

ESSAYS / 03

WHOSE TRANSITION?

THE FUTURE OF COAL AND SELF-DETERMINATION ON THE NAVAJO NATION

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As the crow flies, the distance between the Antelope coal mine in Wyoming and the Navajo¹ homeland spans nearly 750 kilometers, more than the full breadth of the intervening state of Utah. But great distance was not the only reason so many were caught by surprise when the Navajo Transitional Energy Company (NTEC) — the Navajo Nation’s semi-autonomous energy company — purchased Antelope Mine and two more coal mines in Wyoming and Montana in 2019.

NTEC purchased these mines amidst the steep decline of the US coal market, making the Navajo Nation the third-largest coal miner in the United States. Over the past decade, roughly half of

all operational coal mines in the United States have closed. Fifteen percent of US coal capacity has shut down in the last four years.

The purchase was all the more confounding given NTEC’s mission: to diversify the Navajo Nation’s energy resources — that is, away from coal — and support broader economic, social, and cultural well-being and environmental sustainability for the Navajo people.

NTEC was sharply criticized for the purchases from both within and outside the Navajo Nation. Opponents characterized NTEC and pro-coal Navajo actors as being out of touch and behind the times at best and, at worst, financially risky and failing to represent the interests of Navajo people. At the same time, none can deny that NTEC and the Navajo Nation have compelling reasons to stay committed to the Navajo coal economy, given how powerfully the coal sector has supported the evolution of Navajo sovereignty, self-determination, economic life, and social services.

For almost a century, Tribal self-governance has coevolved with hard-fought efforts to control mineral rights and mine development on Navajo lands and secure a greater share of the benefits associated with mining and energy production for Navajo people. It would not be a stretch to say that Navajo efforts to assert ever-greater governmental authority over the coal sector helped shape the modern Navajo Nation, legally, economically, and politically. Yet, in another twist of injustice, it was only at the moment that the US coal industry began its descent into structural decline that the Navajo gained greater control over the coal sector activities within their own lands.

With increasing awareness that the clean energy transition could hurt the pocketbooks of working people, not just corporate executives of large fossil fuel companies, policy makers globally have begun to voice commitments to a “just transition” — managed economic shifts that do not leave behind fossil fuel workers, their dependents, and their communities. But a just transition is more easily invoked than executed.

¹ In the Navajo language, the Navajo people refer to themselves as “Diné” and to their traditional, historical homeland as “Dinétah.”

What, indeed, is a just transition? Over at least the last 15 years, the Navajo Nation has been grappling with this question through dialogue, policy making, and activism that have reexamined the coal industry's role for the Navajo Nation. These impassioned discussions revolve around how to manage difficult trade-offs. Given the importance of coal revenue to the capacity of Navajo Nation social support structures, what timeline should Navajo leaders target in transitioning away from coal? More fundamentally, what forms and visions of economic development should the Navajo Nation pursue? For Navajo people, those questions are all the more daunting given the legacy of dispossession, genocidal violence, associated deep and continuing poverty, and long-insufficient federal support for Indigenous Nations that cannot remotely compensate for all that the Tribe has endured.

As government and community leaders and even NTEC have all expressed, the Navajo Nation needs to eventually shift away from reliance on coal. While the term “just transition” tempts non-Native climate activists and academics alike to formulate grand, sweeping definitions, one-size-fits-all visions of neatly replacing fossil sector revenue and jobs with large-scale clean energy development may be neither the most realistic nor the most economically effective path forward.

What the story of Navajo coal politics should highlight is that only Navajo people will define what their just transition looks like. Any sort of politics or agenda that purports to assist that transition will need to support solutions that communities arrive at, whatever they may be. In the case of the Navajo Nation, proposed solutions could surprisingly involve more coal.

1.

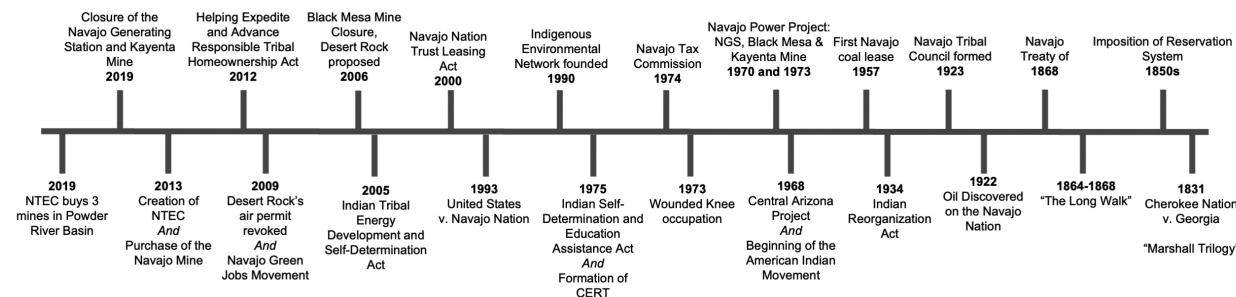
The Navajo Nation's century-long drive to take back control of their lands and natural resources is inseparable from the broader history of what some scholars have termed “settler colonialism.” The US military and allied Tribes forced Navajo communities to a breaking point during the 1860s amidst devastating fighting and massacres. By 1868, when a ninth successive

treaty with the United States first delineated the Navajo reservation, forced relocation and captivity had killed much of the Navajo population through abuse, exposure, disease, and starvation.

Following this violent subjugation, Navajo people had to adapt to successive systems of political organization imposed upon them by the federal government. Traditionally, headmen or *naataanii* led local communities, with no higher structure of leadership beyond a regional gathering of leaders called a *Naachid*. But in the decades after the Navajo Treaty of 1868, an agent of the Bureau of Indian Affairs appointed Tribal leaders. After 1901, the federal government reorganized this single position into a group of six federal officials exercising decision-making power over Navajo reservation lands divided into jurisdictions.

The beginnings of federal recognition of Navajo government came in 1923 when, to facilitate the granting of mineral leases on Navajo lands, the Department of the Interior mandated the creation of a Navajo Tribal Council. The initial council could only meet at the discretion and with the presence of federal representatives, did not possess full authority over council appointments, and immediately approved a resolution granting the special commissioner, a federal agent, the right to sign oil and gas leases on behalf of Navajo people — an action apparently taken in the mistaken belief that the Navajo “would receive government aid in securing new lands.” For decades, however, the Tribal Council would face coercive arrangements dictated by federal officials, utilities, and corporate interests, all of which created the legal, political, and economic framework for developing and exploiting the Tribe's natural resources.

Figure 1: Timeline of selected historical, legal, and energy-related events in recent Navajo history



Ten years later, in 1933, the Tribal Council canceled this previous arrangement, reasserting the right to approve or reject leases. The next year, Congress passed the Indian Reorganization Act, which would significantly influence the structure of Tribal governments and the nature of the federal government's relationship with Tribes. This legislation proposed that each Tribe adopt its own constitution and bylaws, additionally strengthening Tribes' authority over lands and their sovereign ability to negotiate on a government-to-government basis. The act also halted the rapid loss of Indigenous lands by ending the previous federal policy of dividing and allotting Tribal lands to individuals, who often faced little choice but to sell their plots.

Navajo people actually rejected the Indian Reorganization Act in a close vote, but Tribal Council members nevertheless pressed ahead with the idea of Navajo political reform. An abortive 1936–1938 effort to establish a constitutional form of Navajo government in line with the Indian Reorganization Act's intent eventually led to the Tribal Council's reformulation around the group of constitutional assembly delegates. These events marked the beginning of a long process through which Navajo people would leverage the institutions and structures they were compelled to adopt in order to reassert sovereignty and self-determination.

Over this period of evolution in Navajo governance, mineral leases provided sources of Tribal revenue — first through oil royalty payments, then by uranium mining starting in the 1940s, and then from industrial coal mining leases beginning in 1957. By the early 1960s, bonuses, rent, and royalties had produced a total of \$76.5 million for the Navajo Tribe, with mining work itself an increasingly important source of income for Navajo people. However, mining, especially uranium mining, left a tragic legacy of damage to local ecosystems, water, and communities' and workers' health.

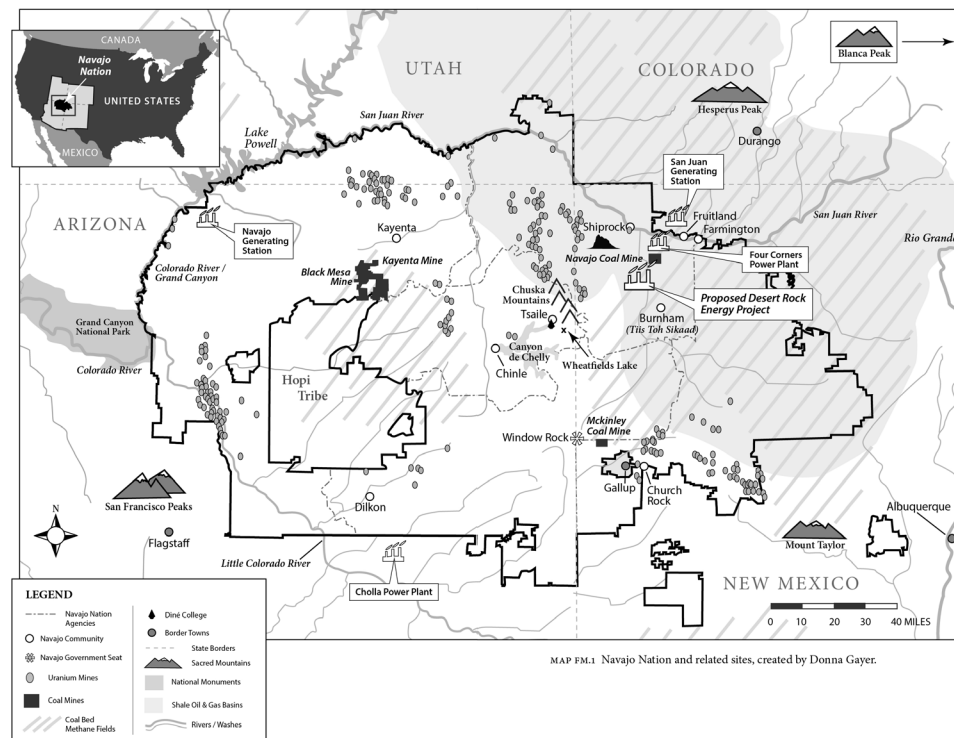
After coal was first leased on Navajo land, it didn't take long for the Four Corners coal plant to begin operating on the Navajo reservation. The discovery and development of coal reserves at Black Mesa drove further expansion of coal mining and generation on Navajo lands, as federal and regional policy makers and regional utility companies jointly pursued dam and power plant construction to secure water and electricity for growing population centers in the Southwest like Las Vegas, Phoenix, and Tucson.

The development of Black Mesa also further deepened exploitative and inequitable mining development on Navajo land, as Peabody Coal parlayed conflicts between the Navajo and Hopi Tribal Councils into a below-market lease arrangement that paid royalties at just a fifth of the government royalty rate for coal mined on public lands. The 1966 agreement further permitted Peabody to transport coal to the Mojave Generating Station via a coal slurry pipeline consuming nearly a billion gallons of groundwater a year, leading to intense, long-term depletion of regional groundwater.

At around this time, intense campaigning by national environmental activist groups like the Sierra Club successfully blocked dam projects proposed for the Grand Canyon as part of the Central Arizona Project (CAP), leading the Bureau of Reclamation and state and regional public water and power interests to advance the Navajo Power Project. This initiative established the Navajo Generating Station, intended to supply power to pump Colorado River water in support of the CAP. The development of the Navajo Generating

Station in 1970 led to the further coal mining expansion at Black Mesa, which is the largest coal deposit in the United States.

Figure 2: Image from *Landscapes of Power* by Dana E. Powell



While mine and power plant jobs served as crucial, growing sources of employment for Navajo workers, the unfair terms of the Black Mesa coal lease were typical of oil and mining leases that often left the Navajo Nation with abnormally small shares of royalties. Royalty agreements with Standard Oil and Peabody Coal fell short of fair market rates and did not adjust for inflation, and legal and bureaucratic complexities of land use deals left Navajo stakeholders disadvantaged. In 1972, the Navajo Nation received just \$1.4 million in royalties for coal burned at Four Corners station, while state and local municipalities received over five times that amount in taxes on the same coal.

In light of these inequities and in the broader context of the civil rights and American Indian Movements of the 1960s–1970s, Navajo leaders fought to strengthen Indigenous civil rights and self-determination. In 1974, the Navajo government established the Navajo Tax Commission, further expanding the role and responsibility of the Tribal government. The right of the Navajo Nation to tax would withstand several court challenges before being upheld in a 1985 Supreme Court ruling. That same year, the Tribal Council established an Oil and Gas Severance Tax on oil and gas production within Navajo lands. Since then, much of the Tribe's internal revenue has come from mining and taxes from mining, leading some scholars to point to the origins of the Navajo welfare state within the coal sector.

Around the same time, leaders of the Navajo Nation Tribal Council played a key role in establishing the Council of Energy Resource Tribes (CERT) in 1975. CERT was based upon the idea of an Indigenous grouping of Tribes similar to the powerful Organization of Petroleum Exporting Countries (OPEC) in the Middle East. CERT would improve the negotiating position of a coalition of energy resource-rich Tribes, including the Navajo Nation, in relation to outside corporations and the federal government. In 1979, CERT successfully secured a federal commitment of \$24 million for Tribal energy proposals and initiatives, and CERT itself served as a valuable shared resource for Tribal governments considering projects and in need of technical, policy, and business expertise.

Over time, Navajo people also began pursuing redress for past wrongs. In 1993, the Navajo Nation sued the federal government for damages of \$600 million, arguing that the federal government's failure to negotiate a higher

royalty with Peabody Coal Company constituted a violation of its statutory and fiduciary duties to the Navajo Nation.²

Across much of the long process through which Navajo authorities have gained greater control over energy-related economic activities and secured a greater share of associated economic benefits, the Navajo Nation has become more economically reliant on oil, coal, and gas. Before 2008, the coal sector represented the single largest source of internal discretionary revenue for the Navajo Nation. Following the Black Mesa mine's closure in 2006, revenue from coal has declined, with land rentals, right-of-way, and business site leases becoming the largest source of internal revenue in recent years, in addition to income from coal, oil and gas, and taxes. The Navajo General Fund's gross revenue has mirrored the coal revenue decline, steadily decreasing since 2006, with the recent closures of the Kayenta mine and Navajo Generating Station in 2019 accompanied by sharp drops in revenue.

Nor are the benefits of the coal industry limited to Navajo General Fund revenue; given economic challenges, the coal industry remains important for direct and indirect employment. The Navajo Transitional Energy Company (NTEC) claims it contributes \$61 million yearly to the Navajo economy in local business, and in 2020 its total economic contribution to the Navajo Nation was almost \$92 million, including providing 713 mining jobs. These activities are significant, given that 71 percent of Navajo money is spent off reservation and unemployment on the reservation hovers around 50 percent (although this percentage does not account for participation in the significant informal sector of the Navajo economy). In response to

limited opportunities within the Navajo Nation, young Navajo often leave their homelands after high school to continue on to college or to find a job, in a pattern some refer to as the "missing generation." Roughly one-quarter of those identifying as Diné live off the reservation as part of a "Diné Diaspora." In this context, the natural resource extraction and energy industries have both presented economic opportunities and made it possible for workers to live closer to their homes and communities.

But the importance of coal to the Navajo economy should not distract from the deep inequities that continue to underlie it. While southwest cities have flourished, thanks in part to large quantities of power and water sourced from far-reaching "hinterlands" such as the Navajo Nation, postwar promises by developers that mining and power infrastructure would promote electrification and prosperity for Navajo people have clearly failed to materialize, as regional utilities allocated resources and prioritized services elsewhere. While the Navajo reservation's mined coal and coal power plants provided 65 percent of the electricity consumed by Arizona, New Mexico, and southern California by 1975, today nearly 40 percent of Navajo people still lack running water, 60 percent lack broadband, 86 percent lack natural gas, and roughly 30 percent lack electricity and rely on candles, kerosene, propane, or diesel for light and on coal or wood-burning stoves for heat.

Insofar as the coal economy was a choice, it was one made by the Navajo Nation under duress, with limited sovereignty, little by way of institutional or legal resources, and few viable alternatives. Recent efforts to strengthen and expand Tribal ownership of energy projects can only be understood in light of this legacy of exploitation and inequity. By exercising hard-won Tribal rights to sovereignty and self-determination, such initiatives have aimed to keep more of the economic benefits from mineral extraction within the Navajo economy.

² After a series of appeals, the US Supreme Court ruled in 2003 that the federal government was not liable for damages, at least partly because the Tribe had been granted the lead role for negotiating the leases; the dissenting opinion emphasized the Tribe's actual limited autonomy in doing so. See Robert McCarthy, "The Bureau of Indian Affairs and the Federal Trust Obligation to American Indians," *Brigham Young University Journal of Public Law* 19, no. 1 (2004): 21–23, <https://digitalcommons.law.byu.edu/cgi/viewcontent.cgi?referer=https://search.yahoo.com/&httpsredir=1&article=1338&context=jpl>; and "United States v. Navajo Nation," Legal Information Institute, Cornell Law School, accessed July 1, 2021, <https://www.law.cornell.edu/supct/cert/07-1410>.

2.

It is likely no coincidence that the most intense debates within the Navajo Nation about coal have followed the Indian Tribal Energy Development and Self-Determination Act of 2005, which guaranteed Indigenous Nations significant autonomy in developing new energy projects. The seemingly clearer economic and social benefits stemming from stronger Navajo control over potential new projects have further highlighted the energy sector in discussions of the economic future of Navajo people.

Meanwhile, the closure of the Black Mesa mine in 2006 underlined how much of the Navajo economy lay at stake. The mine had provided 300 union jobs for Navajo (Diné) and Hopi Tribal members, and its shutdown jeopardized 75 percent of the Hopi Tribe's annual revenue and 40 percent of the Navajo Nation's annual revenue.

The Desert Rock project, a proposed 1,500 MW coal-fired power plant near Burnham, New Mexico, seemed to offer a solution. This plant represented a long-standing vision of the Navajo Nation council and Navajo planners, a policy ambition dating back to the council's creation of the Diné Power Authority (DPA) in 1985. A supercritical coal plant designed with enhanced flue gas treatment to reduce carbon intensity and air pollutant emissions, Desert Rock would have represented the first-ever energy project with majority Navajo ownership and promised to create 1,000 temporary jobs, 400 permanent jobs, \$25 million in infrastructure investments, and \$52 million in annual revenue.

But over time, despite the DPA's claims that the project remained viable, opposition from both local opponents and national environmental groups would ultimately derail construction. Local activist groups ranging from Diné Care and Dooda Desert Rock to the Mountain Ute Tribal Council mounted vigorous legal and public challenges throughout the years-long campaign to prevent the coal plant's approval. Meanwhile, Sierra Club organizers were present at early hearings and continued to advocate against the plant both

on the ground with Navajo activists and as a legal party filing suit against the Environmental Protection Agency alongside Earthjustice lawyers, Diné Care, and regional environmental groups like Grand Canyon Trust and the San Juan Citizens Alliance. Much of the legal battle would thus pit White-led national and regional environmental groups attempting to stop the project against Navajo-led governmental entities including the Navajo Tribal Council and the Diné Power Authority pushing for its approval.

While outside environmental groups were seemingly unanimous in their opposition to the Desert Rock project, the Tribe itself was divided. The president of the Navajo Nation, Joe Shirley, described environmental opposition to the project as "among the greatest threats to Tribal sovereignty, Tribal self-determination, and our quest for independence." In contrast, when then-New Mexico governor Bill Richardson met with activist groups that had traveled to the state capital in 2007 to oppose state legislation proposing a tax break for the power plant, he asked, "Is the Navajo Nation for it or against it?" and one protester shouted back, "the people are against it but the people from Window Rock [seat of Navajo Nation government] are for it."

Further, many Navajo opponents of Desert Rock were not opposed to the Navajo coal industry per se but were concerned about the mine's local impact. From its origins in the American Indian Movement, environmental activism within the Navajo Nation had focused heavily upon the local impact of resource extraction. Navajo workers and organizers had fought for decades to secure compensation for laborers who contracted cancer as a result of radiation exposure while mining for uranium under unsafe and exploitative conditions. Organizers also opposed wasteful water withdrawals on water-scarce Navajo lands for coal mining and coal-fired power generation as well as the transportation of coal slurry.

Much of the opposition to the coal plant, in practice, focused on land use conflicts. Grassroots organizations opposing Desert Rock centered five Elder women who held permits to grazing lands at the proposed plant site. One of them, Alice Gilmore, wanted the land preserved for harvesting medicinal

herbs, grazing sheep, and even extracting household coal, which the Gilmore family used for heating. Not only did the family maintain its own coal mine, but Alice's daughter, Bonnie, had also worked in the coal industry, making the family's motivations for activism far more complex than categorical opposition to coal on purely environmental grounds.

While Navajo leaders and project supporters saw the plant as being critical to increasing economic security and Tribal control over natural resources and strengthening the Navajo Nation, they were often deeply cognizant of the environmental and health costs that the coal industry exacts upon workers and adjacent communities. Navajo environmental activists were likewise painfully aware of the social and economic costs that closing coal mines and power plants might bring for neighbors and kin.

By contrast, as evidenced from the press archives and retrospectives that record external environmental organizations' own reactions to and reflections upon their victory over Desert Rock, external activists gave little thought to the larger, tangled economic challenges that Desert Rock's defeat left unaddressed for the Navajo people. They tended instead to misrepresent Elders like Alice Gilmore as anti-coal activists resisting development imposed upon them by corrupt corporate interests.

3.

Unlike external environmental groups, for whom the battle over Desert Rock was centrally about fossil fuels, air and water quality, and climate change, Navajo proponents and opponents of the project shared an abiding commitment to political self-determination and economic self-reliance. Where the Tribal Council saw in coal and resource extraction a path to Tribally led economic development, many opponents of the project offered a different vision of Navajo self-determination.

In July 2009, Navajo youth activists marched to Window Rock, the seat of the Navajo Nation's government, to lobby the Tribal Council to support a

Green Jobs initiative. The coalition identified various industries and technologies aligned with the movement's ideals: small in scale, decentralized, and viewed as compatible with traditional ways of subsistence. These ideas included community renewable energy projects, green wool manufacturing, energy efficiency projects, local business ventures, farmers' markets, and community gardens.

The Tribal Council was skeptical that the Green Jobs movement's vision of a small, decentralized, and renewables-based energy transition could address the Navajo Nation's needs for economic opportunity, job creation, and Tribal revenue. But the council would nonetheless codify into law the concept of a transition away from fossil fuels via the Navajo Nation Green Economy Commission Act. This development would, unexpectedly, pave the way to NTEC's purchase of the Antelope Mine a decade later.

In 2013, the new Navajo Nation president, Ben Shelly, took the Green Jobs movement concept of an energy transition and repackaged it to create NTEC to purchase the Navajo Mine, which had been slated to close. Together, the Navajo Mine and Four Corners Power Plant directly employed close to 800 people and accounted for 30 percent of the Navajo General Fund. In this way, the Tribal Council accomplished through the Green Jobs act and NTEC some of what it had failed to achieve with the proposed Desert Rock project, transferring ownership of much of the coal mining and generation capacity on Navajo lands to Navajo ownership.

The creation of NTEC and the purchase of the Navajo Mine might seem, upon first glance, to be a contradiction of the aims of the Green Jobs act. Diné Professor Andrew Curley has argued that the act failed because neoliberal assumptions embedded in the Navajo Green Jobs movement promoting decentralization and private entrepreneurship undermined the drive to control energy assets on Navajo lands and ensure that sufficient revenues continued to flow to the Navajo welfare state. Instead of working with the Tribal government, the Green Jobs movement favored "independent"

expertise, transitioning development decisions from the government to private interests.

But another perspective might be that self-determination and economic development, both explicit goals of the Green Jobs act, simply took priority over its climate and environmental aims. Transitioning to renewable energy production did not offer comparable benefits to continued coal mining and generation for multiple reasons. Navajo ownership of coal mines and coal plants allowed greater control of the supply and value chains associated with mining and energy production on Navajo lands. While the Navajo coal workforce has been engaged in such operations for decades, Navajo workers and business and political leaders have limited experience with renewable technologies. Solar panels and wind turbines are mostly manufactured overseas and require little ongoing labor to maintain. Solar and wind installations consequently employ small numbers of workers, while offering Navajo people fewer plausible opportunities to control supply chains or build local industries.

Consider the Kayenta Solar generation facility, a 56 MW solar power plant completed in 2019 and intended to provide energy for 36,000 homes, connect 228 Navajo homes to the grid for the first time, and temporarily create 150 jobs. Upon completion of construction, however, the Kayenta Solar plant permanently employs just two Navajo workers. Even if the Navajo were to develop and operate 25 solar farms of similar scale to match the 1,500 MW nameplate capacity of Desert Rock, those projects would only permanently employ perhaps several dozen Navajo workers. Kayenta Solar and projects like it have certainly promoted Navajo electrification and furthered a renewable energy vision, but they cannot hope to replace tens of millions in lost coal revenue and hundreds of jobs.

At the same time, Navajo people arguably recognize that the coal sector in its current form cannot hold onto its revenue and jobs in the long term. The Tribal Council's intention in 2013 may have been to translate the Green Jobs act into a more gradual plan using coal in the near term to build economic

capacity to transition towards a cleaner and more diversified economy. In 2019, President Jonathan Nez and Vice President Myron Lizer outlined a new vision for Navajo Nation's energy future in the Navajo Sunrise Proclamation: "For the many who have called upon our Nation's leaders to transition away from our overdependence on fossil fuels, the Navajo Nation will strive for a balanced energy portfolio and will pursue and prioritize clean renewable energy development for the long-term benefit of the Navajo People and our communities."

With these priorities in mind, the Navajo Nation has also increasingly demanded compensation from external stakeholders to support transition efforts. New Mexico's Energy Transition Act of 2019 established a dedicated fund for Native communities impacted by lost coal sector jobs, but regulators initially excluded the San Juan Generating Station from the legislation's scope. Navajo leaders advocated before the New Mexico Public Regulation Commission that the act should apply to Navajo workers employed at the San Juan plant, and the New Mexico Supreme Court subsequently ruled in their favor.

Testifying before the Arizona Corporation Commission in October 2020, Nez argued that the Arizona Public Service (APS) should create a just transition plan committing at least \$193.2 million in direct transition aid to Navajo communities, require utilities to provide advance notice of power plant shutdowns, promote development of renewable energy on the Navajo Nation, and invest in electrification and water access on the Navajo Nation. In response, the APS agreed to a minimum payment of \$127 million to the Navajo Nation over 10 years and committed to purchase power from Navajo clean energy projects. While a notable win for Navajo leaders, the package is \$66 million short of what the Tribe requested, and APS commitments to purchase power from Navajo clean energy projects still depend on their construction.

However, to see the actions of the Tribal Council and NTEC primarily through the lens of a clean energy transition is to miss the forest through the trees.

Diversifying the coal economy is just one of many key priorities for Navajo leaders, alongside addressing unemployment and poverty, paving roads, broadening access to water, heat, electricity, and telecommunications across large areas of the Navajo Nation, providing social services, and protecting Navajo sovereignty. Any path to a just energy transition for the Navajo Nation must navigate these many critical and at times competing priorities.

4.

The decade since the passage of the Navajo Green Jobs act underlines the daunting challenges facing a just transition for the Navajo Nation. The rapid erosion of the US coal sector has challenged NTEC's coal-based strategic foundation for a Navajo energy transition. Environmental groups, both Navajo and non-Navajo, have opposed the Navajo Nation's permit to continue operating the Navajo Mine under provisions of the National Environmental Policy Act and the federal Endangered Species Act. Navajo lands do have excellent potential for wind and solar development, but even in the best case, renewable energy development appears unlikely to replace the jobs and revenues that coal, oil, and gas presently support on the reservation.

Some Navajo have also expressed concern that poorly designed large-scale solar and wind development could replicate many of the extractive characteristics and inequitable legacies of the Tribe's current fossil fuel infrastructure. Would Navajo-produced solar electricity mostly flow off the reservation to Phoenix and Las Vegas, rather than improving energy access on the Navajo Nation? Might economic benefits from Navajo solar farms fall disproportionately to outside solar developers, leaving the Navajo people to grapple with the conversion of culturally, ecologically, and economically important lands to rows of solar panels?

Meanwhile, NTEC's new coal mine purchases in Wyoming and Montana have drawn unprecedented criticism, with even the Tribal Council delivering harsh rebuke of NTEC's surprise announcement and refusing to financially support NTEC's assumption of legal liability in the Powder River Basin mine

deals. The deals have only intensified disapproval of NTEC's structure and decision-making process among many Navajo people, while highlighting the Navajo Nation government's limited oversight of NTEC. While NTEC's Board of Directors is largely made up of Navajo engineers and administrators, the company's top management is White and non-Native, with little prior experience working on the Navajo Nation and limited expertise outside coal. As an enterprise incorporated by the Navajo government, NTEC operates on a for-profit basis while enjoying both sovereign immunity and some tax exemptions, a privilege formalized in 1934 under Section 17 of the Indian Reorganization Act.

Such considerations only deepen the intrigue surrounding the Wyoming and Montana mine purchases. On the more critical side, the opacity and lack of accountability lend ammunition to worries that NTEC's managers and board members have primarily self-serving interests in mind. A more generous but still problematic interpretation is that NTEC's mine deals may indeed seek to benefit the Navajo Nation, but by partially relying upon sovereign immunity to reduce liability for cleanup and other obligations. While NTEC has waived some sovereign immunity in response to such concerns, allowing state and federal mining and environmental regulations to apply to its operations in Wyoming and Montana, NTEC would not be answerable to third-party lawsuits from private citizens or organizations. Yet this situation in turn increases risk, with even unmet state and federal regulatory obligations potentially putting NTEC and the Navajo government in financial jeopardy or leaving communities in the Powder River Basin saddled with unremediated mines. At any rate, NTEC's approach certainly indicates poor transparency and communication, boding poorly for the process of consensus-building key to any just transition. Stricter auditing and oversight of NTEC by the Navajo Nation Tribal Council seem well warranted.

While NTEC's rationale for the Wyoming and Montana mine purchases continues to bewilder, the company can make a somewhat stronger case for continuing coal activities on Navajo land. At the community level, Navajo

coal workers are often supporting large family and kinship groups as a result of widespread unemployment. Coal production and the Navajo coal miner unions offer considerable health benefits, significant salaries, and the ability to work close to home. Compared to the median Navajo household income of \$20,000, employees of the San Juan Generating Station and San Juan Mine make an average of \$86,000. In contrast to installing solar modules or wind turbines produced elsewhere or exporting wool outside the reservation, coal mining and coal power are also economic activities in which Navajo entities can control much more of the value chain, from the mine to the electricity produced.

One proposal for relieving this quandary involves an innovative, if highly speculative, proposal to retrofit the San Juan Generating Station just east of the Navajo Nation with carbon capture technology. In hopes of ensuring the longevity of the plant, the city of Farmington, New Mexico, has pursued a proposal by Enchant Energy to capture around 90 percent of the carbon dioxide produced by the facility and then transport it via pipeline eastwards to the Permian Basin for use in enhanced oil recovery.

While seemingly convoluted, the plan could be economically viable. According to a report prepared for the Department of Energy (DOE) by Management Information Services in September 2020, the cost of installing the carbon capture equipment could be covered by grants, DOE programs, and proceeds and tax credits from the capture and sale of carbon, while the power plant would continue to support significant local employment and tax revenue. Meaningful participation by Navajo workers and technicians in installing and operating the capture technology could even help secure some Navajo presence in an emerging global carbon capture industry.

On the other hand, technical and financial claims should be taken with a grain of salt. Carbon capture remains an experimental and costly technology that has yet to have proven economically viable almost anywhere. Whether carbon capture proves feasible or not, it is clear that resource extraction remains central to the local Navajo economy today, as it does for many other

Federally Recognized Tribes in the United States and for communities in many low- and middle-income countries globally. A successful just transition — on the Navajo Nation or elsewhere — must both offer a path to self-reliance and balance important land, resources, and infrastructure needs with environmental, climate, economic, and sociocultural considerations through open, inclusive internal dialogue.

Crucially, a just transition for the Navajo people must not undermine Navajo sovereignty, recognizing that sustainability or bold climate action cannot come at the cost of eroding self-determination. Rather, any meaningful commitment to environmental justice must accommodate the principle that the Navajo people, should they desire, have the right to prioritize economic development over emissions reductions.

In the end, coal's declining economic benefits, contribution to climate change, and local air and water pollution may well prompt Navajo people to move faster towards a low-carbon economy. That said, Navajo people nevertheless have every right to choose to decarbonize later rather than sooner.

For this reason, outside policy makers and environmentalists should not automatically oppose Navajo plans to continue coal mining or pursue carbon capture proposals. As external actors think about national climate goals or global carbon budgets, entities like the Navajo Nation are the last from which they should demand change.

At the same time, federal support and policies to date have been deficient in meeting their legally bound obligations to Tribes — a recurring pattern that agencies and legislatures must reverse for Tribal governments to have a fair shot at crafting meaningful transition plans. Regional utilities, which have benefitted heavily from easy access to Navajo land and water, also bear important responsibilities to Navajo people and workers as they decide whether to shut down or retrofit coal power plants and whether to buy Navajo-generated electricity. To expand the policy options and resources available to the Navajo while alleviating constraints imposed by historical

inequities, regional and federal governments and utilities should offer strong support for transition efforts without externally imposing specific plans or pathways.

As the future of coal and other fossil energy continues to shift not just nationally but globally, just transition policies must act preemptively to enable viable alternative economic pathways. Simultaneously, the definition of a just transition must broaden to include policies and futures that do not meet strict non-extractive, zero-carbon criteria. It is this open-mindedness regarding the near- and medium-term goals of just energy transitions that acknowledges the sovereign right of politically marginalized groups to make their own development choices. //