



Tribal Planning in the Face Environmental Injustice

Issues of Natural Resource Extraction on Tribal Lands

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Energy resources like coal, oil, and uranium are found on many Native American reservations across North America. Historically, tribal communities have had little to no control over their extraction or production but have suffered from associated economic decline, environmental degradation, health problems, and loss of cultural heritage. This article explores the various impacts as well as some creative solutions that tribes are using to regain autonomy over their land and the resources available to them. Tribal planning is a growing field that should take into account the cultural impacts of different kinds of development on tribal communities. City market test the applicability of Granapati's analysis to different markets. Finally, common threads supporting successful cooperative housing markets are highlighted.

Native American sovereignty has been closely tied to and even reliant on the United States government for centuries, which has led to disproportionate control over many native communities in favor of non-native interests. Continued federal oversight of activities like energy resource management and economic development leaves tribes with little control over job availability, financing, or decision-making. Energy resources are found on many tribal lands, particularly in the northern plains and Southwest. In most cases,

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federal and private interests govern extraction and production of those resources, reaping the economic benefits. The result has been detrimental to the economic, environmental, and social condition of tribal communities.

Through a combination of federal reform and ambitious endeavors by tribes and coalitions, indigenous communities are beginning to take control of resource management and, in turn, economic development. In order to take full advantage of the opportunities provided by this new autonomy, tribal leadership needs to promote strategic and creative initiatives. This article explores the history of tribal resource management in order to understand and assess current initiatives that tribal governments and businesses are undertaking.

History of Tribal Resource Extraction

Management of energy industries on tribal lands is deeply rooted in a history of exploitation, going back to early interactions between tribes and the US government. Since the discovery of the Americas, colonizers and the US government have continuously pushed native peoples out of their homelands and prevented them from maintaining traditional land management practices. Around the end of the 19th century, the US Congress mandated the creation of reservations for Native American tribes, forcing native people to follow Western

approaches to land ownership and management. Reservations were often isolated from non-native communities and ill suited for traditional agriculture. One historian points out,

That a number of reservations have a wealth of mineral resources today is not without a certain irony, because originally it was the intention of the responsible authorities to leave American Indians only isolated areas which contained no mineral resources. (Frantz, 1999, p. 192)
Reservations were established in isolated and desolate areas that most likely could not otherwise profit the government or other non-Indian entities. Later, when resources like coal, oil, and uranium became valuable for energy production, the federal government realized the energy value present on previously established reservations. In fact, tribal lands account for 3 to 10% of US oil reserves, 10 to 30% of US coal reserves, and at least half of all US uranium reserves (Frantz, 1999, p. 189).

Impacts

As these resources have become increasingly valuable and sought after, mineral extraction and production has become mired in a cycle of declining autonomy among tribal communities, contributing to economic, environmental, and cultural problems. The most direct impacts are economic and ecological, as a lack of autonomy means that people living on reservations gain few economic benefits from the industry. Meanwhile, the activity often destroys land and contributes to health problems for nearby communities. Indirectly, this system also contributes to declining social cohesion and cultural assets, which further contribute to difficulties maintaining autonomy.

Economic

Management of energy resources on tribal lands has important direct and indirect economic consequences. Not surprisingly, given the historical treatment of native people, tribes still have little control over how their land and its resources are managed. The Bureau of Indian Affairs (BIA), a federal agency that supervises tribes, was put in charge of managing tribal resources. Through this agency, non-native companies began to lease reservation land containing resources in the early 20th century. To further deprive tribes of the possible benefits of these resources, the 1938 Indian Tribal Mineral Leasing Act did not allow tribes to conduct their own extraction (Frantz, 1999, p. 195).

The BIA, without tribal input, continues to negotiate all leases and payments between companies and tribes (Frantz, 1999, p. 194). The lack of tribal involvement in managing these resources also contributes to a lack of job opportunities on tribal lands (Frantz, 1999). The unemployment rate on reservations averages 43% (BIA, 2006), far exceeding the national average, and a number of tribes have far higher unemployment rates. For people living on reservations, the economic situation fosters poverty and dependence on whatever economic opportunities come along.

A 1992 amendment of the Indian Tribal Mineral Leasing Act gave tribes the legal right to conduct their own extraction, but “reservations that intended to start the independent development of their mineral resources have failed...because of a lack of capital and expertise” (Frantz, 1999, p. 203). A long history of government control

Surface mining, a common practice on coal-rich reservations in the Southwest and upper Midwest, quickly destroys the land. As one study notes,

The direct impacts of mining disturbance to land surfaces are usually severe with the destruction of natural ecosystems, either through the removal of all previous soils, plants, and animals or their burial beneath waste disposal facilities. (Cooke & Johnson, 2002, p. 43)

Once those lands have been destroyed, it is difficult to restore them. For example, reclamation efforts have had limited success in Montana, where only 735 of the 62,000 acres leased to coal mining “have been fully ‘reclaimed’ and released” (LaDuke, 2007, p. 1). Many coal companies claim that they have the technology and intention to fully reclaim the land they destroy, but most have yet to follow through on those promises. Meanwhile, mining continues to destroy natural ecosystems and habitats.

Mining has many other environmental impacts, such as the water use and pollution associated with extraction. This is particularly dangerous in the arid Southwest, where water is already scarce. One 500-megawatt coal-powered plant uses 2.2 billion gallons of water every year (UCS, 2005). The Four Corners power plant on the Navajo reservation in northern New Mexico generates over 2,000-megawatts each year (EPA, 2006), utilizing 8.8 billion gallons of clean water that it releases back into the environment full of chemicals and heavy metals.

On arid reservations, the use of this water is detrimental not only to the ecosystems near the mines, but also to tribal people who need water to live. Peabody’s “coal slurry pipeline swallowed more than a billion gallons of water a year, so much that the Hopis’ sacred springs, which have nourished them for at least a thousand years, began to dry up” (Grinde & Johansen, 1995, 141). Meanwhile, proposed in-situ leach (ISL) mining near Churchrock, New Mexico, would use comparable amounts of water contaminated by dangerous chemicals, which would then return to the aquifer. Proponents of ISL claim that the water is treated and brought back to pre-mining standards, but, according to one environmental lawyer, “there has never been an instance where a commercial ISL operation has restored groundwater to its pre-mining condition” (ENS, 2008). Such water abuse destroys fragile desert ecosystems as well as native peoples’ access to clean water.

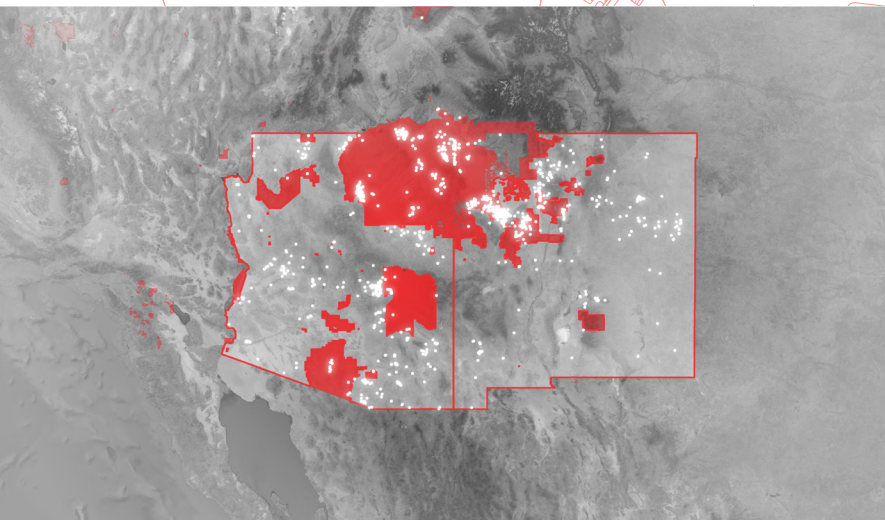


Fig. 4.1. Uranium Extraction and Processing Facilities (white), and Federal Reservation Lands (red)

of mineral resources and extraction fostered tribal dependence on both the US government and non-native companies that still exists, despite initiatives to do away with the legal framework that supported this relationship. This illustrates what has been described as “another not-so-subtle form of colonialism that began with the Spanish incursions and has never ceased” (Grinde & Johansen, 1995, p. 141). The US government has continuously taken steps to reduce the gains for tribes, while maximizing gains to non-native entities, thus maintaining their dominance.

Environmental

Beyond contributing to struggling economies, extracting and processing energy resources can cause devastating ecological damage.

Public Health

Damage to the environment on reservations contributes to declining health among tribal communities. Exposure to harmful chemicals associated with extracting and processing energy resources can lead to cancers and respiratory problems (Frantz, 1999). Beyond the direct impact on peoples' health, loss of productive land and clean water makes it difficult for native people to practice traditional agriculture, and therefore difficult to feed themselves. For many traditional communities, the "survival of a people is tied to survival of the land," and destruction of that land means destruction of the people (Grinde & Johansen, 1999, p. 122). The Navajo, for instance, are sheepherders—using wool for clothing and blankets and sheep for food. As Navajo grazing land was converted to mines and power plants, people lost the ability to raise sheep as they once had. This loss led to increased dependence on small general stores on reservations that sell unhealthy, incomplete, and non-traditional foods.

Social Cohesion and Autonomy

In aggregate, these factors diminish social cohesion and autonomy among tribal people. When tribes do not have control over the activity on their land and cannot benefit economically from such activity, they suffer an important loss of self-determination and autonomy. When people are displaced from their

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land—either directly, when mining operations push them out, or indirectly, when they are forced to seek economic opportunity off of their reservations—they lose cultural connections to family and tribe, as well as their ability to support their tribe and community. While these impacts are not as direct or quantifiable as job loss or destruction of natural resources, tribes

suffer the consequences of decreased social and political cohesion as indigenous people lose their traditional practices and leave reservations.

In Search of Autonomy

Tribes have been legally able to extract and produce their own energy resources for over 20 years, but it was not until the last decade that they have received significant technical and financial support to pursue these activities in a meaningful way. As they begin to take over energy extraction, tribes are faced with an opportunity to radically change the types of resources that they exploit to better represent tribal values. They have also begun to reap benefits that allow them to improve economic, environmental, and social conditions on reservations.

Title V of the Energy Policy Act of 2005 permits tribes to negotiate Tribal Energy Resource Agreements (TERAs) with energy companies and provides funds to help tribes that lack the capital for resource extraction (Miles, 2006; 25 USC, 3502). This act allows tribes more freedom to manage their land "without the oversight or approval of the federal government" (Miles, 2006, p. 469) and to gain economic independence. Laguna Pueblo in New Mexico is one example of a tribe that has taken advantage of this support. The tribe runs a facility that processes 50,000 gallons of tansmix fuel per day, which is sold in gas stations owned by the tribe's community development corporation (LDC, n.d.). Control over energy resources is a step in the right direction for tribal sovereignty and economic independence, but it does not address the environmental or cultural problems associated with traditional energy production. Reclaiming tribal sovereignty must include ways for tribes to sustain themselves without destroying their land and cultural heritage. Renewable energy production is one approach that has gained popularity in recent decades. While it is important to recognize that each tribe has a different history and set of values, clean energy is seen to be in harmony with "Native Americans' respect for the environment and their concern for future generations" (Council et al., 2000).

As tribes explore opportunities to pursue renewable energy resources, they will make many decisions about how to approach and plan for the process. Cornell and Kalt (2003) identified four economic development models for tribes applicable to energy production and other forms of economic development: federal control, tribal enterprise, private "(micro)

enterprise" with tribal member ownership, and private enterprise with nontribal membership control. Federal control is the only choice that most tribes have had historically, and it implies the least amount of self-determination. Private enterprise with nontribal membership control would manifest as TERAs, where tribal governments attract non-tribal energy producers to set up infrastructure on tribal land.

Tribal enterprises and private enterprises owned by tribal members are the options that provide the most autonomy to tribes, provided they can access the initial necessary funding and expertise. The US Department of Energy has a Tribal Energy Program, a valuable resource for tribes and native-owned businesses seeking this type of enterprise. The program has been providing financial and technical assistance to tribes for planning, feasibility studies, deployment, and development of renewable energy production on tribal lands since 1994. Between 2002 and 2012, the program "awarded a total of \$41.8 million to fund 175 tribal energy projects," with a significant portion of projects funded from 2010 to 2012 (OEERE, 2014).

Most of the projects the Tribal Energy Program funds fall into its the Planning and Feasibility categories (OEERE, 2014). Assessing feasibility and conducting planning processes are critical steps for tribes taking on their own energy production. Many tribal communities lack the expertise to manage such operations, which is part of the reason that non-native companies have prevailed on reservations. Funding and support for strategic planning and feasibility studies allows tribes to analyze the needs of their community, as well as to identify the opportunities for resource production and economic development. For example, the Pueblo of Laguna Utility Authority received feasibility funds in 2005. Its study explored possible projects whose goals would be "to improve quality and reliability of electric service on the reservation, work to promote energy self-sufficiency, encourage economic development, as well as to contribute to environmentally clean energy" (Stewart, 2008, p. 1). The study looked at a number of possible solar power production projects on the reservation scale and at a project that would provide power for New Mexico utility companies to help them "meet their renewable energy requirements" (Stewart, 2008, p.4). These projects would benefit the tribal economy by making electricity more affordable and creating jobs for people in the community, while also producing energy in a sustainable way.

Laguna Pueblo's feasibility plans also include capacity building and community education and outreach elements, which were found to "ultimately provide the greatest sustainable value to Laguna" (Stewart, 2008, p. 4). One important outcome of these programs was an internship position filled by someone within the tribe who acted as a champion for the project and helped ensure that the initiatives were based on local knowledge. Throughout the feasibility study, they also identified ways to educate and reach out to their community, so that the project would gain buy-in and the community would feel represented. These elements helped the tribe prepare for energy

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production projects that were ultimately more effective and sustainable for the community. The Tribal Energy Program is not the only resource for tribes to develop their own energy development programs; some tribes and native-owned companies take a more traditional business approach to the problem. In addition to using Tribal Energy Program funds, Laguna Pueblo also has a development corporation that oversees multiple economic development projects, including energy production.

Sacred Power Corporation, based in Albuquerque, New Mexico, is another example of a successful indigenous-owned enterprise. The company does not represent a specific tribe but is "the largest Native American owned and operated renewable energy systems integration and manufacturing firm in the US" (Sacred Power, 2014). Sacred Power is "committed to the development of local pueblo economies and energy independence while providing jobs in a rapidly evolving industry" (Sacred Power, 2014). The company's leadership is composed of experienced businessmen and engineers who have built the company from the ground up. They work with tribal governments, non-native businesses and individuals, and government agencies to promote renewable energy. Although the corporation does not directly support a specific tribe and is a private company, it does work closely with tribes to help bring electricity and solar water heating to native communities that have no access to electricity (Sacred Power, 2014).

Other tribes and native communities can follow and have followed these methods to pursue economic development through renewable energy production. In developing plans and projects, though, they must understand and work with the ecology and available resources in their vicinity. While the desert Southwest is ideal for solar energy production, tribes in other areas are taking advantage of technologies like biomass, geothermal, hydropower, and wind, as well as projects that increase energy efficiency. In Montana, where the Northern Cheyenne have been fighting coal companies that want to open mines on tribal land, conditions are ripe for both wind and biofuel energy production. Activists like Winona LaDuke, an Anishinabe activist from Minnesota, stress that renewable energy production on reservations would be highly beneficial (La Duke, 2007, p. 3).

Planning approaches like those supported by the Tribal Energy Program help tribes identify the most appropriate technologies and approaches for their context. It also helps them develop plans to integrate economic development to support their communities and maintain their culture and heritage for more long-term solutions.

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Conclusion

Ambitious projects to alter the way energy resources are managed on reservation land introduce a new form of autonomy to tribal communities, who have long been denied the ability and the right to provide for their people. Aided by federal reforms and investment, tribal communities are exploring renewable energy resources, while also promoting development that improves the economic, environmental, and social conditions on reservations. Tribal energy production powers homes that have never experienced electricity and opens the doors for new development and investment in nearly abandoned communities. In turn, this creates a critical need for planning to maximize the benefit to tribal members. By approaching both resource management and related economic development thoughtfully and creatively, tribal leaders can successfully develop solar arrays and wind farms that benefit their communities directly and indirectly. For tribes, planning is a critical element to improving conditions on reservations in a manner that is harmonious with their culture and addresses the harms done to their communities over centuries of non-native imposition and control. ■

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