THE UNIVERSITY OF CHICAGO

Empowering Sovereignty: How Tribal Energy Enterprises Can Transform Native American Renewable Energy

By Alexandra Szmyd

Submitted in partial fulfillment of the requirements for the degree of:

BACHELOR OF ARTS

IN ENVIRONMENTAL AND URBAN STUDIES and PUBLIC POLICY STUDIES

at THE UNIVERSITY OF CHICAGO

Preceptor: Saliem Shehadeh

Second Reader: Jessica Landau

April 14, 2025

Dedicated to my partner Kareem, whose unwavering support and kindness made this endeavor possible. Thank you for always reminding me to believe in myself.

Acknowledgments

First and foremost, I would like to express my deepest gratitude to my advisors, Jessica Landau and Saliem Shehadeh, for their invaluable guidance, support, and encouragement throughout the course of my research. Their insights and suggestions were essential to the completion of this thesis. I also sincerely thank my thesis preceptor, Anna Seldo, and my instructor, Christopher Kindell, for their time, feedback, and advice throughout the writing of my thesis. I've learned indispensable skills that will surely aid me in all my future research endeavors.

A special thanks to my peers in the B.A. Thesis Colloquium course for their feedback and constructive critiques. The collaboration, camaraderie, and occasional commiseration over the past months have made the journey both productive and enjoyable. I am also immensely grateful to my friends for their encouragement, especially during moments of doubt and fatigue. I pray the endless hours spent in the library are retained as humorous memories in the future. And of course, endless gratitude towards my family, whose kindness reaches me even through the phone.

Thank you all. This work would not have been possible without your guidance and encouragement.

Abstract

Native American reservations possess a disproportionately high share of the nation's solar and wind resources. Despite this boon, tribes have not been able to capitalize on the growing demand for renewable energy sources and build utility-scale generating units. For over 20 years, the main barriers to development have remained consistent: inadequate funding, limited infrastructure, and leadership challenges. By analyzing the approach of the Navajo Power Utility Authority and the Oceti Sakowin Power Authority, we can see that tribal-led, independent energy enterprises are a valuable strategy for renewable energy development. The expertise and resources provided by an energy enterprise, along with their innovative funding strategies, organizational structure, and understanding of Native community values, play a crucial role in developing utility-scale wind and solar projects. Based on these findings, I propose that tribal governments interested in renewable energy development should invest in creating or joining tribal-led energy enterprises. Furthermore, tribes with tribal energy enterprises should consider pursuing Tribal Energy Development Organization (TEDO) certification. With the help of TEDO certification, tribal led energy enterprises would no longer depend on BIA approval for renewable energy projects. While the original Indian Tribal Energy Development and Self-Determination Act (ITEDSA) has received well-deserved criticism in the past, recent amendments, including the path of TEDO certification, have made this a viable strategy to further propel efficiency in renewable energy projects.

Table of Contents

Introduction **7**

Literature Review **9**

Economic and Social Impacts of Renewable Energy Development 10

Barriers to Renewable Energy Development 13

Financial and Resource Limitations 13

Land 15

Tribal Energy Enterprises 18

Policy, Funding, and Legal Frameworks 20

Data and Methods **23**

Legislation, Grants, Laws 24

Government Accessibility Office Reports 25

Primary Tribal Newspaper Articles and Project Reports 26

Case-Study Framework 27

Analysis **28**

Navajo Tribal Utility Authority 28

Financing Strategies 30

Upholding Tribal Values 33

Land Access 35

The Rosebud Sioux Tribe 40

Owl Feather War Bonnet 41

North Antelope Highland Wind Project 44

Oceti Sakowin Power Authority 49

Legal Authority, Land Access, and Financial Strategy 50

Social Values 54

Wind Projects 55

Policy Recommendation 60

Conclusion 67

Bibliography 69

Appendix 79

Appendix 1. 79

Appendix 2. 80

Appendix 3. 81

Introduction

The dispossession of Native Americans was the start of an ongoing struggle to escape the category of being the lowest-income minority group in the United States. Forced to leave their original lands, tribes were relegated to barren wastelands where their economic future was seemingly sealed. In a twist of fate, these reservations were found to be uniquely situated in regions with extensive renewable energy potential[1]. Even though nearly all tribes have expressed interest in developing renewable energy on their reservations[2] and have the unique resources to do so exceptionally well, utility-scale (10MW>) wind and solar operations are rare[3]. This phenomenon has been labeled the paradox of plenty, where tribes find themselves wealthy in the conditions necessary to build successful renewable energies but haven't had the ability to do so on a meaningful scale[4].

There are a number of setbacks that are keeping tribes and interested developers from pursuing these projects, such as funding, tribal bandwidth and turnover, and sovereignty-stripping U.S. policy and programs. Tribes have struggled financially for centuries, and costs for large-scale projects can be upwards of millions of dollars. Without internal funding to depend on, tribes are forced to look outward to federal aid and traditional financing. Unfortunately, a GAO report shows that nearly 70% of applications for financial assistance grants were not funded, resulting in a loss of $245 million that could have gone to renewable energy development[5].

---

[1] Anelia R. Milbrandt, Donna M. Heimiller, and Paul D. Schwabe, "Techno-Economic Renewable Energy Potential on Tribal Lands," July 3, 2018, https://doi.org/10.2172/1459502.
[2] Office of Indian Energy and Economic Development and Division of Energy and Mineral Development, "Native American Wind Resource Atlas," 2010, https://www.bia.gov/sites/default/files/dup/assets/as-ia/ieed/ieed/pdf/idc013229.pdf.
[3] Ibid.
[4] Martin J. Pasqualetti et al., "A Paradox of Plenty: Renewable Energy on Navajo Nation Lands," *Society & Natural Resources* 29, no. 8 (August 2, 2016): 885–99, https://doi.org/10.1080/08941920.2015.1107794.
[5] "Tribal Electricity Access and Reliability," Report to Congress (United States Department of Energy, August 2023), https://www.energy.gov/sites/default/files/2024-01/EXEC-2023-000952%20-

Furthermore, many available grants force tribes to compete with non-tribal entities, decreasing the chances of securing adequate funding[6]. Traditional financing has proven to be just as hard to secure. Regardless of a tribal government or tribal owned business's credit history, preconceived notions of risk have stopped banks from financing more than $100,000 [7].

Bandwidth constraints and high turnover have also been persistent challenges. Investors and developers typically negotiate directly with the tribal council to develop renewable energy projects. Like negotiations with any government, shifting political dynamics can create friction and threaten the project's progress[8]. Frequent turnover in tribal government positions further increases project risk. A project that was previously deemed beneficial and approved by one council may be abruptly canceled by the next[9]. Additionally, tribes with the greatest need often struggle to secure financial and technical support. Unlike wealthier tribes that can hire grant writers internally or externally, these tribes lack the capacity to navigate complex funding applications.

Land-related challenges are the last barrier to large-scale renewable energy development for tribes. Due to the U.S. tribal trust relationship, tribes are required to obtain approval from the Secretary of the Interior before proceeding with energy projects[10]. While legislation has established clear timelines for land lease approvals, federal agencies have repeatedly exceeded

%20Tribal%20Electricity%20Access%20Reliability%20Report%20to%20Congress%20%28Final%20Draft%20-%20Clean%29-signed%20by%20S1.pdf.

[6] Ibid.

[7] W. Gregory Guedel and J.D. Colbert, "Capital, Inequality, and Self-Determination: Creating a Sovereign Financial System for Native American Nations," *American Indian Law Review* 41, no. 1 (2016): 1–49.

[8] *Harnessing the Wind to Help a Sovereign Culture Thrive*, 2018.

[9] Ibid.

[10] Mara Kelsey, Ni Zhang, and Mengyin He, "Tribal Access to Financing for Renewable Energy" (University of Washington Climate Risk Lab and the Foster School of Business - Masters of Business Administration, June 2024), https://foster.uw.edu/wp-content/uploads/2024/06/Tribal-Financial-Access-to-Renewable-Energy-Full-Report.pdf.

these deadlines—often by years[11]. This prolonged delay created substantial setbacks for project timelines. Longer or uncertain project timelines may sway investor confidence and financial commitment, require tribes to redo environmental impact assessments, or result in tribes losing their interconnection agreements. The most damaging effect can be the loss of a power purchase agreement (PPA), which is essential for securing revenue and confirming the financial viability of a project. The cumulative effect of these inefficiencies reduces overall project feasibility, making it significantly harder for tribes to capitalize on renewable energy opportunities.

These issues all have the potential to cripple a solar or wind project. Therefore, I analyze the efficacy of introducing tribal-led energy power utilities and power authorities in overcoming these hurdles. A *tribal-led power utility* is an energy enterprise that engages in the generation, transmission, and distribution of electricity to tribal and non-tribal customers. A *tribal power authority* is an energy enterprise that combines the resources from one or multiple tribes, usually focused on solely generating and selling power through large-scale energy projects. Since tribal-led energy utilities and power authorities have direct insight into the cultural and historical needs of tribes alongside greater time bandwidth for dedicating to renewable energies, they may be the leadership needed to spearhead renewable projects. Furthermore, these energy entities can increase efficiency in obtaining surface leases by applying for TEDO certification.

Literature Review

[11] United States Government Accountability Office, "Indian Energy Development: Poor Management by BIA Has Hindered Energy Development on Indian Lands" (United States of America, June 2015), https://www.gao.gov/assets/gao-15-502.pdf.

Renewable energy development on Native American tribal lands illuminates a complex intersection of economic opportunities, sociocultural values, and policy challenges. This literature review will examine four key aspects of this multifaceted issue: the economic and social impacts of renewable energy projects, the barriers to renewable energy development in Indian Country, the potential benefits of tribal energy enterprises, and the policy and legal frameworks governing energy development on tribal lands.

I chose to focus on authors who use multidisciplinary approaches in their discussions of energy generation on native land. My thesis aims to build on the topics discussed here and propose that tribes could pursue energy enterprise development and pursue Tribal Energy Development Organization (TEDO) certification as a strategic pathway to increase the quantity and scale of renewable energy projects, generate greater economic value, and honor the tribal sociocultural values of individual tribes.

Economic and Social Impacts of Renewable Energy Development

Renewable energy development presents a unique opportunity for Native American tribes that combines economic advancement with cultural and social revitalization. This combination was rare, as previous energy ventures forced tribes to compromise their environmental values and land stewardship. This was primarily seen in the extraction of fossil fuels, like coal mining and oil drilling, which resulted in large-scale environmental degradation. The Navajo tribe is one such tribe that participated in fossil fuel energy generation, but has entered the renewable energy market with considerable strength. Pasqualetti et al. dedicate their paper to the Navajo and show that complex cultural and political tides have the potential to skew the success of solar and wind energy generation. The Navajo reservation has the greatest area out of any other tribal land, the

largest population, and the most potential for renewable energy, especially solar[12]. The history of coal and uranium mines on tribal land pervaded the general attitudes toward energy generation projects. The Kayenta Mine, for example, was highly criticized for unfair financial agreements. To address these concerns as well as avoid further unfair negotiations, the Navajo switched priorities to owning and operating coal mines. The ownership and control of energy generation also spurred controversy, as the Navajo were now directly contributing to the scarcity of water and poor air quality[13]. The prioritization of scarce water resource to support coal mines, changes in Navajo culture due to over-reliance on coal-mining revenues, and forced relocation of Native Americans to facilitate mining activities all soured the trust of Navajo individuals[14]. As Pasqualetti et. al. show, the desire for ownership can be achieved with renewable energy generation while negating large-scale environmental concerns, maintaining cultural values, and achieving consent from nearby communities. The greater concern these authors pose is healing the general distrust, as most members of tribes already possess a well-established opinion on energy development when first presented with the idea of a new project. These opinions vary from being extremely wary to excited about the possible revenue[15]. It calls to attention the need to properly consult all members who could be potentially affected by a project before moving forward.

Knowing that tribes have a rocky past with energy development, how can commercial renewable energy developers connect with tribes? Pasqualetti argues that understanding the importance of certain cultural and spiritual notions is integral to respecting a tribe's sovereignty and improving perceptions toward a solar or wind project. In the case of the Navajo tribe,

[12] Pasqualetti et al., "A Paradox of Plenty."
[13] Ibid. 888
[14] Ibid. 888
[15] Ibid. 889

understanding K'é and Hozho is a prerequisite for successful renewable development. Ke describes the "interconnected and interdependent realm of human-environment relationships [and] the desire to restore peace and harmony", while Hozho represents the importance of preserving the environment as a way to reaffirm social and cultural identities[16]. It's crucial that developers not view these notions as nuisances and instead interpret them as potentially serious wedges that come between their goals and those of the tribe[17]. Rather than centering discussions purely around revenue generation and employment, developers should present their concerns on long-term environmental impacts, sustainability, and any potential socio cultural costs[18].

Connection and revitalization of cultural and social notions can also come from the choice of land selected for renewable energy projects. The Cobell Buy-Back project sought to return parcels of fractioned tribal lands back to their respective tribal governments[19]. Rebekah Martin, a scholar of American Indian Law at the University of Oklahoma College of Law, argues that this program is beneficial in that it remedies the past failures of the DOI (Department of Interior) in defending and protecting tribal interests, while rightfully returning lost and checkerboarded lands to tribes[20]. This project was unfortunately disbanded in 2022, and the hope for the U.S. government to release its paternalistic hold on tribes is slim[21].

Despite losing a lot of their original reservation land to predatory practices and bureaucratic red tape, renewable energy projects offer tribes a novel way to reconnect this severed relationship. As mentioned by Goemon, the relationship between a tribe and land does

[16] Ibid. 890
[17] Ibid. 890
[18] Ibid. 894
[19] Rebekah Martin, "Defending the Cobell Buy-Back Program," 2016.
[20] Ibid. 93
[21] Ibid. 105

not follow the typical Western mindset[22]. In the Western world, land is understood as property, meaning it is a resource that only has utility when it is owned by a single individual. But Goemon finds that most tribes focus instead on the relationship between community and land, and thus their connection to land is not defined by ownership but by mutual respect and utility[23]. Renewable energy projects that are placed on mixed-use land provide tribes with the opportunity to reclaim and repurpose their land for tribal benefit, while also honoring their commitment to sustainability.

Barriers to Renewable Energy Development

Financial and Resource Limitations

Most scholars agree that financial and resource limitations are the largest contributors to slow renewable energy development in Indian Country. Currently, 22 programs exist that provide economic development assistance to tribes in the form of grants, loans, and loan guarantees[24]. Of these programs, only eight are specifically target tribal entities, while the fourteen remaining programs force tribes to compete with parties such as small business owners or cities[25]. Narrowing down once more, only three of these programs specifically mention support for renewable energy programs, and these generally focus on improving tribal technical

[22] Mishuana Goeman, "Land as Life: Unsettling the Logics of Containment," in *Native Studies Keywords*, ed. Stephanie Nohelani Teves, Andrea Smith, and Michelle H. Raheja (University of Arizona Press, 2015), 71–89, https://doi.org/10.2307/j.ctt183gxzb.9.
[23] Ibid. 72
[24] U. S. Government Accountability Office, "Justice40: Additional Efforts Needed to Improve Tribal Applicants' Access to Federal Programs Under Environmental Justice Initiative | U.S. GAO," May 2, 2024, https://www.gao.gov/products/gao-24-106511.
[25] "Tribal Economic Development Action Is Needed to Better Understand the Extent of Federal Support" (United States Government Accountability Office, August 2022).

capacity or funding feasibility studies[26]. None of these policies are sufficient in fully supporting the development of a solar or wind farm, forcing tribes to look elsewhere for funding.

The Oceti Sakowin Power Authority (OSPA) is a multi-tribal power authority representing the Cheyenne River Sioux Tribe, Flandreau Santee Sioux Tribe, Oglala Sioux Tribe, Rosebud Sioux Tribe, Standing Rock Sioux Tribe, and Yankton Sioux Tribe[27]. Zimmerman and Reames assert that individually, these tribes would not have the financial power, technical resources, or bandwidth to support projects individually. These smaller tribes are often overwhelmed with other tasks to effectively run their governments and provide for their communities. Developers may also be hesitant to work with smaller tribes that do not have knowledge about the energy market or direct points of contact, such as tribal consultants. However, when these tribes collectively established a power authority, they formed a worthy competitor in the energy market[28].

The elimination of resource burdens and financial constraints through the creation of tribal energy enterprises independent of tribal government coincides with the findings of Jorgensen and Taylor, who sought out the broader barriers keeping tribes from economic success. They found that independent tribal enterprises, businesses owned and independently managed by Native peoples, are nearly 5 times more likely to be profitable than council-controlled enterprises, businesses that are directly managed or heavily influenced by the tribal council[29]. Specifically, independent enterprises have a 6.8 to 1 odds of profitability, while

---

[26] Ibid. 54-59
[27] Michael G. Zimmerman and Tony G. Reames, "Where the Wind Blows: Exploring Barriers and Opportunities to Renewable Energy Development on United States Tribal Lands," *Energy Research & Social Science* 72 (February 1, 2021): 101874, https://doi.org/10.1016/j.erss.2020.101874.
[28] Ibid.10
[29] Miriam Jorgensen and Jonathan Taylor, "What Determines Indian Economic Success?," *The Harvard Project on American Indian Economic Development*, 2005.

council-controlled enterprises have only a 1.4 to 1 odds[30]. It appears conclusive in their paper that separating political actors from tribal enterprise boards is a necessary step for most tribal businesses.

While Zimmerman and Reames focus on OSPA as an important loophole to the traditional methods of tribal energy project funding, that being government grants and loans, Guedel and Colbert propose a grander, systemic change. Their recommendation is the creation of a Tribally Chartered Bank (TCB) which would operate under tribal law and an independent, tribally appointed body[31]. A new era of implementing renewable energy projects requires an innovative economic institution to assist in funding. They find that traditional methods of financing, such as banking, are impossible for native-owned businesses regardless of their collateral or credit histories, as existing preconceptions of risk limit them from financing more than $100,000[32]. Traditional capital sources are also wary of tribal sovereignty trumping standard financial security mechanisms such as foreclosures or repossessions[33]. U.S. management and involvement in leases pertaining to surface and mineral rights further block tribes from significant capital[34]. Misuse and improper record keeping of business transactions aside, it is nearly impossible for Native American nations to utilize the capital that has been collected and pledged to help the tribes develop their land and natural resource assets. A bank created for tribal interests, such as the TCB, would finally offer a means for tribes to secure the capital needed for utility-scale renewable energy projects. While this is a novel approach, the creation of TCB could take years or decades before it may operate successfully and fund large-

[30] Ibid. 6
[31] Guedel and Colbert, “Capital, Inequality, and Self-Determination.”
[32] Ibid. 12
[33] Ibid. 13
[34] Ibid. 18

scale projects. This solution also omits the other integral parts of a successful renewable energy strategy, such as knowledge of the energy markets, land restrictions, and the degrees of separation required between an energy enterprise and a tribal government.

Land

The U.S. government's interaction with tribal authorities continues to be inadequate. Nicholas Ravotti points toward the history of ROWs (right-of-way) in Indian country as the culprit of slow development. ROW refers to the legal right to pass through or use someone else's land for a specific purpose, most commonly for transportation or utility infrastructure. Prior to 1899, the U.S. Congress was tasked with authorizing every individual ROW[35]. This model was incredibly inefficient, and the Secretary of the Interior was not required to consult with the tribes over which ROWs they passed[36]. Therefore, ROWs could have been built on tribal lands without any confirmation from the tribe as long as they received just compensation, a monetary amount which was also decided by the Secretary of the Interior[37]. The Indian Right of Way Act has undergone several improvements since then, but the process of garnering Bureau of Indian Affairs (BIA) approval to build on tribal lands remains an unpopular policy among tribes. Zimmerman and Reams also touch on this topic, stating that the BIA and their lack of urgency in completing necessary documentation for tribal project approval have been incredibly detrimental to new projects[38]. This inefficiency can be traced back to erroneous record keeping, understaffing, and a general lack of communication between various federal agencies that are required to offer input and confirmation, such as the Department of the Interior and the

[35] Ravotti, Nicholas M., "Access to Energy in Indian Country: The Difficulties of Self-Determination in Renewable Energy Development," *American Indian Law Review* 41, no. 2 (2017): 279–318.
[36] Ibid. 294
[37] Ibid. 294
[38] Zimmerman and Reames, "Where the Wind Blows."

Environmental Protection Agency[39]. Even if a tribe did successfully manage to get an ROW approved, they still had a laundry list of other statutes to get through, including the Indian Mineral Leasing Act of the Indian Mineral Development Act[40].

The definitions and categorizations of land ownership have also been disrupted by legal frameworks. There are four different categories that comprise Indian Country: trust lands, restricted fee lands, fee lands, and allotted lands. Trust lands are owned by the U.S. government and held in trust. Restricted fee lands are owned by the tribe, but they cannot be sold or leased. Fee lands are tribal lands that are owned by an individual and can be sold or leased freely. Allotted lands are trust or restricted fee lands that are held by a tribal member, though they are often highly fractionated[41]. The different land categories can create a highly fragmented, checkerboard pattern within tribal reservations, making surface land projects often impossible[42]

Swinford points to the General Allotment Act of 1887 as a huge contributor to land checkerboarding since the use of broad language and dishonest administrative action increased the 25-year trust period to an indefinite time scale[43]. The act divided communally held tribal lands into individual parcels assigned to Native individuals, with the "surplus" sold to non-native settlers or held in trust by the federal government[44]. The result was a highly fragmented map with alternating parcels owned by different parties. Guedel and Colber choose to focus on the U.S. government-ordered termination of fee simple ownership in the mid-twentieth century as

[39] Ibid. 2
[40] Ravotti, Nicholas M., "Access to Energy in Indian Country."
[41] Tana Fitzpatrick, "Tribal Land and Ownership Statuses: Overview and Selected Issues for Congress" (Congressional Research Service, July 21, 2021).
[42] Guedel and Colbert, "Capital, Inequality, and Self-Determination."
[43] Wyatt Swinford, "Lessons Learned: Avoiding the Hardships of Tribal Mineral Leasing in the Development of Oklahoma Tribal Wind Energy," *American Indian Law Review* 40, no. 1 (2015): 99–129.
[44] Ibid. 102

the culprit, as it ultimately resulted in a land loss to predatory real estate practices and multiple owners assigned to small parcels of land[45]. Both practices make it difficult for tribes to secure sale/lease authorizations to build large energy projects.

The difficulty of leasing lands extends to projects that aren't tribally owned. If a tribe is interested in leasing a portion of its lands to a developer for the purpose of testing wind speeds or constructing turbines, they are required to secure federal approval, as it triggers the Indian Trust Doctrine[46]. To secure this approval, tribes are required to produce two separate documents: The Wind Energy Evaluation Lease (WEEL) and the Wind and Solar Resource Lease. As Swinford points out, tribes were fearful of taking charge on drafting these leases, as their complexity and the struggle of balancing the right about of rigidity so as to allow proper compensation, but not be so restrictive as to prevent any economical production of electricity given the additional hurdles placed by federal law was difficult[47].

Tribal Energy Enterprises

Tribal energy enterprises are a novel solution that has the capability of tackling many of the renewable energy development barriers discussed in the previous section. Michael Zimmerman and Tony Reames were curious about the efficacy of a tribal-led group taking on renewable energy development as opposed to the status quo of tribal government taking the lead. They conducted a comparative case study on the Rosebud Sioux tribe and the power authority they would later join, the Oceti Sakowin Power Authority. Their main objective is to analyze which leadership structure is better at tackling tribal struggles, such as the inability to enter long-

[45] Guedel and Colbert, "Capital, Inequality, and Self-Determination."
[46] Swinford, "Lessons Learned."
[47] Ibid. 112

term, fixed-price contracts, make business deals, capitalize on tax credits, etc.[48]. The Rosebud Sioux Tribe's two attempts at utility-scale renewable projects were unsuccessful, but their luck took a turn when it joined the OSPA.

The loopholes they found in terms of financial strategy and overcoming bureaucratic red tape are impressive, but the real genius lies behind the OSPA's organizational structure. As mentioned in the Pasqualetti article, tribes are not homogeneous entities. Various subgroups within a Native community may have conflicting perspectives on tribal renewable energy or may be reluctant to explore it further because of past disappointments or betrayals concerning energy development. Bridging these differing viewpoints in a singular tribe is already difficult, and independent tribal governments have often sought the approval of every tribe member before agreeing to a project[49]. Zimmerman and Reames contend that this system is flawed, as the outcome of an entire project that takes many years is dependent on the opinions of officials who may be switched out after a year or two. Developers fear that a fully funded and well-established project could collapse following a change in tribal leadership after the next election. The OSPA was able to remedy this issue because all its member tribes have empowered the organization to execute all business contracts without further tribal oversight[50]. While the OSPA takes on full liability for the project, it's also allowed to operate freely without the noise of tribal administrative turnover and differences.

As a tribal power authority, they are federally designated as a non-profit, allowing them to take on liability in the form of debt or loans that would not transfer over to any one of the individual tribes [51]. Furthermore, they can enter land lease agreements without BIA approval.

[48] Zimmerman and Reames, "Where the Wind Blows."
[49] Pasqualetti et al., "A Paradox of Plenty."
[50] Zimmerman and Reames, "Where the Wind Blows."
[51] Ibid. 50

Lastly, the OSPA entered a joint venture partnership, which made them qualify for the federal Production Tax Credit[52].

Still, tribal energy enterprises are not without their faults. Pasqualetti et al. found that the Navajo have struggled with capitalizing on the division between tribal governments and their tribal power utility, the Navajo Tribal Utility Authority (NTUA). The Navajo Nation recently passed a comprehensive energy policy that outlines decision-making power for large and small-scale energy on tribal land[53]. In response to this change, developers from outside the tribe began interacting with various tribal government subchapters in hopes of striking up a deal to build a new solar/wind farm. Regrettably, most of these local governments didn't possess the technical knowledge, bandwidth, or financial resources required for the projects despite the development company's interests[54]. The risk of outside developers taking advantage of the limits of local chapter government knowledge on renewables is often too high, and these governments are more likely to drop a project rather than face challenges constructively. However, if the NTUA were able to attend these meetings and act as a bridge between tribal values and renewable/economic interests, both parties would likely feel more certain going forward. Even more so, the participation of a tribal-led utility can ensure that there is direct tribal leadership in management and development, which breaks the pattern of "outsiders taking charge"[55].

Jorgenson and Taylor also point out that tribal actors may introduce additional pressures on the enterprises, such as emphasizing employment training or raising profits for the community[56]. These tasks may seem beneficial on the surface, but improperly balancing business

[52] Ibid. 50
[53] Pasqualetti et al., "A Paradox of Plenty."
[54] Ibid. 894
[55] Ibid. 894
[56] Jorgensen and Taylor, "What Determines Indian Economic Success?"

efforts could be devastating. For example, a tribal utility could have all variables lined up to start building a solar farm, but if their tribal government requests to pause construction until tribal employment quotas are filled. The utility may have already implemented a tribal labor force, but due to a strict quota, may be forced to find a suitable employee or train one, pushing project deadlines and losing money. Provided that tribal values and cultural considerations remain at the forefront, the tribal energy enterprises' strategy indicates the most promising pathway for tribes to harness their full potential of renewable energy development.

Policy, Funding, and Legal Frameworks

In response to increasing tribal frustration over sovereignty and nonexistent assistance in developing renewable energy resources, the U.S. government passed the EPAct in 2005, which included the Indian Tribal Energy Development and Self-Determination Act (ITEDSA). This act allowed tribes to create long-term ROW agreements for energy development under a Tribal Energy Resource Agreement (TERA)[57]. This act could have allowed tribes to escape ongoing DOI oversight and significantly increase their sovereignty while still maintaining the trust relationship between the U.S. government and tribes. Unfortunately, the requirements were far too large. The application itself was costly, time-consuming, and difficult to complete[58]. Agencies such as the BIA have repeatedly refused to assist tribes in completing their applications or left their application idle for months[59]. Furthermore, TERAs require a significant tribal environmental review process on top of an already extensive National Environmental Protection

[57] Nicholas M. Ravotti, "Access to Energy in Indian Country: The Difficulties of Self-Determination in Renewable Energy Development," *American Indian Law Review* 41, no. 2 (2017): 279–318.
[58] Ibid. 306
[59] Ben Reiter, "A New TERA: Why It's Time to Revisit Tribal Energy Resource Agreements," *LSU Journal of Energy Law and Resources* 10, no. 2 (2022), https://digitalcommons.law.lsu.edu/jelr/vol10/iss2/6.

Act review[60]. This would mean all projects situated on tribal land would require 2 or more additional years of review, putting them at a disadvantage with other residential lands potentially available to developers. Tribes must incur all costs, from the application to the costs of long wait times. Not a single tribe has applied successfully for a TERA since its creation almost 20 years ago[61]. Rather than pursuing the unpopular TERA pathway towards land leasing rights, some utilities have sought out alternative methods, such as the OSPA. Being classified as a section 17 corporate non-profit has allowed this power authority to enter ROW agreements and take on liability through the form of debt or loans without federal approval[62]. Nevertheless, section 17 status comes with its own restrictions, such as set lease terms that cannot be renewed for additional periods without BIA approval[63].

Ben Reiter argues that tribes ought to reconsider applying for TERA certification in the modern day. The DOI final rule implemented in 2018 offered significant amendments to ITEDSDA, with a focus on improving the tribes' application process and removing federal disincentives in approving TERAs[64]. The most important amendment included:

1. Removing uncertainty on which tribes qualify for the TERA and the steps necessary to qualify
2. The Secretary can now only disapprove under a limited subset of reasons
3. Reduction of NEPA environmental review requirements, allowing for tribal-led review
4. The DOI has 270 days to disapprove a TERA before it is automatically approved

[60] Zimmerman and Reames, “Where the Wind Blows.”
[61] Ravotti, Nicholas M., “Access to Energy in Indian Country.”
[62] Zimmerman and Reames, “Where the Wind Blows.”
[63] Division of Economic Development and Indian Affairs Office of Indian Energy and Economic Development, “Choosing a Tribal Business Structure.”
[64] Reiter, “A New TERA: Why It’s Time to Revisit Tribal Energy Resource Agreements.”

Reiter argues that these amendments sufficiently target tribal uncertainty regarding whether their application will be accepted, and provide them with considerable flexibility in tailoring requirements such as their environmental review[65]. While these amendments may increase the chance that tribes successfully gain TERA certification, they still do not tackle important barriers such as securing pivotal investment, separating tribal governments from energy projects, or increasing tribal bandwidth and expertise.

Luckily, the last important amendment to the ITESDA Act created Tribal Energy Development Organizations (TEDOs). This policy allows for greater sovereignty to energy enterprises such as power authorities and utilities by allowing them to enter public-private partnerships, as well as all the benefits that are granted to tribes under TERA[66]. TEDO approval has the capability of remedying tribal concerns over land lease and business rights, as well as granting the tribes necessary resources and expertise to oversee development tasks previously assumed by the U.S. government[67]. The application requirements are similar to the TERA, and the timeline to approval is significantly shorter: 90 days to approve or disapprove, then an additional 10 days to issue the certification[68]. TEDOs are rarely discussed in both scholarly journal articles and primary government works, revealing a glaring gap in research.

Conclusion of Literature Review

This literature review aimed to reveal the complex landscape of renewable energy development on Native American tribal lands, highlighting both opportunities and challenges.

[65] Ibid. 369-370
[66] Ibid. 368
[67] Ibid.. 368
[68] Ibid. 368

The economic and social impacts of such projects are significant, offering tribes a chance to advance economically while honoring their cultural values and environmental stewardship. However, substantial barriers persist, including financial limitations, complex land ownership structures, and bureaucratic hurdles.

Tribal energy enterprises emerge as a promising solution to many of these challenges. Moving forward, this paper will argue for a proactive approach by tribal nations in pursuing renewable energy development through the examination of two case studies: The NTUA and the OSPA. Rather than waiting for novel institutions like Tribally Chartered Banks to materialize, tribes should focus on forming energy enterprises and seeking TEDO certification. This strategy can provide tribes with greater autonomy in managing their energy resources and streamline the approval process for energy-related agreements. By taking control of their energy future, tribes can work towards greater economic sovereignty and sustainable development.

Data and Methods

I utilized two case studies to undertake this research. The first of the two will be an analysis of the Navajo Tribal Utility Authority (NTUA). The NTUA has been incredibly successful in renewable energy project adoption, boasting two of the largest solar projects built on tribal land: The Kayenta Solar Project and the Red Mesa Tapah Solar Project, totaling over 125 MW[69]. The NTUA, therefore, provides a great example of a successful tribal-led power utility, boasting achievements that other tribes may seek to emulate. The second case study I plan to use is the Oceti Sakowin Power Authority(OSPA). This enterprise consists of seven different

[69] Glenn Steiger, "Utility-Scale Solar Development on Tribal Lands," December 8, 2021, https://www.energy.gov/sites/default/files/2021-12/developing-utility-scale-solar-development-on-tribal-lands.pdf.

tribes, which otherwise may have had limited resources to complete energy projects independently. The Rosebud Sioux Tribe, a member of the OSPA, has attempted unsuccessfully to produce projects by themselves, providing a good framework to analyze tribal strategy independently and after forming a power authority. To support these case studies, I will be incorporating primary data such as legislation and grants, Government Accessibility Office Reports, tribal newspaper articles, and project newsletters. These sources will help contextualize the case study findings and aid analysis into the potential benefits of TEDO certification for these tribes and others.

Legislation, Grants, Laws

It's important to understand the legal background that tribal enterprises are operating under as they embark on producing solar and wind projects. The success of tribal energy projects is dependent on the forms of funding they receive, the methods they undertake to achieve said funding, and their access to tribal lands and surface leases. Hence, it's crucial to analyze how each separate tribal entity in the two case studies approaches current policies and laws. By critically assessing the language of relevant policies and grants, I will draw connections on the efficacy of tribal enterprises interacting with said legislation. It's also critical to analyze whether certain tribes have a better relationship with the U.S. federal government, as this may skew any positive correlations found between forming a tribal energy enterprise and success in building renewable energy projects. This issue arises particularly with the Navajo Nation, which was given special permissions that most tribes do not have access to, such as the ability to lease out land without BIA approval. In such cases, I analyzed secondary documents to understand when these closer relationships arose and why.

Government Accessibility Office Reports

The Government Accessibility Office (GAO) releases reports that provide Congress with holistic information about certain policies, government actions, and data concerning a multitude of different topics. When it comes to tribal energy development, the GAO examines several different federal agency efforts, such as the Department of Energy (DOE) and the BIA, and decides whether or not these efforts have been successful. They also look at specific policy initiatives, such as the Indian Tribal Energy Development and Self-Determination Act (ITEDSA), to determine if these policies have been implemented properly. Lastly, the GAO will recommend valuable solutions to boost effectiveness, increase transparency, and identify any lasting challenges that may require further policy amendments. These reports were instrumental in further analyzing energy policy that affects tribal governments and energy enterprises. Furthermore, these reports often include case studies on relevant tribes, many of which coincide with the subjects I have chosen for my case studies. Comparing their recommendations to my data provided a relevant check on my conclusions.

GAO reports will also be instrumental to my policy recommendations, as they will facilitate important data on which federal agency is most adept at communicating relevant policy amendments to tribes. For example, crucial amendments to the ITEDSA that would significantly aid tribes in renewable energy development have not been widely adopted by any tribe other than the Red Lake Band of Chippewa Indians[70]. Analyzing which branch of the federal government has had the most success in communicating policy updates to tribes.

[70] "Indian Affairs Approves First Ever Tribal Energy Development Organization | Indian Affairs," accessed January 31, 2025, https://www.bia.gov/news/indian-affairs-approves-first-ever-tribal-energy-development-organization.

Primary Tribal Newspaper Articles and Project Reports

An integral part of tribal energy projects is ensuring the local community is fully supportive and that their rights are being protected. To gauge this sentiment, I've chosen to rely on tribal newspapers and project reports. These grant me the ability to track how tribal energy enterprises are communicating with the public, as well as their response to project updates. These also highlight what specific tribal values energy enterprises are looking to uphold, and their strategies for doing so.

Project newsletters and reports provide key information on what categories of land energy enterprises are targeting when they site energy projects, the financial background of projects, how these financial models inform the utility or power authorities' decisions, and what sorts of federal agencies and grants they have utilized to support projects. This information will be pivotal in deciphering the operations of tribal energy enterprises and gauging whether their decisions are beneficial to large-scale energy generation.

Case-Study Framework

By choosing case studies, I will be able to compare two different approaches that existing tribes have taken and analyze the efficacy in implementing renewable energy enterprises. The first approach is formulating an independent tribal led energy utility that primarily serves one tribe, and the second approach is creating a joint power authority comprising multiple tribes.

The cases that have been selected vary by the financial and material conditions of the tribe. The first case that I plan to examine is the NTUA, as the Navajo Nation has the greatest land allowances, transmission availability, and relationship with the federal government. My analysis of this case will show how a tribal energy enterprise operates in a "best-case scenario" and thus isolate critical elements such as government structure, energy enterprise organization,

technical expertise, and financing models. As a result, this easy case will show the plausibility of implementing tribal energy enterprises as a solution to growing large-scale renewable energy on tribal lands. This case will also demonstrate positive impacts that federal branches have had on the Navajo Nation. Moreover, as a baseline for comparative analysis, the NTUA case will enable a more nuanced exploration of challenges faced by other tribes with fewer resources.

The second case will tackle the OSPA, which will contain an analysis of one of its members who had previously failed twice at implementing a renewable energy project: The Rosebud Sioux Tribe. Due to these complications, the formation of a tribal power authority may not seem like the most promising solution. However, this challenging scenario strengthens the argument for the effectiveness of the OSPA's approach. By examining the Rosebud Sioux Tribe's unsuccessful 30 MW Owl Feather War Bonnet Wind Farm and 190 MW North Antelope Highlands Wind Farm, and comparing them to their subsequent involvement in the OSPA's ongoing 2 GW project, we can gain valuable insights into the transformative power of collaborative tribal efforts[71]. This case will demonstrate that even when individual tribes face significant challenges, the formation of a unified power authority like the OSPA can provide the necessary structure, resources, and collective bargaining power to succeed where individual efforts have failed.

Once the successes and barriers of these two entities have been established, I analyze the benefits of TEDO certification for these tribes and federally recognized tribes as a whole. Upon determination of these benefits, my recommendation will suggest that tribes establish tribal-led energy enterprises and pursue certification. My recommendation will extend to the Bureau of Indian Affairs as well, as there are still many improvements that could be made to the TEDO

[71] Zimmerman and Reames, "Where the Wind Blows."

process that can make this strategy more accessible to tribes. These will include streamlining and clarifying the approval process of TEDO certifications, improving outreach and assistance, and providing a brochure to inform tribes on the many opportunities that TEDO certification provides.

Analysis

Navajo Tribal Utility Authority

This section examines the Kayenta Solar Project, a significant renewable energy initiative led by the Navajo Tribal Utility Authority (NTUA). It highlights the broader implications of tribal utility ownership in advancing large-scale renewable energy projects and explores the project's development across two phases: its financial structuring and its alignment with Navajo Nation values. The discussion begins with an overview of the project's scope and impact, detailing the energy output and the number of homes it serves. The financial analysis then delves into the strategies employed by the NTUA to fund the project, including tax credits, power purchase agreements, and federal loan programs. Following this, the section considers the project's role in upholding tribal values, particularly through workforce development, community engagement, and economic empowerment. Finally, an exploration of the Navajo Nation's unique land leasing regulations provides context for how the project was made possible and highlights the ongoing challenges tribes face in securing land for renewable energy development. The NTUA's success with Kayenta demonstrates the advantages of tribal utility ownership, showing that when tribes control their own energy enterprises, they can navigate financial barriers, secure strategic partnerships, and ultimately drive self-sustaining economic and energy development. By leveraging their own utilities, tribes can ensure that renewable energy projects align with

their long-term goals of energy sovereignty, economic resilience, and environmental stewardship.

The Kayenta Solar Project was developed in 2 phases, with the first phase reaching completion in 2016 and the second in 2019[72]. The NTUA spearheaded this project in collaboration with various entities such as the Salt River Project, Isolux Corsan, and Swinerton Renewable Energy[73]. The first phase produced 27.3 MW of solar across 198 acres, and the second phase added an additional 27.3 MW, making the total output of the solar farm 56MW[74]. This farm serves primarily residents of the Navajo Nation, with the total electrical output being enough to serve 36,000 homes. Most recent reports claim that they were successful in bringing power to 406 families[75].

Financing Strategies

The costs of the entire project totaled $164 million, a hefty price for any tribe to pay[76]. The NTUA utilized various strategies to properly execute this project, the first being the creation of a for-profit entity to utilize a solar investment Tax Credit[77]. The Investment Tax Credit was created to incentivize large-scale renewable energy production in the United States, as can be deduced by the greater tax percentage given to projects that reach over a 1 MW capacity. For all

[72] U.S. Department of Transportation Federal Highway Administration, "Project Profile: Navajo Nation Kayenta Solar Program (Phase I & II), Arizona," n.d., https://www.fhwa.dot.gov/ipd/project_profiles/az_navajo_nation_kayenta_solar_program.aspx.
[73] Ibid.
[74] Ibid.
[75] "FHWA - Center for Innovative Finance Support - Project Profiles," accessed January 25, 2025, https://www.fhwa.dot.gov/ipd/project_profiles/az_navajo_nation_kayenta_solar_program.aspx.
[76] U.S. Department of Transportation Federal Highway Administration, "Project Profile: Navajo Nation Kayenta Solar Program (Phase I & II), Arizona."
[77] Steiger, "Utility-Scale Solar Development on Tribal Lands."

renewable projects that are greater than 1 MW, there is a base tax rate of 30 percent, whereas projects smaller than 1 MW receive a base rate of 10%. This is based on the 2017 version of the Investment Tax Credit, meaning there are no additional requirements to fulfill in order to receive a greater percentage, as listed in more recent versions of the ITC following the Inflation Reduction Act. Now, projects can apply for the low-income community's bonus credit program (additional 10 to 20 percentage point boost) and bonus credits for fair wages and apprenticeships[78]. An additional 10% is also provided to projects that domestically source the materials needed, such as steel and iron[79]. This includes products mined, produced, or manufactured in the United States[80]. Due to the past limitations of tax credit accessibility, tribal governments were unable to utilize these important reductions. To bypass these restrictions, the NTUA created a for-profit subsidiary called NGI-Kayenta Inc., which enabled the NTUA to tap into this pivotal tax reduction and further ameliorate its financial strategy[81].

This was not the only strategy the NTUA evoked. They chose to enter a two-year power purchase and renewable energy credit agreement with the Salt River Project [82]. The Salt River Project is a nonprofit utility operating in Arizona that provides technical support in developing interconnection facilities and as well as financial expertise related to development and

[78] "FACT SHEET: President Biden's Budget Delivers for Tribal Nations and Tribal Communities | The White House," accessed January 25, 2025, https://web.archive.org/web/20230404045555/https://www.whitehouse.gov/briefing-room/statements-releases/2023/03/09/fact-sheet-president-bidens-budget-delivers-for-tribal-nations-and-tribal-communities/?hss_channel=tw-104862477.
[79] "Domestic Content Bonus Credit | Internal Revenue Service," accessed January 25, 2025, https://www.irs.gov/credits-deductions/domestic-content-bonus-credit.
[80] Ibid.
[81] Steiger, "Utility-Scale Solar Development on Tribal Lands."
[82] U.S. Department of Transportation Federal Highway Administration, "Project Profile: Navajo Nation Kayenta Solar Program (Phase I & II), Arizona."

ownership[83]. Their PPA agreement would ultimately cover the loan repayments for the plant's construction[84].

Finally, the NTUA utilized the Electric Infrastructure Loan and Loan Guarantee Program, which is administered by the Rural Utilities Service. Through this program, the NTUA received a $94 million loan to support the development of the Kayenta Project[85]. The Electric Infrastructure Loan and Loan Guarantee Program makes insured loans to nonprofits and cooperative associations for the purpose of financing electric distribution and generation facilities[86]. This loan guarantee offers an enticing avenue to access funding, as it can be used to finance up to 100% of the project's construction costs. Aside from being available to federally recognized tribes, state and local governments, nonprofits, and for-profit businesses can also apply, making the application process more competitive[87]. Yet, despite the large application pool, the NTUA was able to stand out as a worthy candidate for funding and successfully secured the loan.

Phase I generated $15.6 million in economic activity, encompassing but not limited to job creation, business growth, and infrastructure development. It also generated $3 million in taxes to the Navajo Nation, and is projected to produce $7.6 million over its 30-year projected

[83] "NTUA, SRP and Navajo Nation Leaders Celebrate Green Energy for Nation at Kayenta Solar," NTUA, SRP and Navajo Nation Leaders Celebrate Green Energy for Nation at Kayenta Solar, accessed March 13, 2025, https://srp.net/2n0HDAw.
[84] U.S. Department of Transportation Federal Highway Administration, "Project Profile: Navajo Nation Kayenta Solar Program (Phase I & II), Arizona."
[85] "USDA Announces Loans to Improve Rural Electric Infrastructure and Upgrade Energy Efficiency | Home," May 30, 2019, https://www.usda.gov/about-usda/news/press-releases/2019/05/30/usda-announces-loans-improve-rural-electric-infrastructure-and-upgrade-energy-efficiency.
[86] U.S. Department of Agriculture, "Electric Infrastructure Loan & Loan Guarantee Program," Rural Development, January 19, 2015, https://www.rd.usda.gov/programs-services/electric-programs/electric-infrastructure-loan-loan-guarantee-program.
[87] Ibid.

lifespan[88]. This excellent investment and the 2-year energy credit purchase agreement with the SRP enabled NTUA to finalize an agreement with the Navajo Nation Community Development Block Grant program[89]. This program extends electrical service to 93 Navajo families, a project that was previously inaccessible due to the requirement of matched funds from the NTUA. Thankfully, with the revenues from the Kayenta Solar project, NTUA moved forward with the last project requirements, such as rights-of-way and environmental assessments[90]. Phase II of the solar farm brought the Navajo Nation an additional $15 million in economic activity, $3 million in taxes, and another $7.6 million over 30 years[91]. Additional proceeds will be used to keep NTUA's electric rate low and further pay for the electrification of Navajo homes through investment in programs like Light Up Navajo. In 2019, the NTUA was able to successfully extend electricity to 233 regional families that were previously without, and in 2022 to an additional 173 families[92].

The NTUA's innovative approach to financing and executing the Kayenta Solar Project demonstrates the effectiveness of tribal utilities in advancing renewable energy development on tribal lands. By creating a for-profit subsidiary, leveraging tax credits, entering strategic agreements, and utilizing federal loan programs, the NTUA showed the potential of tribal entities to overcome financial barriers and successfully implement large-scale renewable projects.

---

[88] "FHWA - Center for Innovative Finance Support - Value Capture - Renewable Energy (Solar) on Tribal Lands," accessed March 31, 2025, https://www.fhwa.dot.gov/ipd/value_capture/strategies_in_practice/kayenta_solar_navajo_nation.aspx.
[89] "Navajo Tribal Utility Authority 2016 Progress Report," 2016, https://www.ntua.com/assets/2016-ntua-progress-report.pdf.
[90] Ibid. 4
[91] "FHWA - Center for Innovative Finance Support - Value Capture - Renewable Energy (Solar) on Tribal Lands."
[92] "Navajo Tribal Utility Authority Light Up Navajo," accessed March 31, 2025, https://www.ntua.com/lun-2022.html.

Furthermore, the NTUA represented the interests of its regional customers by utilizing project revenues to maintain low electricity rates and extend energy access to rural areas.

Upholding Tribal Values

The NTUA was successful in upholding the values of the Navajo Nation and its members, firstly, through their contributions toward economic activity and workforce opportunities. Due to their contract with Isolux Corsan, 200 Navajo residents received training in advanced technical procedures necessary for assembling and installing the solar plant[93]. This meant that 87% of labor for the project was sourced from members of the Navajo Nation, a total of over $9 million in wages[94]. Glenn Steiger, executive consultant and project manager for the NTUA, also shared that following the completion of the Kayenta projects, he received a call from a developer in Albuquerque who needed trained and skilled labor, and thus many of the short-term Navajo workers found further employment there[95]. The project's focus on employing Navajo workers demonstrates a commitment to tribal economic development. By providing specialized training in solar technology, the NTUA invested in long-term skill development for tribal members and created opportunities beyond the immediate project[96].

There was also proper consultation of the Kayenta community. As mentioned in an article from the *Navajo Times*, the Kayenta community voted in favor of the solar facility. The Kayenta

[93] U.S. Department of Transportation Federal Highway Administration, “Project Profile: Navajo Nation Kayenta Solar Program (Phase I & II), Arizona.”
[94] “NTUA Solar Energy,” accessed January 25, 2025, https://www.ntuasolar.com/kayenta.
[95] Lori Lovely, “Project Profile: Kayenta Solar Facility,” Grading and Excavating, May 1, 2018, https://www.gxcontractor.com/home/article/13033737/project-profile-kayenta-solar-facility.
[96] Steiger, “Utility-Scale Solar Development on Tribal Lands.”

Council Delegate Nathaniel Brown proudly thanked his community for approving the facility[97]. Their support was instrumental in securing the land needed for the project, as the Navajo Nation would have likely not leased the land to the NTUA had there been local dissent. As such, NTUA's prioritization of community involvement and consent proves that they respect the traditional Navajo Nation decision-making processes[98].

This project also serves as a beacon of hope among all tribes who value complete ownership of their utilities. The Kayenta solar farm was the largest solar plant of any project built on tribal lands that are owned entirely by its own people[99]. It also presently serves 28,500 Navajo homes, ensuring that the NTUA stays true to its promise to expand electricity access, as it claimed to do through the Light Up Navajo policy[100]. Excess power was primarily sold to SRP per their PPA. This project exemplifies the NTUA and the Navajo Nation's successful pursuit of economic sovereignty. Building a project that is not only entirely owned by the NTUA but also represents the first time the tribe was able to exercise full control over their own surface leases for renewable energy is a remarkable step in the right direction.

Land Access

The Navajo Nation has unique land allowances that other federally recognized tribes cannot access due to two pieces of legislation: The Navajo Nation Trust Land Leasing Act of 2000 and the Navajo Nation General Leasing Regulation of 2013. The Navajo Nation Trust Land

[97] "Kayenta Solar Project Is Operational," *Navajo Times*, June 22, 2017, https://www.ntua.com/assets/kayenta-solar-project-is-operational----navajo-times-paper---06-22-2017.pdf.
[98] Pasqualetti et al., "A Paradox of Plenty."
[99] "NTUA Solar Energy."
[100] "FHWA - Center for Innovative Finance Support - Project Profiles."

Leasing Act of 2000 was the first act allowing any tribe in the U.S. to lease the surface of land without approval from the Secretary of the Interior. As stated by the Indian Affairs Committee of the 106th Congress, the requirement of Secretary approval adds an additional burden of review and regulation that does not apply to non-tribal private lands[101]. Furthermore, the Act stated that the Navajo Nation should have full rein to make immediate decisions over the use of their lands, bar the exploration and extraction of minerals[102]. This was done with the purpose of revitalizing the Navajo reservation and promoting economic development and self-determination[103]. Despite this act giving the Navajo the power to lease lands of their own volition, it did not offer the tribe full agency over the process. The tribal regulations and process of leasing had to be approved by the Secretary of the Interior, and in order to gain approval, it had to closely mirror the regulations[104]. The regulations set forth by the Secretary of the Interior are as follows[105]:

- Lands must be leased for business, agricultural, public, religious, educational, or residential purposes
- Leases must include an environmental and cultural review
- Leases that make payments directly to the Navajo must be paired with documentation of the lease payments being sufficient to enable the Secretary to discharge the trust responsibility of the United States
- Stay contained with 25 years for business and agricultural leases, and 75 years for leases pertaining to public, religious, educational, recreational, or residential purposes.

The conditions of this act were isolated to the Navajo Nation tribes but later introduced to all other federally recognized tribes through the Hearth Act of 2012. The language used in the Hearth Act closely mirrors that of the Navajo National Trust Leasing Act of 2000, with both

[101] Ron Kyl, "Navajo Nation Trust Land Leasing Act of 2000," Pub. L. No. S.2665 (2000), https://www.congress.gov/bill/106th-congress/senate-bill/2665/text.
[102] Ibid.
[103] Ibid.
[104] Ibid.
[105] "25 CFR Part 162 -- Leases and Permits," accessed March 13, 2025, https://www.ecfr.gov/current/title-25/chapter-I/subchapter-H/part-162?toc=1.

pieces of legislation claiming they were created to support tribal self-determination, with similar tribal regulation standards such as including an environmental review process, term limits, and restrictions to tribal trust and restricted lands[106]. This does call into question why the Navajo Nation was given preferential treatment with an earlier codification of lease rights before any other tribe. Their "special relationship" is even referenced in the language of the Navajo Nation Trust Leasing Act of 2000[107].

One theory for the Navajo being selected as a pilot for more tribal control in surface leasing is their greater resource allowance. The Navajo Nation has more reservation land than any other tribe and has thorough experience with energy-related projects[108]. The creation of the Navajo Nation tribal government body was facilitated by the U.S. government as a means to allow oil companies as well as federal bodies to lease lands with the purpose of fossil fuel extraction and uranium mining[109]. Through this process, as well as the entanglement of rural electrification programs, the U.S. positioned the Navajo Tribal Utility Authority (NTUA) as a symbol of federal involvement spurring economic activity[110]. Especially after World War 2, Navajo uranium, oil, and coal extraction rose in popularity to fuel the U.S.'s global military and economic power[111]. The Navajo took advantage of this opportunity, despite internal criticisms of their decision and the complexities of power dynamics, to elevate themselves through non-

[106] "HEARTH Act Leasing | Indian Affairs," accessed March 13, 2025, https://www.bia.gov/service/HEARTH-Act.
[107] Kyl, Navajo Nation Trust Land Leasing Act of 2000.
[108] Dana E. Powell, *Landscapes of Power Politics of Energy in the Navajo Nation* (Duke University Press, 2018), https://doi.org/10.1215/9780822372295.
[109] Ibid. 38
[110] Ibid. 36
[111] Ibid. 36

renewable energy ventures, fostering intellectual capitalist growth and improving infrastructure[112][113].

By the late twentieth century, the Navajo economy relied on coal extraction to bring in 50% of its annual revenue, expanding its socio-political and economic spheres[114]. These conditions enable the Navajo Nation to be considered a political body with intricate ties to the federal government[115]. Their intensive development as compared to other tribes and experience in capitalistic land endeavors may have inspired the federal government to select them as the first tribe to be in charge of their own surface leases.

The Navajo Nation General leasing regulations of 2013 expanded the type of leases that the Navajo can partake in[116]. As stated previously, the Navajo Nation Trust Land Leasing Act of 2000 only permitted the tribes to lease tribal lands for business, religious, educational, and residential purposes, excluding renewable energy and mineral leasing. With the 2013 amendment, the U.S. permitted the Navajo to issue renewable energy-related leases and permits, as well as streamlined procedures for environmental review, approval, management, and enforcement of leases[117]. This was passed with the aim of promoting self-determination, encouraging self-sufficiency, and improving the efficiency of leasing on Navajo Nation trust lands[118]. This amendment, once again, does not apply to land classifications outside of native trust lands.

---

[112] Pasqualetti et al., "A Paradox of Plenty."
[113] Powell, *Landscapes of Power Politics of Energy in the Navajo Nation*.
[114] Ibid. 28
[115] Ibid. 28
[116] Navajo Nation Council, "United States Department of the Interior Bureau of Indian Affairs Approval of the Navajo Nation General Leasing Regulations of 2013" (United States Department of Interior, 2013), http://nnld.org/docs/gldd/General_Leasing_Regulation_2013.pdf.
[117] Ibid.
[118] Ibid.

Because of this regulation, to secure land for projects such as the Kayenta Solar Project, the NTUA is required to submit a fully completed lease form, an appraisal if applicable, a certified site survey, and documentation of environmental review[119]. The Navajo Nation is allowed to waive or charge nominal rent for the use of Navajo Nation trust lands and public utilities, where such entities or projects are providing essential governmental or utility services to the Navajo people[120]. Considering that the Kayenta Project supplied electricity to tribal residents, it is not beyond the scope of possibility that the Navajo Nation could have reduced the lease amount in support of the project.

Despite the greater agency received by the Navajo Nation in leasing their lands to the NTUA for renewable energy projects, many roadblocks inhibited their progress. The Executive Director of the Division of Natural Resources of the Navajo Nation, Arvin Trujillo, commented that the amount of support, both technically and financially, was woefully lacking following the Navajo Nation Tribal Leasing Act of 2000 and the subsequent approval of regulations in 2006 (Helping Expedite and Advance the HEARTH Act, 2009). He claimed that the Congressional Budget Office determined that the Navajo would not require any financial support for services such as data cleanup, direct implementation, or development and revision of tribal procedures[121]. For example, no funding was given to the Navajo to update the historical DOI backlogs of pending lease transactions[122].

[119] Ibid.
[120] Ibid.
[121] "Helping Expedite and Advance Responsible Tribal Homeownership Act or the Hearth Act" (U.S. Government Publishing Office, October 21, 2009), https://www.govinfo.gov/content/pkg/CHRG-111hhrg52940/html/CHRG-111hhrg52940.htm.
[122] Ibid.

Trujillo also stated that BIA logs of capacity surveys and land plots identified for leasing were severely outdated, most being conducted in the mid-1900s[123]. The data transferred to the Navajo utilize outdated mechanisms to identify plots of land, with reports citing nearby rocks, trees, and natural landmarks rather than concrete coordinates[124]. In response to this woeful lack of data, they were forced to create the Navajo Nation Land Title Records office with completely independent funding[125].

Furthermore, despite having approved regulations, Mr. Trujillo claimed that business leases were still required to be submitted to a Navajo Regional BIA office for conveyance, a process that could take anywhere from 2 months to a year[126]. This is a large discrepancy to the supposed freedom and streamlining intended by the Navajo Nation Tribal Leasing Act and the subsequent Navajo General Leasing Act of 2013, neither of which gives any mention to processing lease conveyances.

The quality of BIA data on Indian trust lands is debated. In a statement during this legislative hearing, Jerry Gidner, the director of the BIA, claims that the quality of BIA data on Indian trust lands is "pretty good," stating that it is constantly being updated[127]. He then adjusts his statement, saying that the database is never entirely current due to the volume of workload, yet it is nevertheless better than it has ever been[128]. Mr. Gidner then reveals that there is no clear timeline for approving tribal regulations through the Hearth Act or otherwise[129]. Despite the act claiming that the secretary must approve tribal regulations within 120 days, he was unable to

[123] Ibid.
[124] Ibid.
[125] Ibid.
[126] Ibid.
[127] Ibid.
[128] Ibid.
[129] Ibid.

give a definitive answer on how the BIA plans to process the backlog of leases and regulations[130].

The 6-year delay faced by the Navajo Nation was a glaring issue that the BIA planned to mediate through the Hearth act with future tribes seeking land lease rights. Yet, it was found in 2019 that the Interior has yet to clearly document its process for reviewing tribal leasing regulations[131]. Despite the 120-day time frame, intending to begin at the first submission of tribal regulations, the GAO found that the Secretary of the Interior started the clock only during the final version of the proposed regulations[132]. This 'final version' considers regulations that have undergone review by the BIA, the Interior Solicitor's Office, and the Tribe. In theory, the Interior could continue to request additional review by the BIA and Solicitor's office multiple times, extending the time frame far past 120 days.

In summary, the land allowances granted to the Navajo Nation greatly improved the project timeline for the Kayenta project. Rather than waiting an indiscriminate amount of time for the BIA to approve a project, the NTUA was able to directly lease from the Navajo Nation, a power that would greatly benefit other tribes as they embark on renewable energy development.

The Rosebud Sioux Tribe

The Rosebud Sioux Tribal reservation is situated on 888,500 acres in South Dakota. It houses a total wind potential of about 52,155 MW with about 400,877 acres classified as a wind

[130] Ibid.
[131] United States Government Accountability Office, "Indian Programs Interior Should Address Factors Hindering Tribal Administration of Federal Programs," Report to the Chairman, Subcommittee on Regulatory Affairs and Federal Management, Committee on Homeland Security and Governmental Affairs, U.S. Senate (Government Accountability Office, January 2019).
[132] Ibid, 19

power class 3 and 351,757 acres as Class 4[133]. Classes 4 and above are viewed as favorable to wind project development[134]. Their transmission capabilities are low, with only 2 115kV transmission lines crossing through the reservation. Typically, any project above 1 MW would require transmission capabilities of 138kV or more[135]. The Rosebud Sioux currently has one 750 kW wind project on the reservation and two failed attempts at larger MW projects: The Owl Feather War Bonnet project (30 MW) and the North Antelope Project (100 MW)[136]. The following section examines these two attempts, the challenges that hindered their success, and ultimately assesses whether progress in developing wind farms has improved since joining the OSPA.

Owl Feather War Bonnet

The Owl Feather War Bonnet wind project was the tribe's first attempt at developing a utility-scale wind project. The tribes continued to work with Distributed Generation Incorporated of Lakewood (DISGEN Inc.), a renewable wind energy developer that had assisted the tribe in their previous 750kW project[137]. This project appeared to be rolling along smoothly. The tribe had successfully applied for a $448,000 grant from the DOE in 2003, which would cover all pre-construction activities to develop the project[138]. These costs include wind feasibility studies,

[133] Office of Indian Energy and Economic Development and Division of Energy and Mineral Development, "Native American Wind Resource Atlas."
[134] "Land-Based Wind | Electricity | 2021 | ATB | NREL," accessed March 13, 2025, https://atb.nrel.gov/electricity/2021/land-based_wind.
[135] Southwest Power Pool Generator Interconnections Department, "Interconnection Facilities Study Report," (IFS-2016-001-11, February 2022, https://opsportal.spp.org/documents/studies/files/2016_Generation_Studies/GEN-2016-032-IFS-2016-001-11_IFS-Summary_R3-DRAFT.pdf.
[136] Office of Indian Energy and Economic Development and Division of Energy and Mineral Development, "Native American Wind Resource Atlas."
[137] Ken Haukass, "Owl Feather War Bonnet Wind Farm Rosebud Sioux Tribe," Grant (Department of Energy, October 22, 2007), https://www.energy.gov/sites/prod/files/2016/02/f29/rosebud03final.pdf.
[138] Ibid, 2

environmental review costs, assessment of transportation ability, etc. After 5 years of preparation, including the time to develop a full Environmental Impact Statement (EIS), the project had been issued a FONSI, a Findings of No Significant Impact, which indicates that the project will not cause any undue environmental harm, and no further mitigation efforts must be set forth in order for the project to receive clearance[139]. This declaration was issued by the BIA as well as the tribe, meaning all the project required after that point was the approval of the BIA for a grant and lease agreement and a PPA.

However, this project was unable to come to fruition due to the prolonged delay by the BIA in land lease approvals[140]. This delay caused the tribe to lose a draft PPA with the Nebraska Public Power District. At the time, a report created by Ken Haukaas for the Rosebud Sioux tribe and Citizen Wind claims that a sluggish U.S. economy and the project's distance from any other load demand restricted them from finding any other party to secure a PPA[141]. The reason for this delay is unconfirmed; however, the Rosebud Sioux were not the first to be burned by the inadequacies of the BIA. A report made by the GAO in 2015 highlights that other tribes that had suffered monetarily, such as the tribal officials who claimed to have waited 8 years and lost more than $95 million in revenues[142]. Delay times can also contribute to uncertainty about project viability since the validity of economic feasibility and environmental impact tests can become irrelevant after a few years due to potential changes in economic/environmental conditions[143]. The reasons for BIA delays include a lack of data on resource availability, knowledge of which

[139] Ibid, 5
[140] Ken Haukass, “Executive Summary North Antelope Highlands Project Rosebud Sioux Tribe and Citizens Wind,” n.d., https://www.osti.gov/servlets/purl/1250520.
[141] Ibid, 2
[142] United States Government Accountability Office, “Indian Energy Development: Poor Management by BIA Has Hindered Energy Development on Indian Lands.”
[143] Ibid, 22

prior leases are still in effect, staff limitations, and lack of a documented process, which resulted in no tracking of review and response times or transparency of energy-related documentation[144]. There have been several improvements made by the BIA to reduce wait times in response to this report. These include improvements in cadastral survey needs and a review of historic survey requests still trapped in the previously defunct cadastral request system in 2015, data viewing and map creation employment in 2018, and the creation of the Indian Energy Service Center (IESC) to monitor energy development activities in 2016[145]. The IESC is an interagency team for the BIA, IEED, ONRR, BLM, and OST, which was created to provide support for technical and administrative functions with the aim of expediting leasing, permitting, and developing energy projects[146].

Unfortunately, most of these improvements, including the IESC, have an emphasis placed on oil and gas development[147]. Furthermore, these amendments took years to implement following the failures of projects like the Owl Feather War Bonnet wind project. As written multiple times in the Hearing before the Committee on Indian Affairs in 2015, these amendments were first and foremost a response to the critical GAO report made in January of that year, rather than a reactive measure to the valid complaints of tribes. Had these amendments come sooner, perhaps more progress could have been made with tribal-led and owned energy development.

The Owl Feather War Bonnet project had one last saving grace: selling the power from the project to the U.S. government. Because the project was not approved by the BIA, the PPA with the Nebraska Public Power District (NPPD) expired. The Rosebud Sioux partner exhausted all efforts to work with the NPPD as well as the Southwest Power Pool (SPP), but they were

[144] Ibid, 18
[145] Ibid, 19
[146] "Subcommittee Hearing on Regulatory Barriers to American Indian Job Creation," April 7, 2011.
[147] Ibid.

ultimately unsuccessful[148]. The economics of selling their power beyond NPPD, when considering wheeling and tariff fees, was unfeasible[149]. Thus, Rodney M. Bordeaux who was the current president of the Rosebud Sioux Tribe urged three parties to consider the PPA with the additional benefit of applying "double RECs" as per the Renewable Energy Goals of the Energy Policy Act of 2005: Any federal agencies connected to the Western Area Power Administration (WAPA), the Omaha Public Power District which could sell the energy and renewable energy credits (RECs) to the Offutt Air Force base, and the NPPD which could sell the energy and RECs to federal customers[150]. Mr. Bordeaux emphasized the federal government's trust responsibility, as it was solely their fault for not approving their land lease request in time [151]. Unfortunately, this request was not fulfilled.

North Antelope Highland Wind Project

Despite the loss of the Owl Feather War Bonnet wind project, the Rosebud Sioux tribe continued their efforts to bring a wind project to fruition. While the Own Feather War Bonnet project was not put completely to rest, this time they wanted to increase the size of the project in hopes of enticing more interest as well as generating more revenue for the tribe. Their next endeavor was called North Antelope Highland, a wind farm which would total 190 MW split into 2 parts.

In 2007, the Rosebud Sioux Tribe issued a request for proposal (RFP), announcing the North Antelope Highland Wind project and soliciting bids from qualified contractors to complete

[148] Ibid.
[149] Ibid.
[150] Ibid.
[151] Ibid.

it[152]. The tribe selected Citizen Wind, a subsidiary of Citizen Energy Corp, to partner in hopes of creating a 200 MW wind farm on the reservation[153]. This partnership was sealed by a Memorandum of Agreement in 2008, stating their agreement would last for 5 years, where Citizen Wind would gain exclusive wind rights over the tribal lands for 2.5 years, and the remaining 2.5 years must result in at least one operating wind farm[154]. Upon analysis of the Final report created by the U.S. Department of Energy(DOE), it appears that the project was intended to be sold to a third-party investor or owner, rather than a joint ownership between the Rosebud Sioux Tribe and Citizen Wind[155]. This can be gleaned from their negotiations over development fees, which are costs paid by the project company or investment group to the developer to compensate for their efforts in bringing a project to fruition. In recent partnerships between tribal groups and non-tribal energy developers, it was common for the developer to reap the majority, if not all the development fees. However, in discussion with Citizen Wind, they landed on a 20/80 split[156]. Citizen Wind would contribute their development knowledge and money, while the tribe would bring their land and wind resource to the table[157]. Given that the project intended to charge somewhere around $100,000 per MW for a 190 MW project, the total development fee would amount to $190 million[158]. Fortuitously, the Rosebud Sioux tribe secured a grant from the DOE in the fall of 2009, amounting to $1.5 million to assist in development costs. In response to this grant, the tribe was able to negotiate a 33/67 split in development fees, resulting in the tribe

[152] Haukass, "Executive Summary North Antelope Highlands Project Rosebud Sioux Tribe and Citizens Wind."
[153] Ibid, 2
[154] Department of Energy, "Wind Development on the Rosebud," November 16, 2021, https://www.energy.gov/sites/prod/files/2016/01/f28/tep_2012_programreview_valandra_1112.pdf.
[155] Haukass, "Executive Summary North Antelope Highlands Project Rosebud Sioux Tribe and Citizens Wind."
[156] Ibid, 2
[157] Ibid, 2
[158] Ibid, 2

receiving $33,000 per MW after financial closing[159]. Furthermore, the tribe could opt to purchase a few turbines, depending on the negotiated price of the PPA, resulting in them obtaining all profits from the purchased turbines. This purchase would result in profits being over and above the previously agreed 3.5% fee on the gross revenue stream[160].

Despite site and environmental reviews proceeding smoothly for the project, there were considerable road bumps that rendered the project incapable of reaching completion. The first hiccup that faced the project was transmission capabilities. Upon preliminary Systems Impact Studies on the nearly 115kV WAPA line, they found that the capacity of the line was limited to 190 MW[161]. This discovery prompted the Rosebud Sioux tribe to split the project into two phases: the first half entering the WAPA queue at 90 MW, and the second at 100 MW, which would maximize the capacity on the line[162]. If both phases were to be approved, no other project in Southern South Dakota could build more wind farms in the area without WAPA upgrading the existing system or another private firm building a new line. Costs to build over 135 MW on the existing line would have cost over $10 million to upgrade[163].

Another significant roadblock was the lack of communication between Citizen Wind and the Rosebud Sioux tribe. Citizen Wind has lost its primary tribal contact, Mr. Braden Houston, and the Rosebud Sioux had lost their primary contact for Citizen Wind in 2012 due to tribal elections[164]. This led to delays in acquiring reports for contractors and pushing the project

[159] Ibid, 2
[160] Ibid, 2
[161] Ibid, 2
[162] Bordeaux, Rodney M., "Testimony of President Bordeaux Senate Committee on Indian Affairs," n.d., https://www.indian.senate.gov/wp-content/uploads/Rodney%20Bordeaux%20testimony.pdf.
[163] Department of Energy, "Wind Development on the Rosebud."
[164] Haukass, "Executive Summary North Antelope Highlands Project Rosebud Sioux Tribe and Citizens Wind."

forward for 3 years[165]. Following this period, Citizen Wind hired a new point of contact to assume management for the project. The Rosebud Sioux, however, had not hired anyone to assume work and vouch for tribal wishes since[166]. There was an effort to move oversight to the Rosebud Economic Development Corporation (REDCO), a tribally chartered corporation created to spur the local economy without the weight of local politics impeding[167]. Their tasks include managing 14 subsidiary companies, assisting in economic policy analysis and development, and engaging in community development projects[168]. Yet, despite a DOE report claiming that all wind development was redirected from the Rosebud Sioux Tribe to REDCO in 2008, a following report in 2016 claimed the transition was still ongoing, indicating that the transition of oversight had not been fully realized despite 8 years of progress[169][170].

This situation highlights the critical need for a dedicated tribal utility or energy authority to ensure the continuity and success of large-scale renewable energy projects. Unlike REDCO, which juggles multiple economic initiatives, a tribal utility would focus exclusively on energy development, providing stability and expertise regardless of changes in tribal leadership. Because such an entity would operate independently of political cycles, it could maintain long-term relationships with external developers like Citizen Wind, preserving institutional knowledge and ensuring ongoing project management. Additionally, a tribal utility would have the technical expertise and administrative capacity to navigate regulatory requirements, coordinate with contractors, and oversee feasibility studies—tasks that require sustained

[165] Ibid, 2
[166] Ibid, 2
[167] "ROSEBUD ECONOMIC DEVELOPMENT CORPORATION (REDCO)," The Praxis Project, January 9, 2020, https://www.thepraxisproject.org/cbph-orgs/2020/1/9/rosebud-economic-development-corporation-redco.
[168] Ibid.
[169] Haukass, "Executive Summary North Antelope Highlands Project Rosebud Sioux Tribe and Citizens Wind."
[170] Department of Energy, "Wind Development on the Rosebud."

attention beyond the scope of a general economic development corporation. Establishing such an authority could have prevented years of delays in the North Antelope Wind Project by maintaining a consistent point of contact and facilitating smoother collaboration with Citizen Wind.

The last challenge sealing the unsuccessful fate of the North Antelope Wind Project was the inability to secure a PPA and hence a buyer of the project. The project is located in the WAPA regional transmission organization (RTO) authority, and thus, it would follow that they would try to secure a PPA in this area. The tribe was unable to secure a PPA with WAPA directly, since the organization does not have the authority to enter into contracts longer than 5 years[171]. In order to secure investment from banks or other buyers, it's typical to already have a PPA lasting at minimum 12 to 20 years[172]. Thus, the tribe was forced to look to other areas of load growth, albeit rare in the WAPA region. Basin Electric was their next target, as they had issued two RFPs over the last two years and accepted power inputs[173]. These developers were likely successful due to the size of their projects, allowing for volume discounts on equipment from contractors, as well as lower financing costs. However, the Rosebud Sioux were unable to engage Basin Electric or any other potential off-takers.

The next potential strategy was shipping power east to the MISO market. However, crossing over an RTO boundary would add an additional $11 per MWh, making the project uncompetitive[174]. Furthermore, MISO and other RTOs apply transmission costs and rules that

[171] Haukass, "Executive Summary North Antelope Highlands Project Rosebud Sioux Tribe and Citizens Wind."
[172] Bordeaux, Rodney M., "Testimony of President Bordeaux Senate Committee on Indian Affairs."
[173] Haukass, "Executive Summary North Antelope Highlands Project Rosebud Sioux Tribe and Citizens Wind."
[174] Ibid, 5

favor incumbent utilities, maintaining market dominance and discouraging competition[175]. Lastly, if the interconnection study results came back from MISO with requirements to upgrade transmission lines, the North Antelope Wind project would be rendered financially infeasible. President of the Rosebud Sioux Tribe, Rodney Bordeaux, gave his testimony to the Senate Committee on Indian Affairs urging WAPA and the federal government to consider their trust responsibility[176]. From the perspective of the tribes, this scenario warranted policy adaptation so that WAPA or other federal branches may prioritize purchasing power at market price from tribal projects[177]. This project would have been a significant contributor to the Rosebud Sioux revenue stream. There were plans to develop a wide distributed generation system to lessen dependence on the larger grid, create a tribal utility company, upgrade the energy efficiency of tribal residences, and support community-scale renewable energy devices[178]. With these various community improvements funded by this viable wind project, it follows that President Bordeaux would urge the United States to consider their responsibility to the tribes. Unfortunately, there was no additional support given from the federal branch in assisting the Rosebud Sioux tribe in finding a buyer, and the North Antelope Project was put to rest.

Oceti Sakowin Power Authority

The Oceti Sakowin Power Authority was created in 2015 through the combined efforts of the Cheyenne River Sioux, Crow Creek Sioux, Flandreau Santee Sioux, Oglala Sioux, Rosebud Sioux, Standing Rock Sioux, and the Yankton Sioux tribes[179]. These tribes have all attempted

[175] Lynne Kiesling, "Regional Transmission Organizations as Market Platforms III," Center for Technology, Science, and Energy, January 31, 2025, https://ctse.aei.org/regional-transmission-organizations-as-market-platforms-iii/.
[176] Bordeaux, Rodney M., "Testimony of President Bordeaux Senate Committee on Indian Affairs."
[177] Ibid. 3
[178] Department of Energy, "Wind Development on the Rosebud."
[179] "About Us – OSPA," accessed April 8, 2025, https://www.ospower.org/about-us/.

their own renewable energy projects, yet all of them were unsuccessful. In a panel interview hosted by the Trellis Group featuring Lyle Jack, the chairman of the OSPA and representative of the Oglala Sioux tribe, he states that the reasons these projects all failed or encountered roadblocks were the same: bad investment and project developers with misaligned expectations and ownership goals[180]. Thus, this section will analyze the strategies the OSPA has adopted to ensure financial success while maintaining tribal values. Additionally, it will examine the OSPA's 2 GW wind farm project and its involvement in the NIETC transmission initiative.

Legal Authority, Land Access, and Financial Strategy

The Oceti Sakowin Power Authority successfully acquired its recognition as a federally chartered "Section 17" corporation in 2015. Section 17 corporations are established under the authority of 25 U.S.C § 477, which was passed in 1934. The federal statute is fairly limited, as it is only a paragraph in length, but it nevertheless efficiently outlines the various allowances given to the tribal-led group. The first being the ability to purchase, own, manage, of corporate property and purchase restricted Indian lands[181]. This power, especially the ability to purchase restricted land, was previously only available to tribal governing bodies[182]. Given this power, the OSPA can choose to site turbines on restricted Indian lands provided that these decisions are necessary to capture optimal wind potential, and that the board of the OSPA is in accordance. This process is likely more efficient than waiting for 1 or multiple tribes to first be briefed on the purpose of acquiring the land, convince them that it's a valid enough strategy to spend limited tribal resources on, and lastly vote in confirmation to acquire restricted parcels of land.

---

[180] *Harnessing the Wind to Help a Sovereign Culture Thrive*.
[181] "Incorporation of Indian Tribes; Charter; Ratification by Election," Pub. L. No. S. 3645, 48 25 U.S.C. § 477 (1934), https://uscode.house.gov/view.xhtml?req=granuleid:USC-1999-title25-section477&num=0&edition=1999.
[182] Ibid.

Section 17 corporations may also enter surface leases (non-mining) for a term of 25 years or less without BIA approval[183], which we've established would regularly take the tribe itself ages to acquire due to agency inefficiencies. Bypassing BIA approval provides the enterprise with greater certainty regarding the timeline for land procurement, which can ultimately save the tribe significant amounts of money. With smooth land transfer, tribes are able to avoid time-consuming environmental reviews, interconnection studies, and equipment procurement while also avoiding the risk of market changes that may affect project economics. Lastly, ensuring a project is brought to completion within a certain time frame allows energy enterprises to utilize time-sensitive tax credits, grants, and other financial incentives. Fortunately, the term restriction of 25 years happens to be close to the typical 30-year life spans for wind farms; unless the project owner/developer wishes to recondition and extend its use. Furthermore, one can deduce that if the OSPA were to revitalize the project, they would already have existing environmental reviews as well as a convincing proof of concept to present to the BIA for federal approval of a loan.

The last, vague ability granted to federally chartered section 17 corporations is stated as "further powers as may be incidental to the conduct of corporate business"[184]. In practice, this ability grants corporations abilities such as taking on debt and liability without encroaching on the financial safety or sovereignty of the tribes they originate from and forming partnerships with non-tribal entities. The OSPA takes full advantage of this clause by entering a joint venture partnership with Apex Energy. In honor of their partner tribes' wishes of ownership, as well as

[183] Division of Economic Development and Indian Affairs Office of Indian Energy and Economic Development, "Choosing a Tribal Business Structure" (U.S. Department of the Interior Assistant Secretary—Indian Affairs, n.d.), https://www.bia.gov/sites/default/files/dup/assets/as-ia/ieed/pdf/Choosing%20a%20Tribal%20Business%20Structure%204.8.19.pdf.
[184] Incorporation of Indian tribes; charter; ratification by election.

the various federal Indian programs that define Indian ownership as 51% or more share of the profits generated by the entity, the OSPA has decided that they will assume 51% ownership of the Oceti Sakowin Power Project. The OSPA and Apex are currently developing 2 projects: the 450 MW Ta'teh Topah wind farm on the Cheyenne Reservation and the 120 MW Pass Creek wind farm on the Oglala Pine Ridge Reservation[185]. Together, they have invested over $3 million in early-stage development and, in 2021, were in the process of closing on $15M in funding to fund late-stage development[186].

The 2 wind farms, which represent a section of the OSPA's ultimate goal of developing a 2 GW project, are projected to cost $850 million to build and operate[187]. Per the joint venture agreement, the OSPA was granted co-investor status, allowing the decision-making authority in planning the wind farms and receiving a percentage of the development fees upon completion of development[188]. Unfortunately, despite great effort on behalf of the OSPA, locating federal funding was arduous and unsuccessful. The OSPA had applied for grants, direct loans, and loan guarantees from six different programs run by various U.S. Departments, such as the DOE, DOI, and DOA, but was rejected from all of them[189]. None of the branches reported any indication as to why these grant applications were rejected, leaving the OSPA to deduce that it may have been due to the projects being in their pre-development stage[190]. Thus, the OSPA was forced to raise capital entirely from private sources, a task that is insurmountably difficult for rural infrastructure projects since early-stage development capital is high risk and cannot qualify for

[185] Jon Canis and Jack, Lyle, "Comments of the Oceti Sakowin Power Authority in the U.S. Department of Energy Roundtable Discussion on Funding and Financing Tribal Energy Projects," May 3, 2021, https://www.ospower.org/wp-content/uploads/2023/10/OSPA-Comments-to-DOE-re-Financing-Roundtable-5.3.21.pdf.
[186] Ibid. 1
[187] Ibid. 3
[188] Ibid. 7
[189] Ibid. 10
[190] Ibid. 10

traditional loans[191]. Once you consider the additional bias tribes face when trying to acquire funding from traditional banking sources, the prospect of raising enough pre-development fees for a project this size seems impossible[192]. The tribes that make up the OSPA are among the poorest tribes, occupying the poorest counties in the U.S, indicating that their ability to provide collateral is limited at best[193]. Furthermore, the OSPA has to compete with other non-tribal projects that don't encounter half the compliance/transaction costs or land regulations.

Despite these limitations, the benefits of these two wind farms pushed the two groups to persevere. The Ta-teh Topah (Four Winds) and the Pass Creek wind farm are situated in areas with some of the most powerful and reliable wind resources in the country. Despite the size of these farms being limited by transmission capacity, the two farms will still be the largest infrastructure development project in the history of South Dakota[194]. Furthermore, these projects would bring millions in tax and lease revenues to the tribes and millions in development fees for the OSPA, which has already committed to reinvesting all the fees into the next round of wind and solar projects on the OSPA reservations, including a project on Rosebud Sioux territory[195]. Thus, the OSPA pulled out all the stops in order to raise development capital and ultimately share in developer fees, otherwise, the tribes would be passive lessors. Through their efforts, they garnered a total of $950,000 in grants from various associations, including the Northwest Area Foundation and the Bush Foundation[196]. The rest of the $2 million is unspecified but was likely contributed by the various tribes that make up the OSPA. While federal funding should have

[191] Canis and Jack, Lyle, "Comments of the Oceti Sakowin Power Authority in the U.S. Department of Energy Roundtable Discussion on Funding and Financing Tribal Energy Projects." 12
[192] Guedel and Colbert, "Capital, Inequality, and Self-Determination."
[193] "The Project – OSPA," accessed April 8, 2025, https://www.ospower.org/the-project/.
[194] Canis and Jack, Lyle, "Comments of the Oceti Sakowin Power Authority in the U.S. Department of Energy Roundtable Discussion on Funding and Financing Tribal Energy Projects."
[195] Ibid. 3
[196] "The Project – OSPA."

been more accessible for the OSPA, which would have eased the challenges of obtaining co-investor status, this energy enterprise still highlights the strength and potential of multiple tribes uniting to develop a wind project. None of the OSPAs member tribes could have secured or independently provided this level of funding alone, but through their intertribal cooperation and participation in a joint venture agreement with Apex, they were able to pool their limited collateral, attract investors, and secure the necessary resources for development.

Social Values

The OSPA has taken various approaches to ensure that each tribe's social and cultural values are upheld throughout the stages of project development. Their overall goal, as stated in their corporate charter recitals, is to fulfill their duty to guide the world back into balance[197]. Through their beliefs that the tribes are related to all living beings, the tribes and thus the OSPA seek a way to live harmoniously with all the elements. *Taku Skan Skan* can be roughly translated to energy, which the OSPA has interpreted as a gift to be respected but also utilized for the benefit of healing the severed balance between humans and the earth[198]. Thus, their goals are to develop wind energy potential on tribal lands to harness energy for good and provide for the people under the seven tribes and their future generations[199].

The OSPA further honors the cultural and social values of the various tribes they represent by allowing each tribe to appoint a representative to a council of elders, a branch solely responsible for holding the board directly accountable and providing cultural guidance[200]. Elder

[197] Oceti Sakowin Power Authority, "Corporate Charter of Oceri Sakowin Power Authority," January 30, 2015, https://www.ospower.org/wp-content/uploads/2016/05/Oceti-Sakowin-Power-Authority-Corporate-Charter-Ratified-as-of-May-2016.pdf.
[198] Ibid. 1
[199] Ibid. 1
[200] Ibid. 7

council member Faith Spotted Eagle stated that an "element of culture" was necessary in decision making, and ensuring tribal values and history is pivotal[201]. These notions can be important to consider when planning turbine siting, as not all parties involved may be aware of areas with cultural or historical significance. Altering these landscapes with visual pollution may be incredibly damaging. The other OSPA board members serve as advocates for the seven tribes, but are notably not affected by tribal political turnover[202].

The OSPA has also taken steps to provide educational and occupational opportunities to the people of their seven tribes. Firstly, the OSPA has vowed to reserve hundreds of temporary construction jobs and dozens of permanent jobs for tribal members, providing job training in cooperation with the Tribal Employment Rights Office[203]. It has even committed to utilizing local and tribal resources, including sand, gravel, cement, and trucking[204]. Apex Clean Energy has also extended their internship program to Native American students[205], further demonstrating their support in growing OSPA's renewable energy background as well as contributing to the future generations' general well-being.

Wind Projects

The OSPA submitted their first two projects, the Pass Creek and the Ta'Teh Topah, to SPP's interconnection queue on November 1st, 2017. Yet, after waiting 5 years for

[201] Frank Jossi, "Oceti Sakowin Wind Power Project," *Lakota Times*, May 17, 2018, https://www.lakotatimes.com/articles/oceti-sakowin-wind-power-project/.
[202] Oceti Sakowin Power Authority, "Corporate Charter of Oceti Sakowin Power Authority."
[203] Canis and Jack, Lyle, "Comments of the Oceti Sakowin Power Authority in the U.S. Department of Energy Roundtable Discussion on Funding and Financing Tribal Energy Projects."
[204] Lyle Jack, "COMMENTS OF THE OCETI SAKOWIN POWER AUTHORITY IN THE U.S. DEPARTMENT OF ENERGY ROUNDTABLE DISCUSSION ON FUNDING AND FINANCING TRIBAL ENERGY PROJECTS," April 2019, https://democrats-naturalresources.house.gov/imo/media/doc/2.%20Testimony%20Attachment%20-%20OSPA%20-%20Lyle%20Jack%20-%2004.30.19.pdf. 3
[205] Ibid. 3

interconnection studies, the OSPA had to withdraw due to SPP's request of $230 million for network upgrades and interconnection costs on top of a required $48 million in deposits to remain in the queue[206]. This exorbitant price was outside the bounds of what Apex and the OSPA were able to put forth to continue the project. So in 2022, despite filing out of the SPP queue, they still vowed to work hard and find a solution to the greater transmission issue in the Midwest/Plains area[207]. And through their hard work and collaboration with federal branches, they made good on their promise through the Northern Plains National Interest Electric Transmission Corridor (NIETC) project.

The NIETC refers to a geographic area that is found to be presently or expected to be facing transmission capacity constraints that affect producers or consumers of energy[208]. The designation of NIETCs is decided through a combination of data provided by a triennial National Transmission Needs Study and public comments filtered through a four-phase process. In the first phase, occurring in late 2023, the DOE released an Issuance of Guidance, which outlined the four-phase process for designating NIETCs and opened a 45-day public submission window[209]. Stakeholders were invited to provide data on geographic boundaries, transmission needs, and other relevant factors by February 2024. The DOE then reviewed the submitted information and conducted internal analyses to identify potential NIETCs for further consideration. They then launch Phase 2, in which the DOE publishes the preliminary list of NIETCs, identifies which ones the DOE is considering, and once again provides a 45-day public comment period[210]. One

[206] "The Project – OSPA."
[207] Ibid.
[208] U.S. Department of Energy, "Initiation of Phase 2 of National Interest Electric Transmission Corridor (NIETC) Designation Process: Preliminary List of Potential NIETCs," May 8, 2024, https://www.energy.gov/sites/default/files/2024-05/PreliminaryListPotentialNIETCsPublicRelease.pdf.
[209] Ibid.
[210] Ibid.

of the early contenders for NIETC designation was in the northern plains areas, running through many of the tribal reservations in the OSPA (see Appendix 1). Stakeholders were now urged to provide more specific details based on early transmission mockup maps, including but not limited to: Commenting on the preliminary list of potential NIETCs, including specific transmission capacity constraints or congestion within these areas, providing detailed information on consumer harms related to these constraints, suggesting adjustments to geographic boundaries based on environmental, community, or other resource impacts, and identifying transmission projects under development near or within these corridors that may influence DOE's evaluation[211]. Furthermore, interested parties are urged to provide information based on 13 categories or resource reports: geographic boundaries; water use and quality; fish, wildlife, and vegetation; cultural resources; socioeconomics; Tribal resources; communities of interest; geological resources; soils; land use, recreation, and aesthetics; air quality and environmental noise; alternatives; and reliability and safety[212]. NIETC designation provides tools for transmission developers and utilities, such as direct loans through the Transmission Facility Financing (TFF) program, public-private partnerships through the Transmission Facilitation Program, and Federal siting and permitting authority of the Federal Energy Regulatory Commission[213].

The OSPA has showcased its political agency and influence by successfully submitting comments and persuading the DOE to recognize the Northern Plains as a NEITC. Throughout phases 1 and 2, the OSPA published multiple statements of interest and comments explaining the desire of the seven-member tribes to develop renewable energy projects, how they are well-

[211] Ibid.
[212] Ibid.
[213] Ibid.

equipped to do so, and how transmission is their greatest barrier. Upon hearing that the NREL is beginning the process of collecting data for interregional renewable energy zones in June of 2022, the OSPA and APEX members informed the DOE that there is zero transmission capacity in the Rosebud Sioux Tribal reservation, where the OSPA finds some of the best wind resource[214]. Even the two projects they are currently trying to push through have been limited due to the transmission capacity available. The OSPA estimates that, in total, the tribes could generate up to 5 GW, but without transmission capacity, this is potential is severely stunted[215]. Thus, when the DOE first published its Notice of Intent and Request for Information regarding the designation of NIETCs, the OSPA jumped at the opportunity. They shared their struggles with joining the SPP interconnection queue, and how their current tariff and transmission upgrade costs will take the OSPA an additional five to six years to procure, totalling to a decade-long delay for the most significant renewable energy project on tribal lands[216]. Furthermore, they share their endless commitment to solving their issue through their participation in every transmission-related proceeding initiated by the DOE and its independent offices[217]. They have consistently filed comments in financing roundtables, tribal consultation outreaches, and workshops[218]. This concentrated effort might not have been possible if every tribe had to represent itself and thus provide its own private comments on its respective situations. However, with the creation of the OSPA, the tribes were able to make a striking commitment to solving the

[214] Oceti Sakowin Power Authority, "The Oceti Sakowing Power Authority Statemnt of Interest in Particiapting in the National Renewable Energy Laboratory's Process for Identifying Interregional Renewable Energy Zones," June 3, 2022, https://www.ospower.org/wp-content/uploads/2023/10/OSPA-Statement-of-Interest-National-Transmission-Planning-Study-06032022.pdf.
[215] Ibid. 3
[216] Jon Canis, "Comments of the Oceti Sakowin Power Authority in Response to U.S. Department of Energy's Request for Information: Designation of National Interest Electric Transmission Corridors," July 31, 2023, https://www.ospower.org/wp-content/uploads/2023/10/OSPA-NIETC-COMMENTS-7.31.23.pdf.
[217] Ibid. 6
[218] Ibid. 6

transmission issue plaguing them all. The OSPA recommends that the NIETC designation should follow the proposed upgrades given to them by SPP and then extend to be within reach of OSPA's next development projects[219]. This would fix the current transmission problem facing the Pass Creek and Ta'teh Topah wind farms, as well as prevent future delays for other projects[220].

The OSPA has also highlighted their attempts to consult with WAPA and SPP over their development plans, all of which have been met with no response[221]. They feel that the tribes are excluded from the conversation of how the national power grid will be upgraded and expanded. While funding for the NIETC program will be primarily used for unlocking financing for transmission development, it can also support essential consultations between tribes, Power Marketing Administrations (PMA), and RTOs[222]. The OSPA also submitted two letters of support from tribal leaders of the Cheyenne River Sioux tribe and the Oglala Sioux tribe[223]. The Cheyenne tribe points out that the required $29 million deposit the SPP required is more that five times what the average wind farm develop is required to pay for access, where as the Oglala tribe were required to pay more than 11 times what the average wind farm developer would have paid for the same access[224]. Furthermore, they highlight that PMA's and the federal government share a federal trust responsibility to engage meaningfully with tribes and support them in endeavors that support tribal sovereignty and economies[225].

---

[219] Ibid. 6
[220] Ibid. 6
[221] Ibid. 7
[222] Ibid. 7
[223] Lyle Jack, "Recommendation for Narrow Geographical Boundaries for a Potential NIETC and Supporting Information Submission," February 2, 2024, https://www.ospower.org/wp-content/uploads/2025/02/OSPA-NIETC-Recommendation-2.2.2024.pdf.
[224] Ibid. 35
[225] Canis, "Comments of the Oceti Sakowin Power Authority in Response to U.S. Department of Energy's Request for Information: Designation of National Interest Electric Transmission Corridors." 6

On December 16, 2024, the DOE announced which projects would advance to Phase 3, and fortunately, the aptly named *Tribal Energy Corridor* in the Northern Plains was selected as one of the three projects to move forward from the original 10 potential NIETCs[226]. They explain their decision was largely informed by the substantial comments received in Phase 2, indicating that the multiple comments made by the OSPA were pivotal to their NIETCs being selected for further review[227]. The map uploaded in phase three runs through 5 of the 7 tribes in the OSPA (see Appendix 2). The OSPA expressed appreciation for the redesigned *Tribal Energy Corridor*, noting that their requests to narrow the corridor for more targeted and efficient grid updates were not only addressed, but exceeded their expectations[228]. The DOE also highlights that increased transmission in this area will increase clean energy integration and facilitate tribal energy and economic development[229], findings that are likely informed in part by the comments submitted by the OSPA. The OSPA is encouraged to submit comments for the final public comment period until April 15th. The DOE has pledged to perform NEPA reviews on each of the proposed NIETCs, which will reduce duplication of reviews from multiple interested developers and improve efficiency and timeliness[230]. Final NIETCs designations are set to be released in 2026[231]. The commitment of the OSPA in advocating for the Tribal Energy Access transmission corridor, coupled with the indisputable need for improved transmission in the greater plains area, will likely result in the project being selected for the fourth and final phase.

[226] "National Interest Electric Transmission Corridor Designation Process," Energy.gov, December 16, 2024, https://www.energy.gov/gdo/national-interest-electric-transmission-corridor-designation-process.
[227] Ibid.
[228] Canis, "Comments of the Oceti Sakowin Power Authority in Response to U.S. Department of Energy's Request for Information: Designation of National Interest Electric Transmission Corridors."
[229] "National Interest Electric Transmission Corridor Designation Process."
[230] Ibid.
[231] Ibid.

Policy Recommendation

This policy recommendation outlines a multi-faceted approach involving both tribal nations and the federal government to accelerate renewable energy development on tribal lands. Unlike conventional policy frameworks that rely heavily on federal action and often leave tribes in a position of passive reliance, this proposal prioritizes tribal agency and authority. By catering this policy recommendation towards tribal governments while suggesting further ways federal branches can support tribes, this approach empowers Indigenous communities to take a leading role in shaping their own energy futures. Thus, I recommend that tribal governments create or support the creation of tribal energy enterprises. This can include forming an independent tribal-led utility or collaborating with other tribes to form a combined power authority. A tribe that holds enough land and financial resources to fund project predevelopment can choose to form its own independent utility, following the Navajo model. If the opposite is true, and the tribe finds that they are lacking land or financial resources, they should follow an OSPA model and form a multi-tribal power authority.

The benefits of tribal energy enterprises, as explored through the case studies above, are numerous. Tribal-led energy enterprises have been shown to successfully understand the cultural and societal needs of their tribal members, while avoiding government control and thus potential project delay due to tribal turnover. Energy enterprises have also taken on impressive financing strategies, such as taking part in competitive government loan programs, entering joint venture agreements, combining the limited resources of multiple tribes to successfully reach project goals, and attracting the attention of investors/foundations. Lastly, tribal energy enterprises such as the OSPA and NTUA have escaped the long, unpredictable waiting times of BIA lease

approval through the utilization of past favorable relations or securing section 17 corporation status, demonstrating the benefits of surface lease power being placed in tribal control.

As beneficial as forming a tribal-led energy enterprise can be for renewable energy project generation, it can be taken a step further with TEDO certification. TEDO certification grants tribal energy enterprises the ability to surface lease lands without BIA approval for 30 years, with an option for as many renewals at the discretion of the tribe for as long as the energy enterprise maintains certification[232]. A section 17 corporation, such as the OSPA, only has the right to surface lease land for up to 25 years without BIA approval[233]. If they wished to upgrade any projects and renew a lease, they would have to secure approval from the BIA, the timeline of which is unpredictable. TEDOs also allow for tribal energy enterprises to take on debt, assume liability, and enter into joint venture agreements without secretarial approval[234]. Thus, the TEDO program is a conglomeration of various existing policies, such as the Hearth Act, which allows tribes to lease land but not to enter into various business agreements, and section 17 corporation designation, which allows for business agreements and leasing, but only for up to 25 years. Thus, if tribal governments support the formation of an independent or multi-tribal power authorities and motivate them to pursue TEDO certification, the energy enterprises may finally operate at a comparable level to other utilities and renewable energy developers and thus create lucrative renewable energy projects providing the tribe with tax revenues, job stimulation, and economic activity.

[232] John Hoeven, "Indian Tribal Energy Development and Self-Determination Act," Pub. L. No. S. 245, 224.206 (2018), https://www.ecfr.gov/current/title-25/section-224.206.
[233] Division of Economic Development and Indian Affairs Office of Indian Energy and Economic Development, "Choosing a Tribal Business Structure."
[234] Hoeven, Indian Tribal Energy Development and Self-Determination Act.

Both the OSPA and the NTUA have highlighted that more support from the federal government was required for utility development and project pre-development costs. The NTUA and Navajo Nation have cited limited financial support for data cleanup, development, revision of tribal procedures, updating of capacity surveys, and land plotting systems[235]. The issue emphasized by the OSPA was their struggle in securing predevelopment costs for their first two projects: the Ta Toph and Pass Creek Wind Farm. Ensuring they had raised enough capital was pertinent to maintaining an authoritative position in their joint venture agreement, reaping part of the developer fees upon the completion of the project, and moving both wind projects forward to next steps, like interconnection studies. They found that current grants and federal loan programs were biased towards projects that had already left the pre-development stage and were entering construction/development. These two organizations point out two pivotal gaps in funding that TEDO certification fills with 2 joint policies: the Tribal Energy Development Capacity Program (TEDC) and the Energy and Mineral Development Program (EMDP)[236]. TEDC was passed a year after TEDO certification was created with the aim of assisting tribes in developing managerial, organizational, and technical capacity in their tribal energy enterprises. From 2018 to 2020, they were able to fund 15-25 projects and award anywhere from $50-$1 million[237]. EMDP was first introduced in 2013 available to all federally recognized tribes, but following the 2017 ITESDA amendments, they included TEDOs as qualified applicants. This program awards around $6 million annually, and has funded 20-30 projects since its creation[238].

[235] "Helping Expedite and Advance Responsible Tribal Homeownership Act or the Hearth Act" (U.S. Government Publishing Office, October 21, 2009), https://www.govinfo.gov/content/pkg/CHRG-111hhrg52940/html/CHRG-111hhrg52940.htm.
[236] Duane Matt, "Tribal Aggregate Business Development: Why Should I Do It" (Division of Energy and Mineral Development, May 15, 2024), https://www.ugpti.org/resources/proceedings/downloads/2024-05-15-1300-DuaneMatt.pdf.
[237] Ibid. 10
[238] Ibid. 10

Yet, despite the various benefits that TEDO certification brings to tribal energy enterprises, only one tribe has successfully achieved this status in 2022, the Red Lake Band of Chippewa Indians' energy utility, Twenty-First Century Tribal, Inc[239]. This is a perplexing reality, but one that the federal government can remedy through the use of the three-pronged outreach approach. This strategy begins with streamlining the TEDO application process, increasing resources to assist tribes and their respective energy enterprises with the application process, and lastly, increasing awareness of TEDO certification through an information campaign.

Two issues complicate the TEDO application process: the Indian Self-Determination and Education Assistance Act (ISDEA) requirement and the inconsistent language concerning multi-party TEDOs. The ISDEA Act enables tribes to assume control of federal programs, promoting self-governance and management of resources[240]. The application for TEDO certification requires that the tribe of the respective tribal-led energy enterprise has engaged in at least 3 years of an ISDEAA contract or compact under title I or IV[241]. Yet, for a tribe to apply for a TERA, which grants the tribe the same powers of renewable energy surface leasing, no such requirement exists. Instead, the tribe is able to replace this requirement by proving other proof of "substantial experience in the administration, review, or evaluation of energy resource leases or agreements or has otherwise substantially participated in the administration, management, or development of energy resources located on the Tribal land of the Indian Tribe"[242]. This option is much less

[239] "Indian Affairs Approves First Ever Tribal Energy Development Organization | Indian Affairs," accessed April 9, 2025, https://www.bia.gov/news/indian-affairs-approves-first-ever-tribal-energy-development-organization.
[240] "About the Indian Self-Determination and Education Assistance Act, as Amended Training Program | Indian Affairs," accessed April 9, 2025, https://www.bia.gov/bia/ois/dsd/Training/About.
[241] Hoeven, Indian Tribal Energy Development and Self-Determination Act.
[242] Hoeven, John, "Tribal Energy Resource Agreements Under the Indian Tribal Energy Development and Self Determination Act," 25 U.S.C. § 3504 § (2018), https://www.ecfr.gov/current/title-25/chapter-I/subchapter-I/part-224.

restrictive, and thus may promote more applications. However, the language of this requirement is vague and thus up to the discretion of the BIA, which may dissuade tribal-led energy enterprises. The creation of a new department or committee in the BIA that assists in reviewing application materials and adding their insight on whether they show "substantial experience" would remedy this issue.

There is also conflicting language surrounding the certification of multi-tribal energy authorities. Section §224.205 states that the majority interest of the TEDO must be owned and controlled by the tribe and that the TEDO's organizing document requires this ownership to be fleshed out[243]. In both of these lines, there exists a clause in parentheses stating "or the Tribe and one or more other tribes"[244]. However, when it comes to the middle clause stating that the TEDO's organizing document requires the Tribe with jurisdiction over the land to maintain the controlling interest in the TEDO, this multi-party clause is not present. This legislative language signals to multi-tribal energy enterprises that TEDO certification may be unattainable, particularly if their projects span multiple tribal reservations. This policy should either eliminate the clause requiring the tribe with jurisdiction over the land to maintain a controlling interest in the TEDO, or revise it to include a multi-party provision, consistent with the structure of other sections. This ensures that multi-tribal energy enterprises like the OSPA are not alienated from the benefits that come with TEDO certification.

As mentioned above, additional support from a federal committee or department would likely be categorically helpful in tribal applications for TEDO certification. Currently, there is no dedicated federal body, branch, or committee that is specifically tasked to provide direct assistance to tribes in preparing or providing insight on application materials for TEDO

[243] Ibid.
[244] Ibid.

certification. The process for TEDO certification is managed by the Indian Energy Service Center (IESC) under the BIA, but its role is primarily administrative and regulatory rather than offering hands-on technical support for application preparation[245][246]. Order 3377 by the Secretary of the Interior is intended to provide further guidance on the application process of TERA and TEDO development[247]. The Secretary admits that tribes submitted several requests for clarity on the federal function that are contractible under an approved TERA and thus prove ample experience in tribal energy resource ventures, and that the Department had not provided such a list[248]. Yet, in their amendments, they direct responsible offices to create a list of federal functions only for oil and gas development, not renewable energies[249]. Furthermore, there is no commitment to increase federal assistance to tribes in this matter, instead, the BIA is tasked to provide training and technical assistance to the BLM and ONRR on administrative tasks[250]. In a report by the GAO, they find that tribal business enterprises find federal program applications to be difficult to understand and access, with outreach about these federal programs to be insufficient[251]. Going forward, the IESC should form a team of dedicated tribal consultants to assist tribes in their applications for TEDO certification. These consultants can review application materials, provide edits and recommendations to increase the chances of BIA approval, and highlight any gaps that the energy enterprise or tribe must fill before they send in

[245] "Indian Energy Service Center | Indian Affairs," accessed April 9, 2025, https://www.bia.gov/bia/ots/iesc.
[246] U.S. Department of the Interior, "Overview: Tribal Energy Resource Agreement(TERA) and Tribal Energy Development Organization," n.d., https://usea.org/sites/default/files/event-/Mark%20Cruz%20and%20Johnna%20Blackhair%20-%20TERA-TEDO%20Overview%20September%202020.pdf.
[247] Secretary of the Interior, "Order NO. 3377 Contractibility of Federal Functions for Oil and Gas Development on Indian Lands," December 16, 2019.
[248] Ibid.
[249] Ibid.
[250] Ibid.
[251] "Tribal Electricity Access and Reliability."

their application. These recommendations can reduce tribal energy enterprises' hesitation to apply, as well as save them the time it may have taken to apply multiple times.

The last section of the three-pronged approach pertains to outreach. The TERA policy had not received any applications before the amendments that were implemented in 2018. If tribes consider the TERA/TEDO application process to be similar to the format it used to entail, it may deter them from considering the application, given that no tribe was successful before. It may also be possible, as the previous GAO report stated, that tribal business enterprises are simply unaware of the available federal programs and what benefits they provide[252]. Thus, I recommend that the newly formed TEDO consultant team from the IESC, as well as the Office of Indian Energy, share an informative brochure in their in-person visits and online workshops (see Appendix 3 and Appendix 4). This brochure would include a brief history of the policy's introduction and amendments, all of the benefits that TEDO certification can grant tribes, the two policies that provide energy enterprise and pre-development financial support, and finally the application materials needed to apply. Providing a clear brochure such as this can help build trust, reduce confusion around the application process, and encourage more tribal energy enterprises to explore TEDO certification and associated federal resources. If tribes are interested in learning more, links leading to application resources, as well as a link to the IESC consultant webpage, will be available on the last page of the brochure. An example of this brochure can be found in the addendum.

[252] Ibid.

Conclusion

Native American tribes face a paradox of plenty by having a disproportionately high potential of wind and solar energy, yet continuing to struggle to capitalize on them due to persistent systemic barriers. While challenges such as funding shortages, infrastructure deficits, tribal government turnover, and bureaucratic inefficiencies have impeded progress, tribal-led energy enterprises offer a promising path forward. By utilizing their expertise, innovative funding strategies, and understanding of community values, these organizations can begin to bridge the gap between potential and profit. The NTUA is a highly successful energy utility that has developed 2 solar projects, with one on the way. The OSPA, on the other hand, demonstrates the capabilities of a multi-tribal power authority, whose ambitious goal to develop a 2 MW wind farm will soon be underway with the development of the Tribal Energy Corridor. Therefore, if tribes wish to embark on the journey of renewable energy production, they should heavily consider the implementation of a tribal-led energy enterprise.

TEDO certification is a key step in this process, as it can streamline project approvals and reduce the historically stifling oversight of federal branches. While TEDO certification offers tribes a valuable pathway to energy sovereignty, current application barriers and limited federal support have hindered its widespread adoption. Twenty-First Century Tribal Energy Inc. is the only energy enterprise to successfully achieve TEDO certification in December 2022, but there is limited data detailing their operations or potential projects thus far. Further research is required to concretely accept TEDO certification as beneficial or not. The federal government has a unique opportunity to change the limited interest in TEDO through a three-pronged approach: streamlining the application process, expanding technical support, and increasing outreach efforts. By addressing the restrictive ISDEAA requirements, clarifying language for multi-party

TEDOs, and establishing a dedicated consultant team within the IESC, the federal government can eliminate key obstacles that prevent tribes from pursuing certification. Coupled with a well-designed informational brochure and targeted outreach efforts, these measures can build tribal capacity, improve transparency, and encourage more tribal energy enterprises to take advantage of the benefits that TEDO certification provides. Only through this comprehensive support system can the federal government truly empower tribes to take the lead in renewable energy development on their lands. Ultimately, with strong federal support and proactive engagement from tribal energy enterprises, tribes can overcome the paradox of plenty and pave the way toward a sustainable and sovereign energy future.

Bibliography

"25 CFR Part 162 -- Leases and Permits." Accessed March 13, 2025. https://www.ecfr.gov/current/title-25/chapter-I/subchapter-H/part-162?toc=1.

"About the Indian Self-Determination and Education Assistance Act, as Amended Training Program | Indian Affairs." Accessed April 9, 2025. https://www.bia.gov/bia/ois/dsd/Training/About.

"About Us – OSPA." Accessed April 8, 2025. https://www.ospower.org/about-us/.

Bordeaux, Rodney M. "Testimony of President Bordeaux Senate Committee on Indian Affairs," n.d. https://www.indian.senate.gov/wp-content/uploads/Rodney%20Bordeaux%20testimony.pdf.

Canis, Jon. "Comments of the Oceti Sakowin Power Authority in Response to U.S. Department of Energy's Request for Information: Designation of National Interest Electric Transmission Corridors," July 31, 2023. https://www.ospower.org/wp-content/uploads/2023/10/OSPA-NIETC-COMMENTS-7.31.23.pdf.

Canis, Jon, and Jack, Lyle. "Comments of the Oceti Sakowin Power Authority in the U.S. Department of Energy Roundtable Discussion on Funding and Financing Tribal Energy Projects," May 3, 2021. https://www.ospower.org/wp-content/uploads/2023/10/OSPA-Comments-to-DOE-re-Financing-Roundtable-5.3.21.pdf.

Department of Energy. "Wind Development on the Rosebud," November 16, 2021. https://www.energy.gov/sites/prod/files/2016/01/f28/tep_2012_programreview_valandra_1112.pdf.

Division of Economic Development and Indian Affairs Office of Indian Energy and Economic Development. "Choosing a Tribal Business Structure." U.S. Department of the Interior Assistant Secretary—Indian Affairs, n.d. https://www.bia.gov/sites/default/files/dup/assets/as-ia/ieed/pdf/Choosing%20a%20Tribal%20Business%20Structure%204.8.19.pdf.

"Domestic Content Bonus Credit | Internal Revenue Service." Accessed January 25, 2025. https://www.irs.gov/credits-deductions/domestic-content-bonus-credit.

Energy.gov. "National Interest Electric Transmission Corridor Designation Process," December

16, 2024. https://www.energy.gov/gdo/national-interest-electric-transmission-corridor-designation-process.

"FACT SHEET: President Biden's Budget Delivers for Tribal Nations and Tribal Communities | The White House." Accessed January 25, 2025. https://web.archive.org/web/20230404045555/https://www.whitehouse.gov/briefing-room/statements-releases/2023/03/09/fact-sheet-president-bidens-budget-delivers-for-tribal-nations-and-tribal-communities/?hss_channel=tw-104862477.

"FHWA - Center for Innovative Finance Support - Project Profiles." Accessed January 25, 2025. https://www.fhwa.dot.gov/ipd/project_profiles/az_navajo_nation_kayenta_solar_program.aspx.

"FHWA - Center for Innovative Finance Support - Value Capture - Renewable Energy (Solar) on Tribal Lands." Accessed March 31, 2025. https://www.fhwa.dot.gov/ipd/value_capture/strategies_in_practice/kayenta_solar_navajo_nation.aspx.

Fitzpatrick, Tana. "Tribal Land and Ownership Statuses: Overview and Selected Issues for Congress." Congressional Research Service, July 21, 2021.

"Geospatial Energy Mapper (GEM)." Accessed April 11, 2025. https://gem.anl.gov/tool.

Goeman, Mishuana. "Land as Life: Unsettling the Logics of Containment." In *Native Studies Keywords*, edited by Stephanie Nohelani Teves, Andrea Smith, and Michelle H. Raheja, 71–89. University of Arizona Press, 2015. https://doi.org/10.2307/j.ctt183gxzb.9.

Guedel, W. Gregory, and J.D. Colbert. "Capital, Inequality, and Self-Determination: Creating a Sovereign Financial System for Native American Nations." *American Indian Law Review* 41, no. 1 (2016): 1–49.

Harnessing the Wind to Help a Sovereign Culture Thrive, 2018.

Haukass, Ken. "Executive Summary North Antelope Highlands Project Rosebud Sioux Tribe and Citizens Wind," n.d. https://www.osti.gov/servlets/purl/1250520.

"Owl Feather War Bonnet Wind Farm Rosebud Sioux Tribe." Grant. Department of Energy, October 22, 2007. https://www.energy.gov/sites/prod/files/2016/02/f29/rosebud03final.pdf.

"HEARTH Act Leasing | Indian Affairs." Accessed March 13, 2025. https://www.bia.gov/service/HEARTH-Act.

"Helping Expedite and Advance Responsible Tribal Homeownership Act or the Hearth Act." U.S. Government Publishing Office, October 21, 2009. https://www.govinfo.gov/content/pkg/CHRG-111hhrg52940/html/CHRG-111hhrg52940.htm.

Hoeven, John. Indian Tribal Energy Development and Self-Determination Act, Pub. L. No. S. 245, 224.206 (2018). https://www.ecfr.gov/current/title-25/section-224.206.

Hoeven, John. Tribal Energy Resource Agreements Under the Indian Tribal Energy Development and Self Determination Act, 25 U.S.C. § 3504 § (2018). https://www.ecfr.gov/current/title-25/chapter-I/subchapter-I/part-224.

Incorporation of Indian tribes; charter; ratification by election, Pub. L. No. S. 3645, 48 25 U.S.C. § 477 (1934). https://uscode.house.gov/view.xhtml?req=granuleid:USC-1999-title25-section477&num=0&edition=1999.

"Indian Affairs Approves First Ever Tribal Energy Development Organization | Indian Affairs." Accessed January 31, 2025. https://www.bia.gov/news/indian-affairs-approves-first-ever-tribal-energy-development-organization.

"Indian Affairs Approves First Ever Tribal Energy Development Organization | Indian Affairs." Accessed April 9, 2025. https://www.bia.gov/news/indian-affairs-approves-first-ever-tribal-energy-development-organization.

"Indian Energy Service Center | Indian Affairs." Accessed April 9, 2025. https://www.bia.gov/bia/ots/iesc.

Jack, Lyle. "COMMENTS OF THE OCETI SAKOWIN POWER AUTHORITY IN THE U.S. DEPARTMENT OF ENERGY ROUNDTABLE DISCUSSION ON FUNDING AND FINANCING TRIBAL ENERGY PROJECTS," April 2019. https://democrats-naturalresources.house.gov/imo/media/doc/2.%20Testimony%20Attachment%20-%20OSPA%20-%20Lyle%20Jack%20-%2004.30.19.pdf.

"Recommendation for Narrow Geographical Boundaries for a Potential NIETC and Supporting Information Submission," February 2, 2024. https://www.ospower.org/wp-content/uploads/2025/02/OSPA-NIETC-Recommendation-2.2.2024.pdf.

Jorgensen, Miriam, and Jonathan Taylor. "What Determines Indian Economic Success?" *The Harvard Project on American Indian Economic Development*, 2005.

Jossi, Frank. "Oceti Sakowin Wind Power Project." *Lakota Times*, May 17, 2018. https://www.lakotatimes.com/articles/oceti-sakowin-wind-power-project/.

Kelsey, Mara, Ni Zhang, and Mengyin He. "Tribal Access to Financing for Renewable Energy." University of Washington Climate Risk Lab and the Foster School of Business - Masters of Business Administration, June 2024. https://foster.uw.edu/wp-content/uploads/2024/06/Tribal-Financial-Access-to-Renewable-Energy-Full-Report.pdf.

Kiesling, Lynne. "Regional Transmission Organizations as Market Platforms III." Center for Technology, Science, and Energy, January 31, 2025. https://ctse.aei.org/regional-

transmission-organizations-as-market-platforms-iii/.

Kyl, Ron. Navajo Nation Trust Land Leasing Act of 2000, Pub. L. No. S.2665 (2000). https://www.congress.gov/bill/106th-congress/senate-bill/2665/text.

"Land-Based Wind | Electricity | 2021 | ATB | NREL." Accessed March 13, 2025. https://atb.nrel.gov/electricity/2021/land-based_wind.

Lovely, Lori. "Project Profile: Kayenta Solar Facility." Grading and Excavating, May 1, 2018. https://www.gxcontractor.com/home/article/13033737/project-profile-kayenta-solar-facility.

Martin, Rebekah. "Defending the Cobell Buy-Back Program," 2016.

Matt, Duane. "Tribal Aggregate Business Development: Why Should I Do It." Division of Energy and Mineral Development, May 15, 2024. https://www.ugpti.org/resources/proceedings/downloads/2024-05-15-1300-DuaneMatt.pdf.

Milbrandt, Anelia R., Donna M. Heimiller, and Paul D. Schwabe. "Techno-Economic Renewable Energy Potential on Tribal Lands," July 3, 2018. https://doi.org/10.2172/1459502.

Navajo Nation Council. "United States Department of the Interior Bureau of Indian Affairs Approval of the Navajo Nation General Leasing Regulations of 2013." United States Department of Interior, 2013. http://nnld.org/docs/gldd/General_Leasing_Regulation_2013.pdf.

Navajo Times. "Kayenta Solar Project Is Operational." June 22, 2017. https://www.ntua.com/assets/kayenta-solar-project-is-operational----navajo-times-paper---06-22-2017.pdf.

"Navajo Tribal Utility Authority 2016 Progress Report," 2016. https://www.ntua.com/assets/2016-ntua-progress-report.pdf.

"Navajo Tribal Utility Authority Light Up Navajo." Accessed March 31, 2025. https://www.ntua.com/lun-2022.html.

"NTUA Solar Energy." Accessed January 25, 2025. https://www.ntuasolar.com/kayenta.

NTUA, SRP and Navajo Nation Leaders Celebrate Green Energy for Nation at Kayenta Solar. "NTUA, SRP and Navajo Nation Leaders Celebrate Green Energy for Nation at Kayenta Solar." Accessed March 13, 2025. https://srp.net/2n0HDAw.

Oceti Sakowin Power Authority. "Corporate Charter of Oceri Sakowin Power Authority," January 30, 2015. https://www.ospower.org/wp-content/uploads/2016/05/Oceti-Sakowin-Power-Authority-Corporate-Charter-Ratified-as-of-May-2016.pdf.

"The Oceti Sakowin Power Authority Statement of Interest in Participating in the National Renewable Energy Laboratory's Process for Identifying Interregional Renewable Energy Zones," June 3, 2022. https://www.ospower.org/wp-content/uploads/2023/10/OSPA-Statement-of-Interest-National-Transmission-Planning-Study-06032022.pdf.

Office of Indian Energy and Economic Development, and Division of Energy and Mineral Development. "Native American Wind Resource Atlas," 2010. https://www.bia.gov/sites/default/files/dup/assets/as-ia/ieed/ieed/pdf/idc013229.pdf.

Office, U. S. Government Accountability. "Justice40: Additional Efforts Needed to Improve Tribal Applicants' Access to Federal Programs Under Environmental Justice Initiative | U.S. GAO," May 2, 2024. https://www.gao.gov/products/gao-24-106511.

Pasqualetti, Martin J., Thomas E. Jones, Len Necefer, Christopher A. Scott, and Benedict J. Colombi. "A Paradox of Plenty: Renewable Energy on Navajo Nation Lands." *Society &*

Natural Resources 29, no. 8 (August 2, 2016): 885–99. https://doi.org/10.1080/08941920.2015.1107794.

Powell, Dana E. *Landscapes of Power Politics of Energy in the Navajo Nation*. Duke University Press, 2018. https://doi.org/10.1215/9780822372295.

Ravotti, Nicholas M. "Access to Energy in Indian Country: The Difficulties of Self-Determination in Renewable Energy Development." *American Indian Law Review* 41, no. 2 (2017): 279–318.

Ravotti, Nicholas M. "Access to Energy in Indian Country: The Difficulties of Self-Determination in Renewable Energy Development." *American Indian Law Review* 41, no. 2 (2017): 279–318.

Reiter, Ben. "A New TERA: Why It's Time to Revisit Tribal Energy Resource Agreements." *LSU Journal of Energy Law and Resources* 10, no. 2 (2022). https://digitalcommons.law.lsu.edu/jelr/vol10/iss2/6.

Secretary of the Interior. "Order NO. 3377 Contractility ofFederal Functions for Oil and Gas Development on Indian Lands," December 16, 2019.

Southwest Power Pool Generator Interconnections Department. "Interconnection Facilities Study Report." (IFS-2016-001-11, February 2022. https://opsportal.spp.org/documents/studies/files/2016_Generation_Studies/GEN-2016-032-IFS-2016-001-11_IFS-Summary_R3-DRAFT.pdf.

Steiger, Glenn. "Utility-Scale Solar Development on Tribal Lands," December 8, 2021. https://www.energy.gov/sites/default/files/2021-12/developing-utility-scale-solar-development-on-tribal-lands.pdf.

"Subcommittee Hearing on Regulatory Barriers to American Indian Job Creation," April 7,

2011.

Swinford, Wyatt. “Lessons Learned: Avoiding the Hardships of Tribal Mineral Leasing in the Development of Oklahoma Tribal Wind Energy.” *American Indian Law Review* 40, no. 1 (2015): 99–129.

The Praxis Project. “ROSEBUD ECONOMIC DEVELOPMENT CORPORATION (REDCO),” January 9, 2020. https://www.thepraxisproject.org/cbph-orgs/2020/1/9/rosebud-economic-development-corporation-redco.

“The Project – OSPA.” Accessed April 8, 2025. https://www.ospower.org/the-project/.

“Tribal Economic Development Action Is Needed to Better Understand the Extent of Federal Support.” United States Government Accountability Office, August 2022.

“Tribal Electricity Access and Reliability.” Report to Congress. United States Department of Energy, August 2023. https://www.energy.gov/sites/default/files/2024-01/EXEC-2023-000952%20-%20Tribal%20Electricity%20Access%20Reliability%20Report%20to%20Congress%20%28Final%20Draft%20-%20Clean%29-signed%20by%20S1.pdf.

United States Government Accountability Office. “Indian Energy Development: Poor Management by BIA Has Hindered Energy Development on Indian Lands.” United States of America, June 2015. https://www.gao.gov/assets/gao-15-502.pdf.

“Indian Programs Interior Should Address Factors Hindering Tribal Administration of Federal Programs.” Report to the Chairman, Subcommittee on Regulatory Affairs and Federal Management, Committee on Homeland Security and Governmental Affairs, U.S. Senate. Government Accountability Office, January 2019.

U.S. Department of Agriculture. “Electric Infrastructure Loan & Loan Guarantee Program.”

Rural Development, January 19, 2015. https://www.rd.usda.gov/programs-services/electric-programs/electric-infrastructure-loan-loan-guarantee-program.

U.S. Department of Energy. "Initiation of Phase 2 of National Interest Electric Transmission Corridor (NIETC) Designation Process: Preliminary List of Potential NIETCs," May 8, 2024. https://www.energy.gov/sites/default/files/2024-05/PreliminaryListPotentialNIETCsPublicRelease.pdf.

U.S. Department of the Interior. "Overview: Tribal Energy Resource Agreement(TERA) and Tribal Energy Development Organization," n.d. https://usea.org/sites/default/files/event-/Mark%20Cruz%20and%20Johnna%20Blackhair%20-%20TERA-TEDO%20Overview%20September%202020.pdf.

U.S. Department of Transportation Federal Highway Administration. "Project Profile: Navajo Nation Kayenta Solar Program (Phase I & II), Arizona," n.d. https://www.fhwa.dot.gov/ipd/project_profiles/az_navajo_nation_kayenta_solar_program.aspx.

"USDA Announces Loans to Improve Rural Electric Infrastructure and Upgrade Energy Efficiency | Home," May 30, 2019. https://www.usda.gov/about-usda/news/press-releases/2019/05/30/usda-announces-loans-improve-rural-electric-infrastructure-and-upgrade-energy-efficiency.

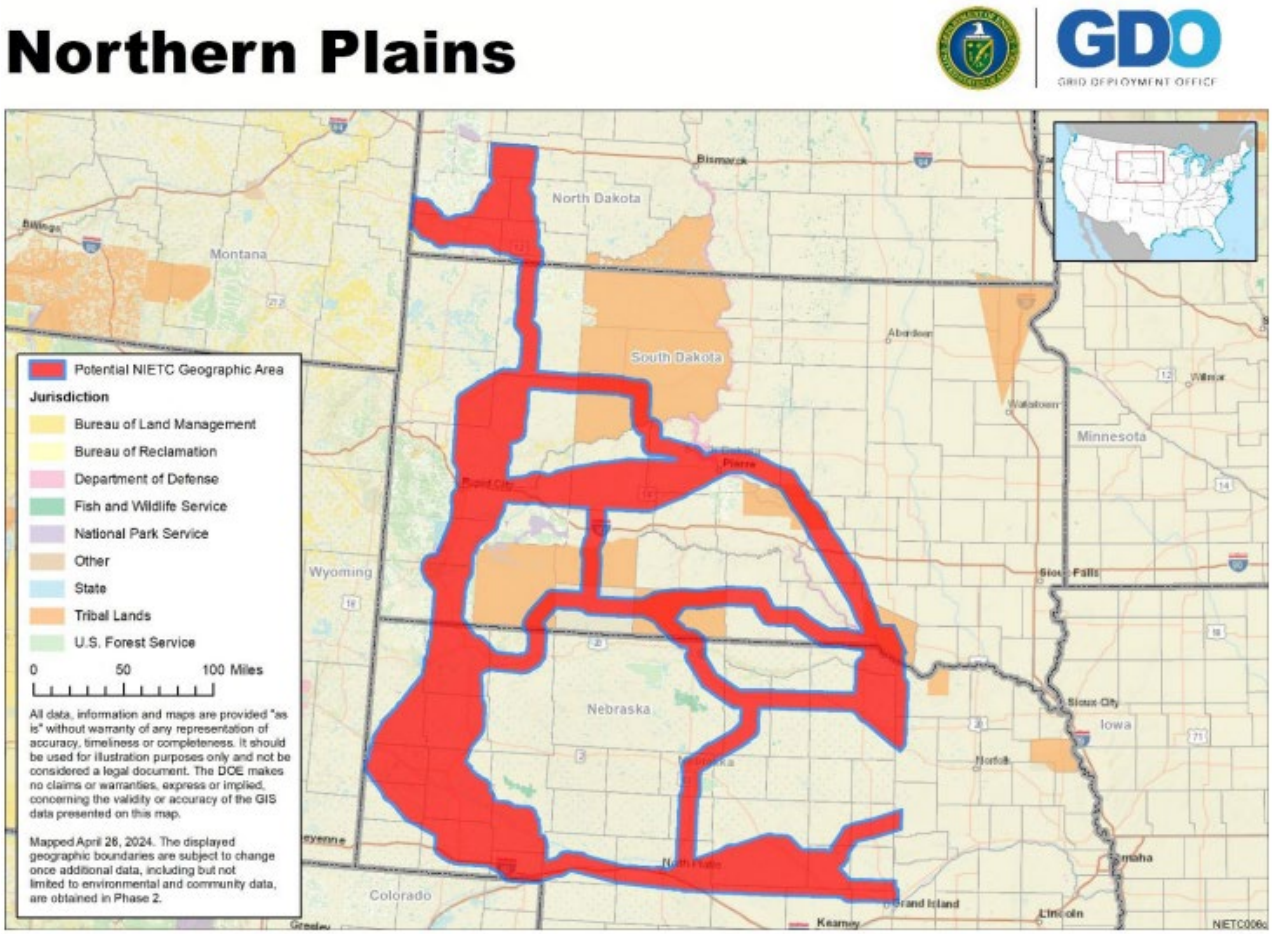
Zimmerman, Michael G., and Tony G. Reames. "Where the Wind Blows: Exploring Barriers and Opportunities to Renewable Energy Development on United States Tribal Lands." *Energy Research & Social Science* 72 (February 1, 2021): 101874. https://doi.org/10.1016/j.erss.2020.101874.

Appendix

Appendix 1.

Preliminary transmission geographic area designation in the Northern Plains released in phase two of the National Interest Electric Transmission Corridor Designation Process. This map was designed based on the 2023 National Transmission Needs Study and input from public recommendations[253].

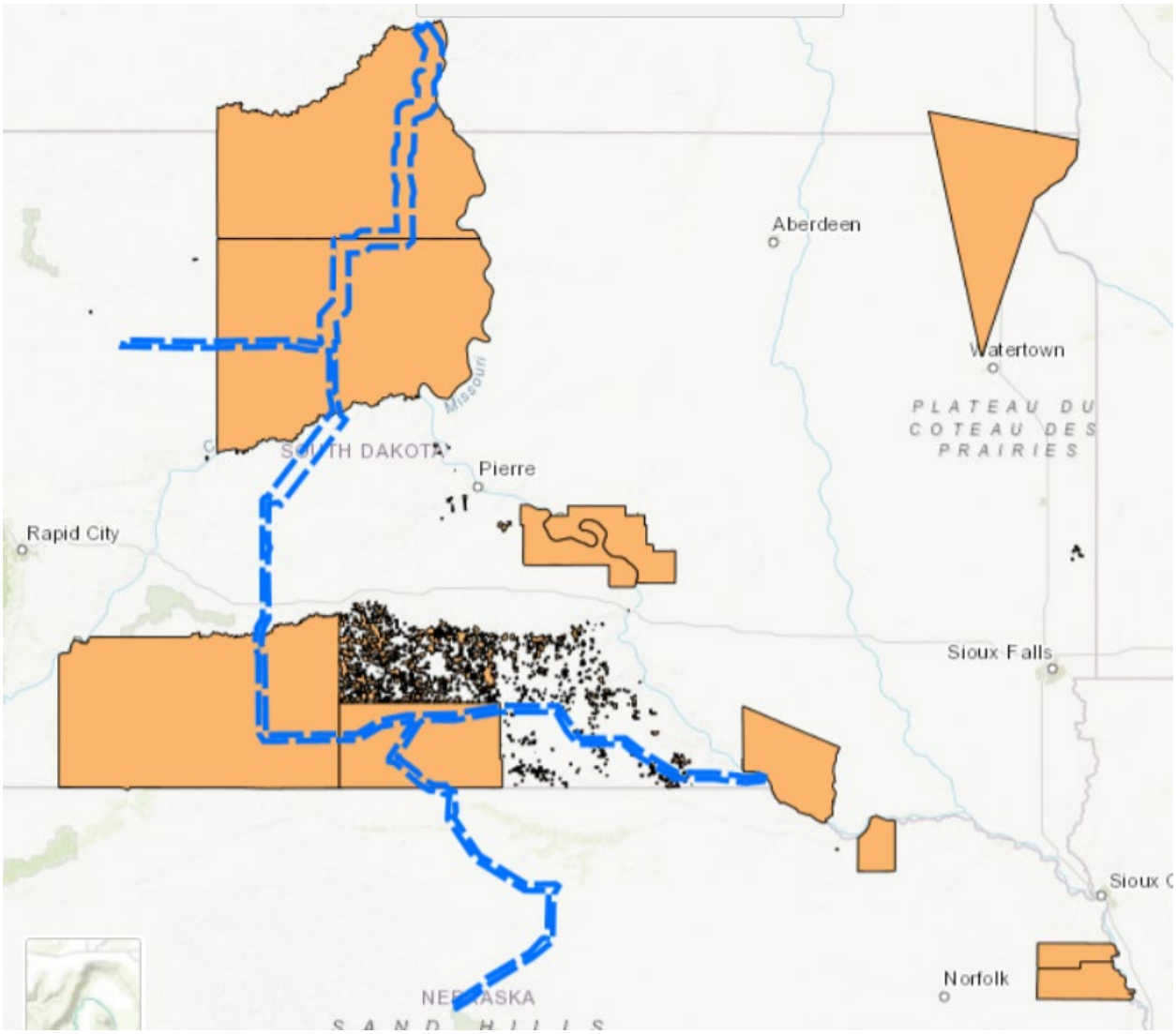
[253] U.S. Department of Energy, "Initiation of Phase 2 of National Interest Electric Transmission Corridor (NIETC) Designation Process: Preliminary List of Potential NIETCs."



Appendix 2.

A map generated using the Department of Energy's Geospatial Energy Mapper showing the potential National Interest Electrical Transmission Corridors in phase three. It overlays a geospatial representation of tribal reservations. This corridor is aptly named the *Tribal Energy Corridor* at this stage. To create this map, I selected the *Phase 3 Potential National*

Interest Electrical Transmission Corridors and the *Tribal Reservation* layers[254].



Appendix 3.

A mock brochure created for the BIA and IESC serves as promotional/informational material to inform tribes and tribal-led energy enterprises of TEDO certification. The brochure includes a quick background of the policy, the powers that come with TEDO certification, the additional

[254] "Geospatial Energy Mapper (GEM)," accessed April 11, 2025, https://gem.anl.gov/tool.

programs that support TEDOs, and finally, the application materials necessary to acquire certification. This brochure references current application requirements, not amended by my policy recommendation. The sources used to create this material are referenced below[255-258].

Appendix 4: (Continued from previous page)

[255] U.S. Department of the Interior, "Overview: Tribal Energy Resource Agreement(TERA) and Tribal Energy Development Organization."
[256] Matt, "Tribal Aggregate Business Development: Why Should I Do It."
[257] Hoeven, Indian Tribal Energy Development and Self-Determination Act.

Additional Programs

Tribal Energy Development Capacity Program (TEDC)

- Develop **tribal managerial, organizational, and technical capacity** for establishing Tribal energy enterprises:
  - Legal infrastructure
  - Update tribal policies/codes
  - Adopting secure transaction codes
- **No cost match**

Energy and Mineral Development Program

- **Pre-construction project development**, financial and technical assistance
  - Resource assessments
  - feasibility studies
  - engineering design
- **No cost match**

Application Materials for TEDO Certification

1. Contract under title I or IV of the Indian Self-Determination and Education Assistance Act for 3 or more years
2. Proof that TEDO is organized under Tribal laws
3. Proof that majority interest of TEDO is owned/controlled by the tribe(s)
4. Proof that tribal jurisdiction over land is maintained by the controlling interest in the TEDO

How to Apply

Submit an application package with all supporting documents in searchable portable document format (PDF) to TERA@bia.gov

Still Have Questions? Contact Us!

TERA@bia.gov,

iesc.org bia.gov