⁸ The Navajo ceremony often referred to as the main stalk of Navajo philosophy.

⁹ Benally, Herbert. *Navajo Philosophy of Learning*, pg. 3.

¹⁰ Loosely translated as “thinking.”

¹¹ Loosely translated as “planning.”

¹² “From a place of beauty and spirit, I greet my mother earth and father sky.”

This interconnectedness finds expression in the principle of *k'e*. It is with *k'e* that one realizes that her mind is connected to her body and that her mind and body are connected to the world. The implication of such is that her actions on someone else are, in some measure, also an act on her own self. One must be careful not to infer that Navajo is an individualistic or utilitarian-based society. Rather, when one thinks of their own individual identity, one must by necessity think of her identity as the identity of family. Therefore the individual is an individual insofar as they have autonomous bodies, and autonomous thoughts, but they are also obligated to take upon themselves their family. Therefore, the welfare of the lake next to my home is relatively as important as the welfare of my son or daughter.

In short, for the DEIS to consider the impacts on tribal members, it must also include reference to impacts on immaterial relations rather than on impoverished and mechanistic notions of environment that is limited to measurements of air, water and so forth. To have full consideration and make a cumulative analysis, the EIS must, by necessity and out of fiduciary responsibility, consider the impacts on Navajo spiritual notions of the environment. Spirituality, as respect for life, involves – as one aspect - songs, prayers and offerings.¹³ The importance of spirituality should be implicit and added to the supplemental EIS.

Understanding Culture

When considering the EIS' use of the term "culture," and comparing this against a more organic documentation of culture and spirituality, the fundamental laws of the Dine, it is evident that the DEIS fails to understand "culture" as the Navajo perceive it. The DEIS' definition of culture is too limited and categorical to represent Navajo Life Way fairly and accurately. This DEIS presents Navajo culture as something outdated, historic and limited to dress, ceremonies and artifacts. Little is said of contemporary Navajo culture and how this differs from that of the mainstream US (and therefore would be impacted differently than a standard cost/benefit analysis might suggest.)

The DEIS definition of culture, referred to as "cultural environment," is defined as "those aspects of the physical environment that relate to human culture and society, along with the institutions that form and maintain communities and link them to their surroundings."¹⁴ According to the report's authors, the only cultural elements that may be affected by the proposed power plant are archeological and historical artifacts (e.g., gravesites, Anasazi ruins, a "death hogan," etc.) and traditional artifacts. According to this definition these aspects are part of the physical environment relating to human culture and society. The DEIS' only dimension for the broad concept of culture is its call for proper protocol for *jischa* or gravesites, human remains and funerary items.

The construction of the proposed Desert Rock power plant will diminish spiritual balance by eliminating aspects of the Navajo Life Way that are vital to maintaining a healthy relationship with the environment. In a Navajo mode-of-analysis, grave consequences may occur to the people and the environment with a lack of understanding on humankind's role in the natural world (which, for Navajo, means stewarding the land and its living inhabitants.) The Navajo practice of "offering" are part of a protocol (i.e., measure of mitigation) that isn't even addressed

¹³ Making offerings and prayers represents respect when harvesting plants of any type for medicine and ceremonial purposes. Offerings are protocols that require the use of corn pollen and prayer, and when the individual departs the offering place he or she has a clear conscious knowing that the procedure is satisfied.

¹⁴ Desert Rock, Chapter 3, pg. 147.

in the entire DEIS report. Essentially, overburdening the environment is considered an act of disrespect and reckless disregard for a natural order of things and, therefore, seen as exploiting the natural world beyond what is needed and offered to humanity for survival.

In the EIS, the notion of culture is considered separately from other components of the report. Culture is not ever explicitly defined, but is used in a context that does not comport to notions of Navajo ways of being. However, recognition of the complex notions of culture and its inextricable link to resources is briefly mentioned.¹⁵ Culture is defined solely as it relates to the discussion of grazing. This view of culture in the affected environment is narrow and does not represent an understanding of culture from the Navajo perspective.

Conversely, culture is limited to activities such as “the grazing of livestock” which is said to be “integral to the Navajo culture.”¹⁶ Such a narrow definition enervates the notion of contemporary Navajo culture, rooted in history and tradition, and underestimates the potential effects the proposed power plant would have on it. In a confusing sentence attempting to capture a more complex notion of culture, it appears that cultural identity is considered at one point in the EIS report, but for a fleeting moment. Yet, how cultural identity is conceived in this singular instance is problematic. “The connection of Navajo people to the study area is expressed both in terms of cultural identity and in official documents kept by the Navajo Nation and the United States government.”¹⁷ This sentence opens the section on the social and cultural situation, however it remains unclear as to how cultural identity is understood, and further maintains a separation of culture from the environment.

Broad statements are made without reference to an understanding of Navajo traditional culture: “Potential on traditional Navajo lifeways and knowledge could have an affect on the entire culture.”¹⁸ Statements of this sort are made without proper context or foundation to understand what those impacts may be, or what is meant by “traditional lifeways” and “traditional knowledge.” Nor is any assessment made on the effects the project would have on this referenced culture.

The notion of culture is defined inconsistently throughout the entire DEIS. In Chapter 5, reference is made to culture in the “Social Impacts” section:

With regard to social impacts of the project upon the Navajo people and revenues generated from tribal assets, there is no single “Navajo culture” which controls the lives of the Navajos living on the Navajo reservation. Rather, through the revenue generated in the sale of tribal assets communities within the Navajo Nation have become dispersed along a cultural continuum ranging from very “traditional” to very “acculturated.” Traditional means those Navajo still living and holding values much the same as their ancestors did and “acculturated” means those Navajos who have changed their lifestyle, live lives and hold values nearly like the majority of Americans made possible through the additional revenues recognized through the sale of coal and water. Impacts of the proposed project would be very different upon individual Navajos, and Navajo families depending where they may occur on this cultural continuum.¹⁹

¹⁵ Desert Rock, Chapter 3, pg. 127

¹⁶ Ibid, pg. 143

¹⁷ Ibid, pg.144

¹⁸ Ibid, pg. 48

¹⁹ Ibid, Chapter 5, pg. 25-26.

This sociological critique reveals a weakness in the description of Navajo culture and people. This critique dichotomizes the Navajo people into two continuums that do not share any “traditional” values. Thus, more revenue would further this dichotomization. And according to this rational laid-out, more revenue injected into the Navajo economy via realization of the Desert Rock power plant would further bifurcate the Navajo people, with revenue causing one segment of society to become more traditional and the another more acculturated. This analysis is tenable at best. Any correlation resulting from increased revenues from the project could not reasonably result in further bifurcation of the Navajo. At best, the increased revenue would be only a small part of the overall neo-colonization of the Navajo people.

In further demonstration of lack of understanding of the Navajo relationship to the environment, the DEIS attempts to articulate in a confusing manner Navajo relationship to landscape. “The continued modification of the landscape through numerous regional projects that remove the important places or modify the Navajo’s visual relationship to the landscape can have a cumulative impact on an individual Navajos sense of well-being and their relationship to the landscape. What cumulative effect this has over time on the Navajo individual and family is unknown and up to this point unquantifiable.”²⁰ This description of Navajo relation to family is generalized and as such is unquantifiable. However, such an issue of well-being must be considered in a Navajo context and understood qualitatively, not merely through a created metric instrument that quantifies well-being. While making the remarks about being unquantifiable, the writers of the DEIS failed to recognize how well-being and the measurable aspects of historical trauma are related.²¹

To summarize the notion of culture used within the DEIS, one can simply see culture in a very material way, where culture aside from cultural resources remains an elusive concept. Thus, culture is conceived of as merely values and physical expressions (i.e. arts, property, etc.) that have some relationship to resources, not necessarily the environment. Culture is not conceived of as being inextricably linked with environment and spirituality.

Bik’egho da iinaanii

The DEIS approached culture in a very scientific and rational way, “which too often reduces culture to a category, a definition, a ‘logic,’ i.e. to a ‘system of meanings, signs, representations; in other words to *logos* (content).”²² The fundamental laws of the Diné is a declaration of Navajo culture, done in “resistance to the standardizing bureaucratic planning system, to the ideology, [and] monoculture...of democratic culture.”²³ In the DEIS, this bureaucratic system is apparent, even in its very reductionist approach to understanding Navajo and their “culture.” “While many moderns accuse (sometimes rightly, sometimes wrongly) this cultural resistance as being anti-progressive, anti-developmental, anti-rational, of living nostalgically in the past, of being fundamentalist, many of the culturalist, on the other hand, see a ray of hope in that resistance. But the latter feel at the same time a deep malaise, when they have to defend the fact that the path they promote is a valid, important, realistic one.”²⁴

²⁰ Ibid, pg. 26.

²¹ Ibid, pg. 27; See Duran and Duran. Native American Post-Colonial Psychology

²² Vachon, Robert. “Towards a radical revision of the notion of culture,” Das Kalpana, Intercultural Institute of Montreal, 1994.

²³ Ibid.

²⁴ Ibid.

Thus the Navajo people along the entire continuum of their culture feel a degree of connection to their Diné identity, despite their spending patterns, their economic physiognomy, and acquisition of American values. This impoverished notion of culture and environment within the DEIS is a failure of dominant analytic methods for analysis. In many of those methods, a specific epistemology is employed to inform those analytic methods. Thus, an epistemology of objectivism leads to methods, based in the positivist tradition, of quantification and categorization.²⁵

Hence a notion of culture is seen merely as customs, behavior, arts, food, habitation, and history. Whereas, Navajo understand culture in more structural and mythical ways, where the structural includes family, society, nation, social organization, religious practices, norms, and language; and where the mythical includes a worldview or cosmology that includes the self, the cosmos, human, time, space, spirituality, psyche, mind and knowledge.²⁶

Therefore to understand “culture” in a Navajo context is to first understand that there are key foundational elements that inform a specific worldview. The foremost is *k'é*. This is a concept that informs and guides one’s spiritual, mental, physical, emotional, and utilitarian behavior with all creation. Thus, the weakness in articulating the Navajo relationship to land could have been augmented by understanding the principles guiding that relationship. Relationship to place informs memory of one’s self and relations to the broader world.

One term that describes this notion of guiding principles for relating to all creation is *bik’ehgo daiinaanii*, that which gives direction to one’s life. Understood in the context of *k'é*, a notion of culture is then inseparably connected to a broad notion of environment. Where arbitrary delimitations of the project demarcated by one mile out, does not make sense to the Navajo. Yet, this understanding of Navajo is expected when one complies with the fundamental laws of the Diné.

Understanding Desert Rock and the “Fundamental Laws” of the Dine

This DEIS prepared by URS for the BIA and the US Department of Interior (DOI) is insufficient insofar as it defines the concepts “culture” and “cultural resource” in narrow, historic and archeological jargon that is divorced from notions of “environment” and “social” well-being, which for the Navajo are contributing attributes of culture. For the Navajo people, for whom this report is ultimately intended, this trifurcation impoverishes in scope each of these categories and leads to a false analysis based-on wrong assumptions. As the common cliché goes, “the whole is greater than the sum of its parts.” From the traditional Navajo perspective each of these categories (among other concepts) is inseparable from the next and must be considered concurrently and not separately.

Such information is not esoteric to Navajo medicine men or “traditionalists” in the Navajo community. Rather, one can easily access this type of knowledge in the laws of the Navajo Nation, found in Title 1 of the Navajo Nation Code, termed, “The Foundation of the Diné, Dine Law and Dine Government”²⁷ (FLD). These “fundamental laws” serve as a useful set of criteria by which to judge the environmental (i.e., cultural) ramifications of the proposed Desert Rock

²⁵ Crotty, Michael. The Foundations of Social Research: Meaning and Perspective in the Research Process (Sage Publications, 1998) pg. 5-6.

²⁶ Vachon, Robert. “Towards a radical revision of the notion of culture,” Das Kalpana, Intercultural Institute of Montreal, 1994.

²⁷ Navajo Nation Code Annotated: Titles 1 to 5 (2005) Chapter 2, pg. 14-24.

power plant. But the drafters of the DEIS acknowledge this special and contrasting (compared against the US-mainstream) consideration in “American Indian” ontology. Citing Stuart Harris and Barbara Harper in “Environmental Justice in Indian Country...” the DEIS claims in *Chapter 3—Affected Environment* that “[that chapter] also includes information that illuminates the complex interweaving of culture and natural resources, or ‘the unbreakable relation between Native American people and their homeland.’”²⁸ Despite this recognition, the authors of this DEIS neglected to take into consideration Navajo notions of environment and sidestepped this fundamental consideration of the proposed project.

Viewed through the prism of the FLD, the DEIS is in violation of Navajo fundamental law and, consequently, alternative forms of mitigations must be suggested. Some of the most egregious offenses to the FLD are the foreseen environmental ramifications (ergo cultural impacts) that the construction and operation of the Desert Rock power plant will have on the people, land and animals of the nearby and surrounding area. What’s more, from the perspective of Navajo culture and codified in the FLD, impacts of the project should be weighed cumulatively and not compared relatively against existing like projects or environmental (in physical terms) conditions. Meaning, what the Desert Rock power plant will contribute/detract from the culture should be emphasized over its relative improvement in design and costs compared with long-standing similar power plants in the area.

The best example of this reverse logic is found in *Chapter 5—Cumulative Impacts, Unavoidable Adverse Effects, and Irreversible and Irrecoverable Commitment of Resources*, page 21 (5.1.4.2), under the heading “Cumulative Biological Impacts.” Here the report soberly claims:

Development [and continuation] of [area energy] projects²⁹...have resulted and probably would continue to result in the loss and alternation of wildlife habitat, including fragmentation; intentional and unintentional harassment of wildlife; invasion of non-native vegetation; intentional and unintentional mortalities of wildlife from exposure to contaminants, depletion of water resources, collisions with vehicles, increases in legal or illegal harvests of game and non-game species, electrocution/collisions with overhead electrical transmission lines; increases in air and water pollution that directly or indirectly effect plants and animals...³⁰

But, in Section 205, “*Nahasdzaan doo Yadihlil Bits’ aadeee’ Beehaz’aanii*—Dine Natural Law,” the FLD mandates that the Navajo “respect, honor and protect” the “four sacred elements of life:” air, light/fire water and earth/pollen. More to point, Navajos have “sacred obligation and duty to respect, preserve and protect all that was provided for [them, and who] were designated as the steward for these relatives...” and “...the use of land, natural resources, sacred sites and other living beings must be mitigated with proper protocols of respect and offering and these practices must be protected and preserved for they are the foundation of [Navajo] spiritual ceremonies and the Dine life way”³¹ The DEIS, though, makes no mention of the above considerations throughout the entire report.

Rather, the report immediately attenuates these breaches in Navajo Nation law, claiming that “the degree and magnitude of wildlife impacts that could be additive as a result of developing the

²⁸ Desert Rock, Chapter 3, pg.127.

²⁹ Including the proposed Desert Rock power plant, alongside the two other power plants in the Farmington, NM area.

³⁰ Desert Rock, Chapter 5, pg.21.

³¹ Navajo Nation Code, Chapter 2, pg.22.

proposed actions is generally considered a minor cumulative effect.”³² “By who?” The criteria used to judge “cumulative [environmental] effect” is different from that used by the Navajo people and its government in concluding the severity of such impacts. Whereas the report judges Desert Rock’s contribution to overall ecological strain as “minor” relative to existing projects. This can’t serve as a justification for constructing and operating Desert Rock as this report suggests. According to the FLD and given the above prediction on environmental consequences, two different conclusions about environmental effects can be reached: 1) the overall ecology of this section of the Navajo Nation is out-of-balance and must be mitigated and/or ameliorated³³ and 2) the power plant’s minor contribution to a situation that is wrong doesn’t serve as a sufficient justification for its completion. The status quo is inadequate and needs to be redressed.³⁴ But the DEIS simply skips over this consideration and concludes that additional strain to the environment is minor compared to existing like projects and doesn’t need to mitigate these specific imbalances.

Another example of this mode of thought is found in *Chapter 4—Environmental Consequences*, when the report summarizes the project’s impact on “air quality.” (4.1.3) Here, the authors of the report claim:

The Alternative B plant would employ highly efficient super-critical boiler technology, which generates approximately 20 percent less air pollutant emissions per unit of electricity produced, compared to the sub-critical boiler technology proposed under Alternative C.³⁵

Assuming this statement is true, the emphasis of the report’s authors is on the efficiency of either power plants in terms of generating pollutants rather than clearly articulating the aggregate emissions each proposed plant design is predicted to create and comparing these directly with each other (i.e., cumulative impact vs. relative efficiency). In fact the report goes on to claim that, “the ambient air quality impacts of these alternatives would be similar”³⁶ in scope. But the projected carbon dioxide emissions for “Alternative B” are nearly three times as great as that of “Alternative C,” and Hazardous Air Pollutants (HAP), as defined by the EPA, are expected to be over twice as great for mining operations that contribute to Alternative B than to Alternative C. Such misleading statements give readers the impression that there are no differences in terms of ecological impact between the two proposed power plant designs. And if this is true, then there is a severe lack of “Alternatives” offered in the DEIS, a topic we will address later.

Of the 23 sentences that make up this brief section of the DEIS, only five (22 percent) make it clear for the reader that Alternative C would result in overall less pollution emissions than Alternative B. Conversely, the first six sentences (including bullet-points) explain the superior technology of Alternative B over Alternative C. The following paragraph then claims emissions during construction of either plant are virtually identical, and only in the second to last paragraph of this section does the report finally explain the actual difference between Alternative B and

³² Desert Rock, Chapter 5, pg.21.

³³ See Navajo Nation Code, Chapter 2, pg. 14-24; specifically Section 205 in which the Navajo must use “land, natural resources, sacred sites,” etc., only “through the proper protocol of respect and offering.”

³⁴ Additionally Navajo Nation Environmental Policy Act (Title 4, Chapter 9) states: “...the Navajo Nation Council declares that the protection, restoration, and preservation of the environment is a central component of the philosophy of the Navajo Nation...” and that “The Navajo Nation shall employ its governmental authority...[t]o ensure that activities within the Navajo Nation that may substantially disturb the environment are conducted in a manner to minimize such disturbances to the extent feasible and practicable.” pg., 486-487.

³⁵ Desert Rock, Chapter 4, pg.27.

³⁶ Ibid.

Alternative C in terms of total emissions. But even then, in the most succinct acknowledgment of Alternative C's less overall polluting capability, the authors flank the main point of this one sentence with two undermining statements against Alternative C. "Alternative C would have lower efficiency and higher emissions per unit of power produced, but would have lower overall lower [*sic*] emissions because of the smaller size of the unit."³⁷

Additionally, in the DEIS's final section on air quality, the author's of the report summarize Alternative C's "air quality impact," as:

...less efficient than the Alternative B plant, resulting in higher emissions per unit of output energy. However, the Alternative C facility is approximately one-third the size of the Alternative B facility, which would result in lower overall emissions.³⁸

Again, this statement is cumbersome and misleading. The logic used is reversed (with efficiency taking primacy over cumulative impact) and, therefore, unacceptable for the general Navajo public. The Navajo notion of environmental impact weighs more on overall aggregate impact rather than relative emissions efficiency as is stressed in the aforementioned excerpt. Ecological damage considered in conjunction and not separate from existing environmental conditions are of primary importance in Navajo thinking. In this respect Navajo analysis is multi-dimensional and anticipates environmental strain occurring on an existing environment and not in the void realm of the abstract, territory through which this report often drifts.

Using the report's limited index as a guide, the DEIS addresses "Air Quality" in three chapters and five sections. In section 3.1.3, titled "Air Quality," the report's authors establish the criteria by which characterization of air quality will be judged, including "The National Ambient Air Quality Standards" (NAAQS).³⁹ To the report's credit, the DEIS in this particular section is clear in establishing the context in which this plant would be constructed. (But still, we advocate for it to include this consideration in summation and analysis throughout the entire report.) In this section of the report, the authors list all polluting power generating facilities in the area and how much pollutants each of these currently emit. Similarly, in *Chapter 4—Environmental Consequences*, the report's authors are straightforward in their methods of assessment. In Section 4.1.2.2.4, on "Class II Impacts," the reports states:

In conclusion, the potential effects on air quality due to emissions from the proposed Desert Rock Energy Facility, in conjunction with nearby area source emissions, are expected to result in predicted concentrations in Class II areas that are in compliance with PSD and NAAQS standards.⁴⁰

Although these first two sections address the context in which the proposed power plant would be constructed, there still remains problems with the criteria with which the report's author judge these projected effects. (Again, contextualization that includes cumulative impacts is limited throughout the entire report, unacceptable for Navajo methods of analysis.) The main problem with the report at this point is its consideration of PSD and NAAQS standards as the *only* base criteria for judging the "potential effects on air quality" of the proposed power plant. The authors, consistent with DEIS reports in general, take a cost/benefit mode of analysis in deducing

³⁷ Ibid, pg.,28.

³⁸ Ibid, Chapter 5, pg.11.

³⁹ Ibid, Chapter 3, pg.6.

⁴⁰ Ibid, Chapter 4, pg.17.

acceptable environmental impact, especially in consideration of effects on air quality.⁴¹ Taken from a whole, the report's authors segregate air quality from environment and then apply criteria specific to this limited category in reasoning "potential effects." For the Navajo, impacts on air quality are inseparable from environmental health and spiritual well-being.⁴² Therefore, specific metrics that would include measures for these categories is needed in order to suffice Navajo notions of environment. Meaning, beyond the announcement of chemicals that would be released into the atmosphere with operation of this power plant, consideration of effects should include: 1) conjunct accumulation of chemicals released in the air that in turn 2) depreciates existing life systems in the area and would 3) hamper the spiritual/cultural well-being of Navajo people according to their well-documented concepts of environmental quality.

A good example of this inappropriate categorization is the report's analysis on "potential impacts on human health."⁴³ In this, the third section of the DEIS that addresses impacts on air quality, the report's authors list all harmful pollutants that would be emitted with construction and operation of the proposed plants. Clearly and succinctly, this section of the report documents the potential impacts of each listed toxin on the functioning of the human body. But what the report fails to consider here is the impact these chemicals, in aggregate, would have on the emotional/psychological well-being of citizens of the Navajo Nation, even beyond the proposed impact area. Meaning, construction of the power plant would detract from the natural environment beyond aesthetics. But in terms of the planet's health, such environmental degradation would reflect poorly on the Navajo Nation and its citizenry's ability to maintain stewardship over land that, in spiritual terms, is sacrosanct vis-a-vis US conceptions of land and environment which are often limited to use/value.

A good example of where conflict could arise in the reports perception of environment (both in terms of physical environment and human perceptions of it) is found in its matter-of-fact consideration of asthma conditions in the area. In Section 4.13.3 "Summary of Impact Analysis," the authors of the report claim "Nearby communities of the proposed plant do not appear to have greater susceptibility to asthma than the greater population."⁴⁴ This statement is highly suspect, as American Indians nationally have reported higher instances of asthma.⁴⁵ Navajo's in particular have demonstrated hesitancy in taking prescriptive medications for asthma correctly and adequately—relying on signs of physical ailments as primary indicators of illness.⁴⁶ But such difference in the Navajo perception of health and medicine is neglected in this section of the report and, therefore, the report's authors conclude, "In particular, cumulative concentrations of particulates [including asthma inducing pollutants] are not expected to result in adverse health affects for the nearby communities of the proposed plant..."⁴⁷

In some sections of the DEIS, the report's authors demonstrate creativity in mitigating the effects of increased pollutants in the area, and state "The cumulative cancer risk of 2×10^{-4} is greater

⁴¹ See William H. Rodgers, Jr., *Environmental Law in Indian Country: Volume 1, Sections 1:1 to 1:28* (2005) pg. 378

⁴² See Navajo Nation Code, Chapter 2, pg. 22. Here "Dine Natural Law" requires that "life, air, light/fire, water and earth/pollen... must be respected." Stating the importance of "these laws," the FLD states that "these laws provide sanctuary for the Dine life and culture... and the balance [the Navajo] maintain with the natural world," pg. 18.

⁴³ Desert Rock, Chapter 4, pg.10.

⁴⁴ Ibid, pg.203.

⁴⁵ American Lung Association, "Asthma and American Indian/Alaskan Natives,"

<http://www.lungusa.org/site/pp.asp?c=dvLUK9O0E&b=312838> Last accessed: 8/15/07

⁴⁶ Ibid; David Van Sickle and Anne L. Wright, "Navajo Perceptions of Asthma and Asthma Medications: Clinical Implications," *Pediatrics*, 2001.

<http://www.pediatrics.org/cgi/content/full/108/1/e11> Last accessed: 8/15/07.

⁴⁷ Desert Rock, Chapter 4, pg.203.

than USEPA's acceptable risk range of 10-6 to 10-4; however, nearly all of that risk is due to existing concentrations of arsenic in soil and native vegetation and the contribution of arsenic from the operation of the facility would be slight."⁴⁸ In the spirit of the Foundation of the Diné, a holistic and, therefore, cumulative assessment on the health of the environment is primary for impact analysis. It is of secondary importance whether or not much of the unacceptable levels of arsenic in the area are found naturally in the soil. If the project contributes enough arsenic to cause a concern for the health of residents in the area, then such an operation might be unallowable according to the FLD. But the report continues along its trek of fully elucidating the dangers of living in the area and consuming (for dietary and/or ceremonial needs) the local vegetation:

The majority of the noncancer hazard for mercury is driven by the ingestion of wheat and the ingestion of native/wild plants through ceremonial and medicinal uses pathways, while for arsenic, the ingestion of ceremonial and medicinal plants is the largest contributor of non-cancer health hazards.⁴⁹

This means that under the foreseen conditions for residents living near the proposed power plant, traditional ceremonies in particular would become more hazardous. This direct effect on a people's ability to practice their traditions shouldn't be tolerated by the Navajo Nation government, the Navajo people and the Bureau of Indian Affairs that assumes "trust responsibility" over American Indian people. Given this revelation, the main concern for decision makers should be offsetting and ameliorating some of these harmful, existing health conditions.

The report then claims that the plant's operation, after 50 years of operation, would be "insignificant" to the cumulative cancer risk of the population in the immediate vicinity. In the spirit of the Foundation of the Diné, the plant's reported slight contribution to the noxious toxins found in arsenic concentrations is significant for careful consideration.⁵⁰ The FLD stresses that Diné "life and culture" is "balanc[ed]" on its "relationship with the natural world."⁵¹ For example, in the US, basic guarantees of individual freedom are sacred and any encroachment, even seemingly slight and insignificant for the majority of the population, threatens the very foundation of the US political experience. Similarly, seemingly small impinges on the Navajo people's relationship with the natural world (and their ability to conduct traditional ceremonies) is serious and needs greater weight (if not simple acknowledgement) in the summary/analysis process of this report.

Finally, in the last significant chapter of the EIS, *Chapter 5—Cumulative Impacts, Unavoidable and Irreversible and Irrecoverable Commitment of Resources*, the DEIS considers impacts on air quality in a more comprehensive manner, while at the same time stressing what the authors perceive as the minimal impact of an additional power plant in the area. Conclusively, the authors state:

...the criteria pollutant emissions associated with Alternative B would be substantially lower than six other existing coal-fired power plants in northeast Arizona and northwest New Mexico. This reflects the superior boiler design and pollution control technology proposed for the proposed project, compared to the older technology comprising the other plants, which were built from the late 1950s to the early 1980s. This also serves to

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Ibid, pg.204.

⁵¹ Navajo Nation Code, Chapter 2, pg. 22.

forecast a national trend, in that older coal-fired power plants will eventually be replaced with higher efficiency, lower polluting facilities.⁵²

In accordance with the FLD, there are several problematic statements with the above paragraph. First, the emphasis in the paragraph, like that of this section, is on the “superior boiler design” of the proposed power plants (especially for the favored Alternative B version), with only favorable mention of the cumulative impact on the air quality of an already heavily polluted region. In this section, the report first addresses “Air Quality Trends in San Juan Basin,” a necessary preliminary step in understanding the potential impact of the Desert Rock power plant in the region. Citing the Farmington, NM-based *Daily Times*, the report finds that retrofitting of the San Juan Generating Station “is expected to significantly reduce emissions of four different pollutants—mercury, nitrogen oxide, sulfur dioxide and fine particulates—from its four coal burning units.”

The author’s then provide a graph or anticipated Sulfur Dioxide emissions that shows significant reductions from the San Juan Generating Station for 2010 (despite the fact that emissions from this plant increased from years 2003 to 2004.) The logic? That with the reduction in pollutants from regional power plants, Desert Rock would at worst maintain the status quo in terms of pollutants. This is unacceptable according to the spirit of the FLD. In addition, according to the Navajo Nation Air Pollution Prevention and Control Act, “It is the policy of this Nation that no further significant degradation of the air in the Navajo Nation shall be tolerated, and that economic growth will occur in a manner consistent with the preservation of existing clean air resources.”⁵³ Though these laws go on to claim that compliance with Navajo Nation EPA standards, the spirit of the act is to prevent further degradation of Diné life systems. The proposed Desert Rock power plant will add significant amounts of pollutants into the atmosphere in a region already far too exposed to these dangerous chemicals.

In conclusion, construction and operation of the Desert Rock power plant would violate fundamental laws of the Dine, termed “The Foundation of the Diné, Diné Law and Diné Government” (FLD). These laws are designed to steer Navajo government official into more traditional modes of decision-making and to make policy that is more flesh with the living culture of their people. Navajo modes-of-analysis are not stagnant and historic. Rather, they are ubiquitous in the Navajo people, in both the elderly and the youth, both urban and rural. Environmental Impact Statements consider Federal environmental regulatory acts when determining impacts or effects of a proposed project. These criteria are supposed to be universal in application, from Federal land holdings to state, county and municipal governments. But for Indian tribes, who have an historic, traumatic and unique relationship with the Federal government, who are continually striving for greater sovereignty while under the tutelage of the US government, a radically different approach is needed. The drafters of these statements need to take into better account the rules and regulations that govern the people whom are intended to benefit from the research and publication of these reports.

In the case of the Navajo Nation and the Navajo people, who are obliged by the FLD to be stewards of the land and remain in-balance with the natural elements—for it is their sacred obligation to do so; such simple, dichotomized cost/benefit evaluations are not acceptable. With the multi-dimensional Navajo method-of-analysis, such formulaic reports are not acceptable. We offer these suggestions so that the authors of this EIS might take into account more relevant regulatory criteria by which to deduce potential environmental, social and, ultimately, cultural impacts of this and other projects.

⁵² Desert Rock, Chapter 5, pg.11.

⁵³ Navajo Nation Code, Title 4 Section 1102 “Declaration of Policy,” pg. 500.

Re-considering Alternatives

The criteria for evaluating alternatives appear to implicitly (sometimes explicitly) support the project. The fundamental criteria used were:

1. “The technical feasibility of constructing and operating the proposed project and acquiring the necessary rights-of-way.”
2. “Cost feasibility, including environmental costs relations to the potential impacts and potential mitigation and constructions costs.”
3. “The ability to acquire all regulatory permits.”
4. “The ability to meet the purpose and need, including providing sufficient electric power reliability for southwestern utilities and the use of Navajo coal for economic development.”⁵⁴

These criteria and their use are problematic. These criteria favorably address the project. Thus calling into question the independency of the preparers of the DEIS. If one places technical feasibility of constructing the proposed project, how can other projects be considered? How can other alternatives such as a combination of the proposed project with a sunset clause and alternative energy be considered? These criteria are problematic in that they implicitly favor the proposed project and do not allow consideration of other alternatives. Each of these criterion listed as fundamental have only two options: either build the proposed project or not. These criteria do not accommodate other options, such as the one previously mentioned.

Furthermore, the other ancillary criterion shown in Table 2-5 which includes, avoids environmental impacts, reflects public and agency input, cost effectiveness, and carried forward based on input from Navajo Nation are also questionable for the same reasons mentioned above. In addition, in these ancillary criteria, the people’s voice occupies only one criterion, while the voice of the developer (i.e., the Navajo Nation, Diné Power Authority and Sithe Global) is implicitly included in certainly five of the seven criteria mentioned in the table. Thus, the people’s voice must be weighed against, five criteria that favor the proposed project.

With the criteria selected, only two alternatives emerged. These alternatives are insufficient and do not adequately reflect the attitudes of the people who make up the Navajo Nation. Therefore, this commentary requests that different alternatives that are more neutral to the project be employed in a supplemental EIS. Such criteria can be derived from the fundamental laws of the Diné, which does not automatically discard the proposed project, but such criteria would more accurately reflect the values, broadly held by the Navajo people and comport with their spiritual connections to all creation. Such an action would also be lawful under Navajo law.

The selection of these criteria draws attention to the impoverished nature of the decision-making process, when that process directly affects the Navajo Nation, its citizenry, and surrounding polities for many generations to come.

⁵⁴ Desert Rock, Chapter 2, pg. 25.

Conclusion

The DEIS has many shortcomings when viewed in light of the fundamental values of the Diné. The main shortcoming stems from the narrow definition of the environment and its disassociation from culture. Despite precedence of this practice and despite the institutional momentum of compartmentalizing culture and environment when conducting an EIS, the preparers of the DEIS should have considered the *full* impact of the proposed Desert Rock power plant on tribal members. The first consideration of the DEIS should have been compliance with the fundamental laws of the Diné. These laws lay the foundation for all laws of the Navajo Nation. Further, the intent of these laws was to bring the Navajo Nation back into balance with the natural world and the world beyond the sacred mountains. As such, the DEIS failed to consider the impact of the proposed power project on the Navajo people via the fundamental laws.

Because of this blatant deficiency, the DEIS fell short in its analysis of the air, water, land, animals and plants. While the analysis is legitimate for the external world, beyond the sacred mountains, it is insufficient for the Navajo Nation. Not taking into consideration the Navajo perspective results in shortcomings in this report, leading to inaccurate and weak descriptions of culture, environment, relations to the land and forecasted economic impact. This lack of utilization of the fundamental laws leads to biased alternatives.

It was found within this analysis, that the selection of alternatives was based-on the intents of the Desert Rock power plant developers. This selection process did not consider criteria in its evaluation of alternatives that comport with the fundamental laws. As such the alternatives were biased toward the developer and therefore insufficient.

In summation, the notions of culture, environment and human environment that were employed in this report were not properly defined in light of the fundamental values of the Diné. As a result, a full consideration of impacts on tribal members could not be reached. The spiritual connotations of air, water, light and life were not addressed. These components are a paramount concern for many Navajo.

As such we recommend that the supplemental EIS explicitly consider spiritual underpinnings of Navajo thinking. In addition, we recommend that the supplemental EIS include a different set of criteria for evaluating the alternatives that are derived (substantially) from the fundamental laws of the Diné, and that a more holistic notion of the environment should be employed as well. We appreciate this opportunity to review and submit comments on the DEIS and look forward to our recommendations being included into the supplemental EIS.

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