

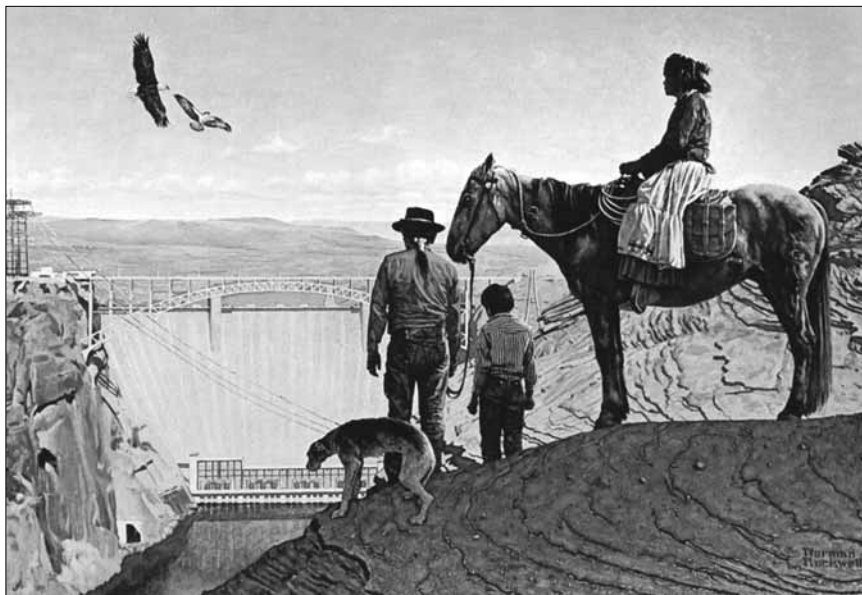
# Indians & Energy

## 1

### Introduction

**Sherry L. Smith and Brian Frehner**

In 1969 the Bureau of Reclamation commissioned artist Norman Rockwell to produce a painting commemorating the completion of Glen Canyon Dam. Located just south of the Utah/Arizona border, the dam is a central feature of the Colorado River Storage Project. Its waters generate electricity and irrigate the desert Southwest, and its structure provides flood control. Glen Canyon Dam sits on the Navajo reservation, but its proponents were, and its primary beneficiaries remain, non-Indian people. Upon visiting the site with Bureau of Reclamation employees, Rockwell, best known for sentimental images of Anglo-Americans that appeared on the cover of *The Saturday Evening Post*, announced that he painted people, not objects. A painting of the dam alone would be nothing more than “a mechanical drawing.” Scrambling to provide the human element, W. L. Rusho, Regional Public Affairs officer for the federal agency, asked a local Navajo family to pose for the artist. They are the figures in the foreground of the final canvas, looking down at the colossal dam and its power lines (figure 1.1). Rockwell’s wife photographed the family in various poses outside their home, and the artist, working in his Stockbridge, Massachusetts, studio, later superimposed them onto the scene. In the process, Rockwell created an arresting image of Native Americans and energy.<sup>1</sup>



**Figure 1.1**

*Norman Rockwell painting of Glen Canyon Dam with a Navajo family in the foreground. Image courtesy of the Bureau of Reclamation.*

The family's reaction to Glen Canyon Dam is difficult to discern. The man and boy, wearing contemporary dress, stand with their backs to the viewer, making it impossible to gauge their feelings (though the boy's fists are clenched). The woman, dressed in a long skirt and velvet blouse and perched on an apparently relaxed horse, is in profile and also difficult to read. Only the dog looks stressed—albeit worried more about the cliff than the technological behemoth in the background. Soaring overhead are a bald eagle and a hawk, patriotic symbols more concerned with each other than with the people or the dam. The image blends the old and the new, the human and the technological, the wild and the manmade. The message, perhaps not surprising, given the client, was clear: dams nestled nicely into the landscape and attracted rather than repelled wildlife. As for the Navajos, does their demeanor suggest acceptance? Resignation? What *is* the implication about the relationship between Indians and energy production? This is ambiguous. In some respects, Rockwell linked these people to premodern life through the woman's dress and transportation. He presented them as culturally—and physically—separate from modernity, not a part of the industrial age. They seemingly had no role in the creation

of the dam—as owners, workers, or consumers of the electric power it would produce. They were merely colorful onlookers, powerless observers of the new world arriving in their lands. Their future remained unclear. Would they benefit from this icon of industrial life or remain apart from it?

Such an image of Native Americans was not unusual in the 1960s. At a historical moment when many policymakers considered Indians and tribes as anachronistic and Congress moved to extinguish tribes as legal entities through the Termination policy, many non-Indians assumed that Indians' only options were to assimilate and acculturate. It was impossible, they believed, to be modern and Native American simultaneously. Even today, in the wake of the Red Power movement, with the revitalization of tribal politics and cultures and the reassertion of tribal sovereignty and treaty rights, many non-Indians continue to assume that American Indians live only in the past. The chapters in this book, through the prism of energy, challenge such simplistic notions. They explain how, from the beginning of energy development on Indian lands, Indian people have been actively engaged: as owners and lessees of resources, workers in the industries, consumers of electricity and gasoline, and developers of tribal energy companies, as well as environmentalists who sometimes challenge these enterprises. The story of the relationship between Indians and energy, in other words, is much more complicated than Rockwell's painting suggests. And it is a story that will continue to have relevance, for Indians and non-Indians, well into the twenty-first century and beyond.

As of 2005, there were 561 federally recognized tribes and communities in the United States, with more than 350 of them in the "lower forty-eight states." According to the 2000 census, 4.1 million people self-identified as American Indian or Alaska Native, and 2.5 million of those people identified as single-race Native American. Tribes own 2 percent of the nation's land base, with reservation lands totaling 72 million acres. Considerable energy resources rest in those lands, particularly in the West. To be sure, not all tribes have energy resources. Still, 30 percent of the known coal reserves in the United States are in Indian Country. Tribes own 37 percent of the country's uranium, 3 percent of its oil and gas, and 10 percent of its onshore natural gas deposits. One-third of the nation's reservations have high potential for wind energy production, and more than one hundred reservations have high biomass potential. In 2004, Indian oil and gas production generated more than \$245 million in royalty revenues, suggesting that Indian-owned oil and gas resources yielded more than \$2 billion in output. Their undeveloped resources may be even more valuable. More than 2 million acres of land have been actively mined for coal, gas, and oil;

another 15 million have potential for such development. The only other mineral-property owners with holdings as large as the tribes' are the railroads (beneficiaries of generous construction land subsidies from the federal government in the nineteenth century) and the US government. Historically, tribes have contributed enormously to energy development, including \$15.3 billion in oil, \$10 billion in coal, and about \$8 billion in natural gas, although they have often been grossly underpaid for these resources. In sum, as one source put it, Native Americans represent 1 percent of the US population but hold 10 percent of the nation's energy reserves.<sup>2</sup>

Clearly, American Indians play an important role in the United States' energy development. This matters, of course, to tribes and their members. But it also matters to all who consume these resources. At a moment when oil prices are volatile and the United States largely depends on foreign sources of petroleum, the place of Native Americans in the nation's energy future is critical. As the Southwest continues to grow, sources for its electricity (hydropower, coal-fired plants, uranium, wind farms) will certainly include those based in Indian Country. The central questions this book addresses are these: What has been the meaning of energy development on Native American lands in the American Southwest, particularly for American Indian people? Is this a story of exploitation or of opportunity? And how does our understanding of past patterns guide policies and decisions—tribal, state, federal, corporate, and individual—that will affect all of us in the future? The authors here reveal answers that are far from simple.

As journalist Marjane Ambler discovered nearly twenty years ago when she wrote about Indians and energy, it is impossible to generalize about the topic.<sup>3</sup> Still, patterns emerge in this volume even if they are, at times, contradictory. As Leah Glaser shows in chapter 8, "An Absolute Paragon of Paradoxes," Native people have been victimized by energy developers, but they have also taken advantage of opportunities to bring energy to their communities. Similarly, Ben Colombi's chapter 5 highlights the "paradox" of hydroelectric energy generated by dams on tribal lands that improved Indians' lives but inflicted serious environmental damage. The diversity of tribes and individuals, experiences, and attitudes further complicates the story. Brian Frehner's chapter 3 discusses Charles Curtis, vice president under Herbert Hoover, who, though identified strongly with his Native ancestry, profited from his efforts to provide non-Indian oil companies access to lands in Indian Territory. And in chapter 4, Garrit Voggesser charts how, in the course of generating power (whether through water, oil, gas, uranium, or coal), a variety of tribes and Indian people gradually came to exercise greater political and economic control over their own resources

and, consequently, their lives. By contributing to the nation's energy sources, they have fueled tribal economic development; this, in turn, has strengthened their political, cultural, and social positions.

Perhaps no example better demonstrates the opportunities energy development can provide than that of the Southern Ute. Their 700,000-acre reservation in Colorado's San Juan Basin contains one of the world's richest deposits of methane found in coal seams. Consequently, the Southern Utes control the distribution of approximately 1 percent of the nation's natural gas supply, making the tribe's holdings worth about \$4 billion. Things were not always so. One of seven bands of Utes, who occupied one-third of Colorado when the United States took over that territory, the Southern Utes ended up with a reservation reduced to a fraction of their lands. After allotment, their land base became even smaller with a checkerboard of Southern Ute and non-Indian ownership. In fact, today 9,500 non-Indians live on the reservation, compared with 1,000 Southern Utes and 433 American Indians of other tribes. Energy companies began drilling for natural gas in the 1950s. Reflecting the politics of the time, the tribe had little power over this development and received meager royalties, distributed to members as per capita payments. In the 1970s, tribal chairman Leonard Burch, a navy veteran who served as chair almost continuously for thirty-six years, began to change the dynamics of Southern Ute energy policies. He put a stop to per capita payments, sending lease revenues to the tribal government. Burch and the tribal council declared a moratorium on new mineral leases until the tribe could build its management capabilities. They enacted a severance tax in the 1980s as the energy boom went into full swing. Still, in 1990 the Southern Utes were not prospering, even though sixty-three oil and gas companies operated on the reservation.<sup>4</sup>

By this time, Burch and the Southern Utes had begun to realize that the real profits came not in royalties, but in ownership of production. They took action to become producers with the aid of business executive Bob Zahradnik, a former Exxon employee who began working for the Utes in 1988, monitoring companies' compliance with leases and strengthening the Utes' negotiating power. Zahradnik wrote up a business plan for one of the first tribe-owned energy companies in the nation, Red Willow Production Company. With \$8 million in seed capital, it began buying back wells and leases. Red Willow now has interests in more than 1,000 wells, operates 450 on the reservation (second only to British Petroleum), and is the thirteenth largest privately held energy company in the nation. The tribe also created the Red Cedar Gathering Company to transport the

natural gas. It owns 3,000 miles of pipelines, processes natural gas, and delivers it to transmission. Altogether, by 2008 the Southern Ute Tribe employed more than six hundred people in several states.<sup>5</sup>

At the beginning of the twenty-first century, Red Willow's and Red Cedar's net revenues totaled about \$100 million. To offset the day when natural gas prices will decline or the resource itself disappears, the Southern Utes established the Permanent Fund, a conservatively invested endowment, to cover tribal government costs and services. In 2005 the fund's worth approximated \$650 million. The tribe also created the Growth Fund to manage tribal businesses and develop new ventures, with Zahradnik as the operating director and a Southern Ute, Bruce Valdez, as the executive director. The vast majority of the Growth Fund's assets are in energy, but its directors also have expanded non-energy investments, including real estate in Colorado, New Mexico, Texas, and Missouri. So successful have the tribe's enterprises been, its bonds received the highest AAA Fitch rating in 2001 and again in 2007. Some Utes complain that the tribe relies too much on non-Indians to run its businesses. Some non-Utes in the area remain wary and suspicious of the tribe's new economic power. One local commented, "You'll hear some people say they liked the tribe better when it was poor."<sup>6</sup> But the Southern Utes' economic success has served as one example of how self-determination and control of one's own energy resources can dramatically turn things around for American Indians.<sup>7</sup>

Of course, gaining such control has not been easy. In the mid-twentieth century, as the Southern Ute case attests, most energy tribes (defined as those that receive a significant portion of their income from energy minerals or that own significant undeveloped reserves) fell far short of realizing their economic potential. Hamstrung by a federal government that assumed paternalistic control of Native Americans, the latter had to fight both government and corporations to secure a place "at the table." From the outset, conflicts arose over ownership of the mineral resources: did these belong to the tribes or to the federal government? By the end of the 1950s, tribes finally established their rights to both ownership and consent authority—that is, deciding whether resources could be developed. Development was not necessarily a given. High unemployment and poverty rates on reservations certainly encouraged it, but Native American conceptions about their relationship to land did not. And the fact that they could not relocate if mining ended up in environmental disaster underscored their potential vulnerability. Also, royalty rates, hammered out in consultations between the Bureau of Indian Affairs and corporations, fell far below market value, cheating tribes (and individual allottees) of their

fair share of profits.<sup>8</sup> The advantages and disadvantages of energy development led to debates within tribes. For some, developing coal and other energy resources seemed to violate their sacred responsibilities to the land. Others privileged the economic opportunities that might result from mining or other mineral extraction.<sup>9</sup> Clearly, energy development offered no perfect panacea.

Meanwhile, some energy tribes learned how to fight back and gradually transformed their role from passive recipients of under-market royalty payments to active partners in decision making and profit taking. They moved away from simply leasing to contracts that gave them ownership options, joint management, and fair profit sharing. Creation of the Council of Energy Resource Tribes (CERT) in 1975, a pan-Indian organization designed to share information, obtain scientific expertise, and increase political clout, further signaled this new determination to ensure fair royalties and increase tribal control. By the 1990s, legal and legislative victories acknowledged Native American tribes' authority to tax mineral producers, enforce royalty regulations, impose air and water quality standards, issue tax-free bonds, and negotiate with industry to develop tribal resources.<sup>10</sup>

When one adds Native American workers to the equation, the narrative of Indians and energy turns, again, toward exploitation. Energy development on the Navajo reservation brought jobs to Indian people, but workers had to fight to secure such employment, as Colleen O'Neill's chapter 7 demonstrates. These jobs often paid well. But they also carried enormous costs. For example, of the 150 Navajo uranium miners who worked at the Kerr-McGee mine in Shiprock, New Mexico, until 1970, 133 succumbed to lung cancer or forms of fibrosis by 1980.<sup>11</sup> Chapter 6, by Barbara Rose Johnston, Susan Dawson, and Gary Madsen, speaks to the devastating impact of this industry on workers' health. Mining and refining minerals is never a clean industry. The health and environmental costs of such development fall heaviest on those who toil in the industry or live in its vicinity.

This was apparent from the outset. The uranium ore extracted from southwestern Indian lands was destined for the Manhattan Project, which developed the world's first atomic bomb, and then for the nation's Cold War era stockpile of nuclear weapons. When the United States stopped purchasing ore for weapons in 1971, the commercial nuclear energy market stepped in as the primary consumer until the early 1980s. Throughout these decades, private companies mined the ore, even when the US government was the sole purchaser. Scientists knew that uranium workers were at higher risk for lung cancer and other deadly respiratory diseases, but the miners (about 25 percent of whom were Native American—Laguna, Hopi,

Zuni, Ute, and Navajo) did not. They remained uninformed about the hazards of their jobs, received no protective equipment, and often labored in mines with no ventilation.<sup>12</sup> Even those who did not work in the uranium mines suffered health consequences. Workers' clothes, which they wore home, were coated in toxic dust. When the industry came to a standstill, more than a thousand mines and four processing mills on tribal lands closed, leaving behind radioactive waste piles, open tunnels, and pits. Navajo reservation inhabitants, in particular, breathed in radioactive dust, drank contaminated water from abandoned pit mines and holding tanks, played in mill tailings, and constructed dwellings with radioactive debris. Fifty years ago, cancer rates on the Navajo reservation were so low, one medical journal described it as a place where people seemed immune to cancer. Between the early 1970s and the late 1990s, the cancer death rate doubled. Exposure to mining by-products in the air, water, and soil, according to one source, "almost certainly contributed to the increase in Navajo cancer mortality."<sup>13</sup>

Starting in the 1970s, grassroots organizations such as the Red Mesa/Mexican Water Four Corners Uranium Committee and the Uranium Radiation Victims Committee sought compensation for this environmental and health disaster. They found an ally in former Secretary of the Interior Stewart Udall. But in 1979 their lawsuits against the uranium companies and the US Department of Energy failed. The court held that the government was immune from such suits and that the Indians' only redress could come from legislation. In 1990 Congress passed the Radiation Exposure Contamination Act, acknowledging the US government's responsibility for mistreatment of uranium miners and millers and providing compensation to those with diseases related to mining. In 2000 Congress passed amendments to the original law, and by mid-2005, 3,415 miners, 550 millers, and 112 ore transporters had received compensation totaling \$407 million. Money, of course, could not bring back the lives of those who had died or the health of those permanently disabled. But such trouble mobilized people to fight back.

The one bright spot in this history is the view it affords of communities and labor organizations that identified problems, organized themselves to learn about them, and formed alliances to address them. In the future, government bureaucracies and scientific communities should listen to the representatives of these constituencies and respond appropriately in a timely fashion.<sup>14</sup>

As for those who did not work in the mines but simply lived—and grew



up—near contaminated sites, no redress exists. But the legacy of uranium mining and its presumed health costs had such an enormous emotional impact, the Navajo Nation banned uranium mining altogether in 2005, even as the price of the ore rose.<sup>15</sup>

The Southern Utes' phenomenal economic success and the uranium workers' tragic health legacy bookend the tribal and individual experiences of American Indians with energy development. Perhaps no people demonstrate more clearly the shades of gray, the in-between, the complexities, than the Navajos. Their story is emblematic of the larger narrative arc that many Native Americans have experienced: the early exploitation by the federal government and corporations, the rise of nationalism and consequent increased control over their resources (as Andrew Needham's chapter 9 demonstrates), the devastation of workers' health and the growing determination to prevent future abuses, the realization that coal-fired power plants and strip mines carry heavy environmental costs for local people, who do not benefit from the power these produce, and the growing resistance to such developments at the grassroots level within the tribe itself. As people of the twenty-first century, some Navajos express deep concerns about climate change and global warming, generating in the process a "homegrown version of the global debate on slowing climate change."<sup>16</sup> These critics point their fingers not solely at the Bureau of Indian Affairs or the corporations that hope to continue mining Navajo coal and producing electric power on the reservation, but also at their own tribal council, which initiated such economic activities.

The modern Navajo Tribal Council had its genesis in the 1920s, created in part to expedite leasing of the reservation's minerals to non-Indians. Energy demands of the 1960s, ramped up by the spectacular growth of the urban Southwest in the years following World War II, led western states and energy companies to lean on Congress to pass "a Christmas tree bill of dams, power plants, highways and transmission lines in the interior West."<sup>17</sup> The centerpiece was the Central Arizona Project, a huge aqueduct that would funnel water from the Colorado River to Phoenix and Tucson. To push this water (literally) to its thirsty consumers, developers needed power. They decided to mine Black Mesa coal—on the Hopi and Navajo reservations—and build coal-fired power plants to generate the electricity for this project and other Southwestern urban needs.<sup>18</sup> Neither the Hopi nor the Navajo tribal council had sufficient expertise or knowledge to negotiate in their people's best interests. They did not know the value of their coal, the environmental impacts of mining and generating electricity, or the alternatives to coal. They also kept many of the project details secret

from tribal members. In 1966 Peabody Coal (at the time, a subsidiary of Kennecott Copper Corporation) signed two leases with the tribes for 40,000 acres on Black Mesa, in the Joint Use Area, a controversial space shared by both tribes. Eventually, Black Mesa became the most notorious mine in the nation, a symbol of Indian exploitation. To make matters worse, the Hopi tribal attorney, John S. Boyden, who encouraged the project, also represented Peabody Coal—a blatant conflict of interest.<sup>19</sup>

In the face of federal and tribal council unresponsiveness, Hopi and Navajo dissidents found allies in the American Indian Movement (AIM) and environmental groups. The Black Mesa Defense Fund convinced the Senate to investigate plans for energy development in the Southwest, and Black Mesa became a rallying cry for environmentalists all across the country. Such actions did not stop the mining at Black Mesa but did increase awareness of the potential for exploitation. Eventually, the Hopi and Navajo renegotiated their Black Mesa contracts, and federal and tribal regulations regarding mineral leasing underwent reform. The publicity given to the abuses, in other words, improved the processes and results of mineral leasing thereafter.<sup>20</sup>

As Hopi and Navajo energy development have changed from exploitation to opportunity, however, controversies have continued to swirl around coal mining at Black Mesa. On January 1, 2006, the Mohave Generating Station in Laughlin, Nevada, shut down rather than pay \$1 billion for environmental upgrades. So, too, did the Black Mesa Mine, because its sole purpose was to deliver coal to Mohave. A lawsuit that the Grand Canyon Trust and other environmental groups filed against Southern California Edison, the major owner of Mohave, for violation of the Clean Air Act was partly responsible. Other factors included water and market concerns. Since the 1960s, Hopi and Navajo critics had worried about Peabody's pumping and depleting the Navajo Aquifer to deliver coal to Mohave through a 273-mile slurry pipeline. Southern California Edison, meanwhile, feared that natural gas-fired plants would render coal plants obsolete and therefore no longer profitable.<sup>21</sup>

Closing the generating station and the mine represented an environmental victory for some, but it had serious economic consequences for Native Americans. The Black Mesa Mine shutdown cost the Navajos 15 percent of their tribal revenues and the Hopi 33 percent. Today approximately half of the Navajos on the reservation remain unemployed, and per capita income is only slightly more than \$8,000 a year. So it is not surprising that tribal leaders continue to pursue energy projects. In 2003 the Navajo tribal council invited Sithe Global Power, with offices in Houston and New York,

to build a \$3 billion, 1,500-megawatt power plant with the Navajo-owned Diné Power Authority. Navajo president Joe Shirley Jr. argued that the power plant would bring hundreds of jobs, higher incomes, and better lives for Navajos. He expected the plant, named Desert Rock, to bring in \$50 million a year in taxes, royalties, and other income by selling the power to Phoenix and Las Vegas. Shirley also claimed that the project would include a power line to send electricity to twenty thousand remote homes on the reservation. One-third of the reservation's residences lacked electricity.<sup>22</sup>

The project has elicited a firestorm of protest because the Desert Rock Energy Project would be the third coal-fired plant in the Four Corners region. The two existing plants emit noxious fumes and rate the area the worst in New Mexico, for instance, for air quality. At the forefront of opposition are Navajo people themselves, particularly those who live in the vicinity of Burnham, the projected location for Desert Rock. Dana Powell and Dáilan Long's chapter 10 explains that the protest started with Navajo women who sat vigil on the dusty expanse of the site, hoping to block the project. Resistance grew. At ten public hearings on the environmental impact statement, hundreds of Navajos protested Desert Rock, voicing concerns about air pollution, large-scale water consumption, and loss of grazing land. Worries about air quality and health, in particular, tap into the lingering anxieties about previous energy development on tribal lands, particularly uranium. Several groups formed, including Dooda Desert Rock (Navajo for "No to Desert Rock") and Diné CARE (Citizens Against Ruining Our Environment), to organize the opposition, generate publicity, and offer alternatives. Diné CARE, concerned about global warming, urged the council to reject coal in favor of solar, wind, and natural gas.<sup>23</sup> In fact, the Navajo Nation has contemplated harnessing wind energy by partnering with Citizens Energy Corporation, a Boston company chaired by Joseph P. Kennedy II, through the Diné Wind Project, located about fifty miles north of Flagstaff. If it materializes, this will be the first commercial wind farm in Arizona and among the largest wind-power installations in the nation, with approximately three hundred wind turbines generating 500 megawatts of electricity capacity, enough to service 100,000 households. Navajos will have significant ownership in the project, earning \$60 to \$100 million over the project's lifetime, according to a tribal news release.<sup>24</sup> But this project is intended to supplement, not replace, the proposed coal-fired power plant.

The Desert Rock controversy encapsulates the complexities of energy on southwestern Indian reservations, which policymakers originally carved out of deserts they assumed had little value. That such lands proved to contain enormous mineral wealth is a delicious irony. So how can tribes with

energy resources decline the opportunity to contribute millions of dollars to tribal coffers, provide well-paying jobs, and ultimately use the profits to diversify tribal economic investment? On one hand, as consumers of energy and potential consumers, do they not benefit from these resources too? And some might ask, do they not have an obligation to produce resources that will make all Americans less dependent on foreign sources? On the other hand, what about the environmental and health risks associated with energy development? Why should Native Americans pay the greatest costs as the vast majority of benefits accrue to non-Indians in far-off cities? Where is the justice in this? And should American Indian people, who often see themselves as having a special relationship to the earth (as Don Fixico's chapter 2 demonstrates), contribute to climate change and global warming? Should they—of all people—not lead the nation in alternatives that make use of wind and sun to provide cleaner energy? Finally, who should decide the answers to these questions? To the extent that the story of energy development in Indian Country is partly one of evolution from exploitation to opportunity, surely the reemergence of tribal sovereignty in the late twentieth century is a critical factor. But several forms of sovereignty are at stake—one at the tribal and the other at the grassroots level. The Bureau of Indian Affairs' and corporations' colonial relationship with the tribes has transformed. Today more "energy tribes" operate on a government-to-government basis with states and the federal government. Corporations understand that they must work with tribes as powerful stakeholders in energy enterprises. But internal struggles remain, pitting reservation residents of development sites against their own tribal councils. Who is the exploiter now? How will these conflicts be resolved?

The chapters here provide historical context to help address these questions. Together, they present bedrock themes of Native identity and tribal sovereignty, tradition and modernity, the devastating legacies of colonialism, grassroots efforts by Native people to craft sustainable alternatives to traditional energy resources, environmental politics in a time of global warming, and political, legal, and organizational empowerment. They demonstrate divisions within and among tribes. They address tensions between traditionalist and conservationist values and the need for economic development. They speak to the possibilities for enormous opportunity and the potentially devastating environmental and health costs that accompany it. And finally, as noted above, these chapters reveal that the topic of Indians and energy does not lend itself to a single or simple narrative. Rather, this volume presents a mosaic of many stories revealing energy as an issue that historically has divided not only Natives and non-Natives but also Native

people among themselves. At the same time, the history of Indians and energy offers glimpses into how people have sometimes collaborated, cooperated, and negotiated to meet society's growing energy needs in a way that minimizes the negative effects on people and environments.

The book begins with two chapters that address ways of conceptualizing the problem at the heart of the volume. Don Fixico (chapter 2) provides an overview of how various southwestern Native Americans perceive the earth and discusses the people for whom energy development poses particular problems. Brian Frehner (chapter 3) cautions readers to view Indians who participated in energy development as complicated people who defy easy categorization. Regarding Indians' relationship to energy development as a product of their "traditional" or "progressive" orientation or as a result of their "full-blood" or "mixed-blood" ancestry reinforces stereotypical representations of Indian people and robs them of their ability to act as individuals, whose decisions do not always conform to prescribed norms. The contrasting viewpoints of Fixico and Frehner are implicit in Garrit Voggeser's chapter 4, which surveys the evolution of federal Indian energy policy and tells a story in which some Native people successfully used federal courts to control their energy resources, most notably, the Jicarilla Apaches.

Less sanguine portraits of Indians and energy emerge in the two chapters that follow. Benedict J. Colombi (chapter 5) examines hydroelectric dams on the Colorado River within the context of a capital-intensive political economy in which indigenous people bore the brunt of energy development's social and ecological costs while government agencies and non-Native participants empowered and enriched themselves. Barbara Rose Johnston, Susan Dawson, and Gary Madsen (chapter 6) document a story of environmental racism in which Navajo uranium miners and mill workers suffered adverse health effects when the federal government withheld safety information and later failed to compensate them or their families for exposure to radioactivity.

As Native people began empowering themselves legally, politically, and economically to gain control over energy development, their active roles in asserting, contesting, and redefining issues such as sovereignty, identity, and nationalism influenced how they functioned as consumers and producers of energy. For example, Colleen O'Neill's chapter 7 argues that Native people's demand for (and acquisition of) jobs created by energy industries constitutes one of the many ways Indians have redefined sovereignty. Leah Glaser's chapter 8 maintains that federal programs to assimilate Native people conditioned them to function as consumers of electricity

but that Arizona Indians joined regional power grids and incorporated electrical technologies according to their existing traditions and cultures. Thus, Indians did not participate in a zero sum game in which their cultures deteriorated as a result of economic betterment offered by energy development.

In some cases, intense disagreements among Indians over the best methods to control and profit from energy resources reinforced their culture, identity, and nationalism. Andrew Needham's chapter 9 asserts that energy development served as the central issue around which Navajos debated, and often disagreed vehemently over, "self determination," "nationalism," and "decolonization." Authors Dana Powell and Dáilan Long (chapter 10) also examine the ongoing debates and cleavages among Navajos, concentrating on grassroots opposition to the proposed Desert Rock Energy Project, and argue that rural place-based communities have responded with alternative energy technologies that grew out of the communities' "changing expressions of indigeneity." Summarizing and pulling together the volume's central themes, Rebecca Tsosie's chapter 11 articulates how the issue of energy development fundamentally links Native and non-Native people to the global community through the issue of climate change. She illustrates how multiple histories in this volume might serve as lessons from the past to guide future policymakers toward a sustainable future, providing a roadmap for the difficult moral choices that Native and non-Native people alike must make as they continue to produce and consume energy.

To be sure, this book is not comprehensive in its coverage. First, it focuses on the Southwest instead of the entire span of Indian Country. We chose to concentrate on this region because the Southwest is particularly well suited for exploring how people have transformed the region's resources into fuel supplies for human consumption. Not only do Native Americans possess a large percentage of the region's total acreage, but also on their lands reside much of the nation's coal, oil, and uranium resources. Regional weather and climate patterns have enabled Native people to take advantage of solar and wind power as sources of energy. But issues related to energy and Indians transcend the region—and the nation. Clearly, we believe that the lessons of the Southwest illuminate broader trends in other places. Still, much more work needs to be done on tribes in the Southwest and elsewhere who are not covered here and on issues that we do not address (reservations as nuclear waste sites, for instance).

Our purpose is not to end the conversation, but to join it—and

encourage others to do the same. Forty years ago, Norman Rockwell participated in this conversation through his Glen Canyon Dam painting, which so strikingly juxtaposed Native people and energy development. His work perpetuated the mistaken notion that Indians' lives intersect with energy development only in distant and unfortunate, even tragic, ways. Although exploitation undoubtedly has a role in this narrative, ever since Rockwell put paintbrush to canvas, Native Americans have been altering the picture by creating significant opportunities for themselves in a world with ravenous energy appetites. His image remains compelling, however, because it suggests that he wondered, as do all the authors in this book, what *is* the relationship between Indians and energy? The authors provide varied and, at times, contradictory answers. Collectively, they conclude that this is not a simple story of evolution from exploitation to opportunity. Rather, these exist in tension with each other in Indian Country—as they do for all of us who consume energy and cope with its environmental costs.

### Notes

1. W. L. Rusho, personal communication June 2, 2008. Rusho found the family living in a hogan near Page, Arizona. They agreed to pose when they learned that Norman Rockwell was the artist. The dog was apparently Rockwell's invention. The Bureau of Reclamation arranged for various painters to depict its projects across the country. Artists donated the paintings to the Bureau of Reclamation and received a tax deduction for their value. Rockwell's Glen Canyon Dam painting, which remains to this day on display at the dam, was part of this program.

2. Ambler 1990:29, 86; The Harvard Project on American Indian Economic Development 2008:161–162; Kathy Helms, "Tribal Energy Drive Touted," *The Gallup Independent*, July 20, 2007. The Fish and Wildlife Service says that American Indian lands in the lower forty-eight comprise 45 million acres of reserved lands and an additional 10 million in individual allotments, as well as 40 million acres of Native lands in Alaska. The 95 million acres figure for tribal lands comes from <http://www.fws.endangered/tribal.index.html> (accessed June 2008). The Harvard Project (2008) puts the total at 72 million acres. Donald Fixico (1998:143–144) reports that "twenty-five to forty percent of America's uranium, one-third of its coal, and approximately five percent of its oil and gas are on Indian reservations in the West."

3. Ambler 1990:xiv.

4. Susan Moran, "Indian Tribe Becomes Force in West's Energy Boom," *New York Times*, July 24, 2007; Wilkinson 2005:245–246. Although Don Fixico does not write about the Southern Ute case in chapter 2, he sees their situation as reflective of his

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broader thesis regarding pressures from federal policies and American capitalists to seek out and grow wealthy from Indians' natural resources. He argues that "American capitalism...has continued through the twentieth century to exploit tribal nations for their natural resources, thus forcing Indian leadership to adopt modern corporate strategies to ensure the survival of their nations and people" (Fixico 1998:ix-x).

5. Susan Moran, "Indian Tribe Becomes Force in West's Energy Boom," *New York Times*, July 24, 2007.

6. Quoted in Susan Moran, "Indian Tribe Becomes Force in West's Energy Boom," *New York Times*, July 24, 2007.

7. Susan Moran, "Indian Tribe Becomes Force in West's Energy Boom," *New York Times*, July 24, 2007; Wilkinson 2005:347.

8. Utah International, for example, paid the Navajo Tribe between \$.15 and \$.20 per ton of coal in a lease signed in 1957. Arizona Public Service paid Utah International \$6 per ton for the same coal (Fixico 1998:169).

9. For more on these debates, see Fixico 1998:144-146.

10. Ambler 1990:3, 30, 32, 54, 85-86, 91-114, 202, 261; Fixico 1998:159-175. For more information on CERT, see its Web site at [www.cert.com](http://www.cert.com). See also Ambler 1984a; LaDuke 1984.

11. Ali 2003:xx. See also Johnston and Madsen 2007:117-144; Eichstaedt 1994.

12. Brugge and Goble 2006:25-26.

13. Judy Pasternak, "Blighted Homeland: A Peril That Dwelt among the Navajos," November 19, 2006, and "Blighted Homeland: Navajos' Desert Cleanup No More Than a Mirage," November 21, 2006, *Los Angeles Times*, <http://www.latimes.com/news/nationworld.nation/la-na-navajo> (accessed November 2006), and "Navajos Still Await Toxics Cleanup Plan. EPA Testing Will Resume, but a Coordinated Federal Strategy Is Still Lacking, Lawmakers Told," *Los Angeles Times*, December 7, 2007; Florence Williams, "On Cancer's Trail: The Women in Stefanie Raymond-Whish's Family Have a History of Breast Cancer. Now the Young Navajo Biologist Is Asking Why," *High Country News*, May 26, 2008. Our thanks to Edward Countryman and Colleen O'Neill for bringing these articles to our attention.

14. Brugge and Goble 2006:43; see also Dawson, Charley, and Harrison Jr. 2006.

15. Florence Williams, "On Cancer's Trail: The Women in Stefanie Raymond-Whish's Family Have a History of Breast Cancer. Now the Young Navajo Biologist Is Asking Why," *High Country News*, May 26, 2008.

16. Felicity Barringer, "Navajos and Environmentalists Split on Power Plant," *New York Times*, July 27, 2007.

17. Wilkinson 2005:306.

18. *Ibid.*



19. Ambler 1990:59; Wilkinson 2005:306–310.

20. Ambler 1990:59–60.

21. Daniel Kraker, “The End of an Era on the Colorado Plateau,” *High Country News*, January 23, 2006.

22. Felicity Barringer, “Navajos and Environmentalists Split on Power Plant,” *New York Times*, July 27, 2007; see also Ryan Randazzo, “For Navajos, Coal Means Survival,” *The Arizona Republic*, April 13, 2008.

23. Jason Begay, “Desert Rock Critics Flood Final Hearing,” *Navajo Times*, July 26, 2007; Felicity Barringer, “Navajos and Environmentalists Split on Power Plant,” *New York Times*, July 27, 2007; Susan Montoya Bryan, “BIA Criticized for Handling of Navajo Power Plant,” August 16, 2007, and “Navajo Group Offers Alternatives to Coal-Fired Power Plant,” January 18, 2008, The Associated Press State and Local Wire; Randazzo 2008. For an account of the Diné Power Authority general manager’s testimony on Navajo energy development plans, see “Diné Power Authority General Manager Begay Testifies on Indian Energy Development before Senate Panel,” *US Federal News*, May 1, 2008.

24. “Navajos Set to Tap Power of the Wind,” *National Wind Watch*, March 28, 2008, <http://www.wind-watch.org/news> (accessed April 2008). For more information on renewable energy projects in Indian Country, see “New Era of Energy for Tribes,” *Indian Country Today*, November 25, 2005, <http://www.indiancountry.com> (accessed January 2006); Hanna 2007; “Renewable Energy Development on Tribal Lands” and “Tribal Energy Project” on the US Department of Energy Office of Energy Efficiency and Renewable Energy Web site, <http://www.eere.energy.gov/tribalenergy/> (accessed June 2008). See also the winter 2005 issue of *The Tribal College Journal of American Indian College Education* for articles about sustainability and designing tribal colleges to be “green.”