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Indian Tribes and the Fight for Clean Energy

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Thesis:

Native American communities have a unique and close relationship with the natural environment. This relationship is a key element within Native American culture, traditions, practices, and history. The effects of anthropomorphic (human induced) climate change pose an existential threat not only to the environment which tribes hold so dear but to our very species and are primarily attributable to greenhouse gas emissions stemming from nonrenewable fossil fuel power sources. The aim of this project is to explore the degree that green energy initiatives and projects are being implemented by tribal communities, to understand the ways tribes are advancing their green energy goals, and finally to learn about obstacles they have faced along the way. Two case studies have been conducted in order to explore these topics. Before going into the studies, background information will be presented on the two tribes highlighted, the Navajo and the Standing Rock Sioux. The first focuses on the Navajo Nation and is broken up into two sections, past and present, and covers an early example of the tribe seeking ways to divest from dirty fuels and move towards renewables. The second shows more recent green projects stemming from past actions by the tribe.

The following case study conducted by the Sioux Tribe looks at a very recent example of a clean energy project within the Standing Rock Indian Reservation. These case studies serve to inform the overall exploration of the project in examining green energy within tribal communities. Following these cases studies there will be presented some of the ways tribal communities are advancing their green energy initiatives, primarily focusing on grassroots methods and the government programs also stepping in to lend a hand. Finally, all these previous parts will be consolidated into a set of conclusions and findings.

Tribal Backgrounds:

The two main tribes discussed throughout are the Navajo (Dine) Nation and Standing Rock Sioux Tribe. As such, a brief overview of each has been researched.

The Navajo are a proud people and call themselves the Dine', which translates to "The People". It was only after Spanish



missionaries and historians started referring to them as Navajo that the name stuck. The nation is made up of roughly 27,0000 square miles of land which encompasses portions of Arizona, Utah and New Mexico making it the largest federally recognized reservation in the U.S. It also encompasses the Hopi Reservation. Based on the 2010 U.S. census, the tribe is the most populous in the nation with over 300,000 enrolled members.

The Standing Rock Sioux tribe is one of many tribes that make up the Standing Rock Reservation and the Great Sioux Nation. Other related tribes that make up the reservation are the Hunkpapa and Sicasu. The Sioux are a collection of native tribes that are roughly divided among two groups; the Dakota and Lakota and speak certain dialects of the

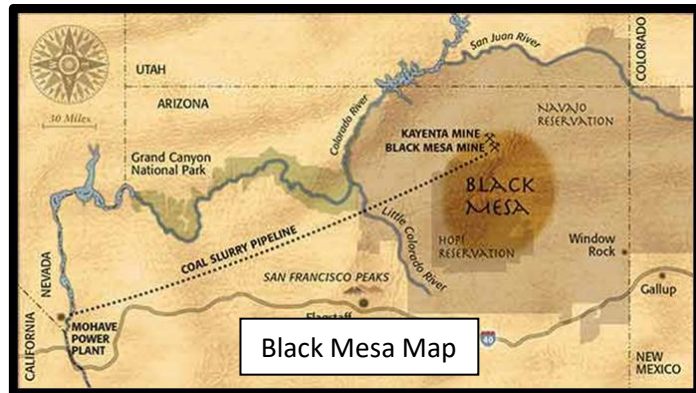


Sioux language. These tribes are members of the “Seven Council Fires” and are highly decentralized. The Standing Rock Reservation is located in portions of North and South Dakota. It has a total area of roughly 3,500 square miles of land and is the sixth largest federally recognized reservation in the U.S. As of the 2010 census, the population is just over 8,000 residents although it is important to note tribal membership is at around 15,000.

Regarding the research topic at hand, both tribal communities have had problems with power infrastructure with a large portion of their populations either lacking or without access to power. When reviews and article about the Navajo nation published by Forbes “more than 15,000 homes are without access to electricity – roughly 75% of the total Native American households without access to electricity” (para. 5). As stated in the same article, “As of 2000, 14.2% of all Native American households have no access to electricity – more than ten times the national average” (para. 2). While this is a somewhat dated statistic, it still expresses the problems many tribal communities face in getting reliable access to energy. At the same time, as will be discussed later, both these tribes have historically been taken advantage of by fossil fuels companies who have taken resources that are precious to the tribes.

Case Study One: Power Paths, Navajo Nation leading the Transition to Alternative Energy

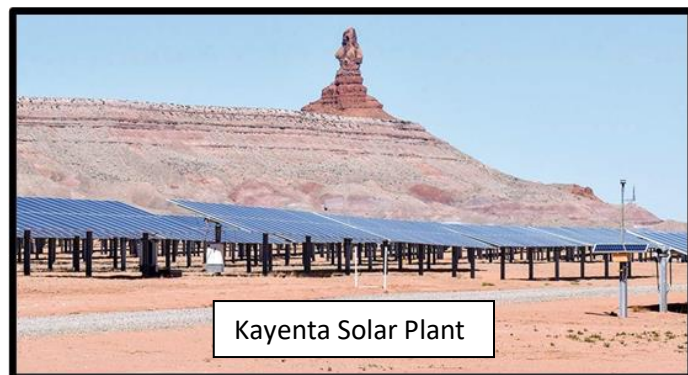
The Black Mesa mine was the largest land stripping coal mine in the nation. Located in Arizona on the Navajo Nation at Black Mesa, it is known to the tribal community as “Dziłjiiin” (Black Mountain'). The mine was in operation



from 1960 until its eventual closure in 2005. Over the years spanning 1971-2005, Peabody Coal, who were the owners of the mine, pumped over a billion gallons of pure water a year from the Navajo and Coconino aquifer to produce coal slurry. Coal slurry is a mixture of water and crushed coal that is not only more easily transportable but can be burned as an energy source. Once the slurry was ready, it was transported from the reservation down a pipeline to the Mohave Generating station in Nevada. It would then be burned creating energy that was sent to places in California like Los Angeles. This mine and others within the Black Mesa area, along with the generating stations that burned the coal slurry, were extremely dirty and had a hugely detrimental effect on Navajo tribal communities. Since its inception, the mine has led to the relocation of Indians, the desecration of ancestral sites, and the degradation and deterioration of the natural environment. Over time due to these detrimental impact's, tribal members along with other outside forces banded together to challenge the coal mine and advance other types of renewable power sources. When the Mohave Generating station closed in 2005 due to violations of the Clean Air Act, it set in motion a change that is still felt today. For the tribe, it was the time to make a transition to clean energy and a Just Transition plan was put into place to establish that mines like the one at Black Mesa would not reopen, and that new ones would not be built. At the same time, members began

experimenting with green energy projects by installing small solar panels and windmills for residents. The tribal members, working within the just transition plan, were able to engage in meaningful dialogue primarily with elected officials in Nevada and California explaining their case and why mines like Black Mesa should cease operation. They largely focused on outlining the detrimental effects to Navajo and Coconino aquifers. After working hard to convince both outsiders and those within the tribe who were in support of continued mining, the Just Transition groups were able to solidify that the Black Mesa mine would not reopen. Although they faced opposition from fossil fuel industry leaders and even some tribal members, they were nonetheless determined to continue fighting and the group was able overcome them and set the groundwork for future projects. This past action by the tribe is an extremely important one because it sets the stage for what is now occurring on the reservation.

Today things on the reservation are starting to look quite different and the continued effort on the part of tribal members and outside groups to progress green energy initiatives are growing in number. The Navajo



Generating Station (NGS) which closed in 2019 and was demolished in December 2020 is yet another example of many over the years in which the tribe is divesting from dirty energy sources. There were mixed emotions within the community, some of whom were reliant on the station for their livelihood. The “Navajo Generating Station and Peabody paid approximately \$40 million in the 2019 fiscal year to the Navajo Nation and millions more to the Hopi. (In 2016, money from the industry accounted for nearly 80% of the tribe’s budget.) These royalties and leasing income

funded essential government services like education and health care; “For many families, it was a tragedy to see coal jobs disappear” (Kutz, para. 24-25). Peabody Coal also laid off 200 workers who were mostly tribal members. While there were negative outcomes, there were also some very positive ones. To help fill the gaps as mines and power plants continue to close, green energy projects are starting to replace them. One notable example is the Kayenta Solar Plant that was constructed in 2016 which is comprised of 356 acres and 119,301 sun tracking solar panels. The farm, although relatively small, has already begun to show positive results over the last few years. It provides power to 36,000 homes on the Navajo reservation. It also provides roughly 100 permanent jobs and although this number is not large, it shows that green energy can be a job creator. One of the most important outcomes from this project is that it is 100 percent Navajo owned. This signals a paradigm shift in which the tribe is taking control of energy production and distribution as opposed to what has been historically the case in which tribes have been reliant on outside power companies, even if those companies were generating power using tribal resources on tribal land. Other notable examples outlining this paradigm shift is Navajo Power, a Navajo utility company, that has already installed hundreds of solar panels and plans to use 80% of its revenue to continue building projects on reservation land. Another is Native Renewables which is a Navajo non-profit that focuses on green energy job training and construction of off-grid solar panels for tribal families.

Overall, these two eras within this case study were hugely important for several reasons. The first era set the stage for Just Transition to occur. While the second, stemming from the first, showed some of the benefits of transitioning to cleaner energy. Above all, the most important outcome was that the tribe was able to assert its governing authority and progressively enact beneficial change. This change had led to a paradigm shift in which tribes are taking control of their energy projects

and ensuring that their communities' benefit from them. At the same time, they are slowly but surely working towards becoming energy suppliers themselves. Hopefully in the future they will be providing clean energy not just within the reservation but to outside cities and towns.

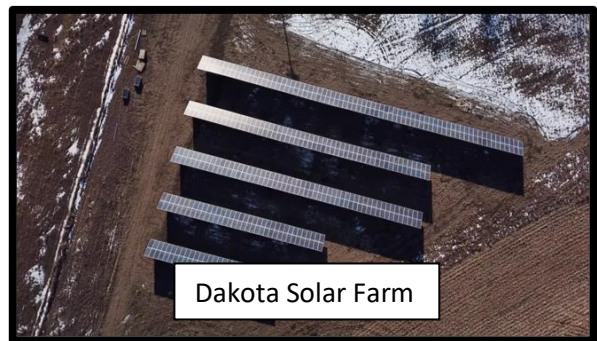
Case Study Two: Standing Rock Reservation-300-Kilowatt Solar Farm

In the years 2016 and 2017 as protests raged over the construction of the Dakota access pipeline, some tribal members were focusing their efforts on another project idea an idea that would help to create a new means of providing clean energy to the community. This idea was to construct a solar farm on reservation land within the Standing Rock Reservation. One of these members was Cody Two Bears,



who helped form indigenized Energy, which is a group focusing on finding ways to provide renewable energy to native communities. He was the driving force behind what would become the 1,100 solar panel, 300-kilowatt solar farm that opened just three miles from the Dakota Access Pipeline in 2019. The overarching goal of the farm as stated by Cody is “about merging the cultural values and wisdom passed down to us with new technologies to establish a sustainable platform that not only helps us live better lives today, but also ensures our footprint over the next several centuries is a positive one,” (Ellsmoor, para. 7). Upon its completion, the solar farm was a towering achievement for the tribe and is an extremely important case for several reasons. First, it was an example of a tribe taking matters into their own hands to advance the goals the tribe wanted to work toward and accomplish, energy independence. While there was help from numerous outside sources including non-profits like Give Power, Empowered Energy, Indigenized Energy and

others, the project was really in the hands of the tribe. Second, it served as an example of collaboration with the tribe and other sources to achieve a mutual goal. The mutual goal being to provide clean energy to the community and help combat climate change at the same time. Third, Nebraska is far behind other states in taking concrete steps to create green projects. The tribe's solar farm, while small, is the largest in the state and serves as a successful example of a green energy project. This solar project is the first of what will hopefully be many that the tribe builds going into the future. As of this writing, another much larger solar farm named the Lookout Solar Project is scheduled to be built on the edge of the Pine Ridge Reservation within South Dakota, roughly 300 miles south of the North Dakota solar farm. Hopefully this signals a trend that more green energy is to come to reservations within the North and South Dakota Indian reservations.



Ways Tribes are advancing their Green Energy Initiatives:

Based off the two main case studies and other research conducted via the examination of other tribe's green energy projects, there are a number of ways in which tribal communities are advancing their green energy goals. The two main methods are comprised of government assistance, and more importantly, through the use of grassroots efforts. The first source of assistance comes from the Department of Energy (DOE) Indian Energy Policy Programs. The DOE has been providing financial and technical assistance to tribes that are federally recognized

since 1992. In 2005 the congressional Energy Policy Act of 2005 (Public Law 109-58, Title V) authorized DOE to promote Indian tribal energy development, efficiency, and use; reduce or stabilize Indian tribal energy cost; strengthen Indian tribal energy infrastructure; electrify Indian land, housing, and businesses. These all fall under the umbrella of the main mission for the



department which is “to maximize the development and deployment of energy solutions for the benefit of American Indians and Alaska Natives” (pg. 4). To advance this main mission the department also has a list of goals that include:

“Promote Indian tribal energy development, efficiency, and use; Reduce or stabilize energy costs; Enhance and strengthen Indian tribal energy and economic infrastructure related to natural resource development and electrification; Bring electrical power and service to Indian land and the homes of tribal members; Support and promote meaningful tribal participation in critical national and global tribal energy initiatives and crosscuts, including the water-energy nexus, grid modernization, and microgrids” (DOE Strategic Roadmap 2025, pg. 5). Overall, the department has made great strides in helping tribal communities. Annually the department averages 7.8 million dollars in federal funding. According to the department’s website, they have funded 170 projects, installed 32 megawatts energy generation within tribal lands and contribute to roughly 14 million dollars in tribal savings. While this is all well and good, tribal communities have been slow to adopt clean energy projects and a main contributing factor is due to the federal government and its mismanagement of projects.

Aside from government assistance, the more important method tribes are using to advance their green energy goals is through grassroots efforts. Over the course of examining various articles and the two case studies, grassroots methods seemed to be the most prominent means by which tribes were able to advance their goals.

Oppositional Forces:

Based on the research conducted, there arises two main sources of oppositional forces to green energy projects. The first is from outside actors. This includes fossil fuel companies, mining companies, states that are heavily reliant on dirty energy as a source of revenue, and fossil fuel lobbyists. All of these forces are primarily in opposition for economic reasons. It would seem it is less targeted at green energy projects themselves but more towards initiatives that aim to close their facilities. For them, intervention on the part of tribes to hinder their ability to produce energy in a dirty fashion hurts their bottom line and thus they are opposed. This is easily discernible in the first and second case studies. In the first you have Peabody Coal which has been reluctant to pay out or support the Navajo as they transition from the old-fashioned mining practices to moving towards green energy production. As stated in the High County News article titled *The fight for an equitable energy economy for the Navajo Nation*, “So far, Peabody has proven the most difficult to deal with by far. The company has submitted a request to the Office of Surface Mining, a federal regulatory agency, to delay much of the reclamation work, which involves returning the open coal pits to workable land, until 2022 at the earliest” (para. 27) and as stated by Nicole Horseherder “They’ll never reach out and say, ‘You know, we hear your concerns. Can we come to some kind of reasonable agreement?’” (Kutz, para 28). This seems to echo



other situations similar to the one the Navajo are facing with Peabody Coal in which industry leaders are unwilling to account for their actions and help to alleviate environmental problems they created. The second source of opposition comes from within the tribes themselves. While there is overwhelming support for green initiatives, a main area of contention is how to transition without doing lots of economic harm. Many tribal communities are heavily reliant on fossil fuel production as a means of retaining jobs and as an economic surplus. In the case of the NGS “more than 1,000 tribal members were employed at NGS and the mine that served it, and tribal officials are facing \$35 million in budget cuts due to the closures” (Marcacci, para, 6). It can easily be seen why some tribal members are opposed to green energy projects if they cause severe economic harm. Some tribal leaders either advocate for the continued use of dirty energy sources and others would like to transition but not entirely. There is also some slight skepticism from some tribal elders, who having witnessed the damage on fish runs and the flooding of what was pristine land due to the construction of dams, are wary to adopt green energy such as wind turbines and solar panels that have been shown to have negative impact on some bird populations.

Although oppositional forces do exist there, are ways in which solutions can be found. Fossil fuels are on their last leg within the U.S. This is not to mean that they are not powerful and hugely integrated into the way U.S. energy is produced. More so, because of growing, overwhelming public support of green projects and with the effect of climate change becoming all too real and increasing in severity, it is not a matter of if fossil fuels will die out, but when. A significant way tribes may be able to advance their green energy goals is by educating those within the tribe who may be opposed to green projects and convince them that in the long term, it will work out for the best. Another would be to continue creating tribal

utility companies, non-profit and advocacy groups. These entities would be able to not only push back on outside forces but also provide jobs and job training for tribal members. A last important factor to mention in combating opposition is that there is currently a new administration in power. This Biden/ Harris administration has already gone to great lengths to help ensure we start to seriously work at tackling climate change. Notable examples are the halt of construction on the KXL pipeline along with the nomination of Rep. Deb Haaland (D-N.M.) to lead the Interior Department who would be the first Native American cabinet secretary in U.S. history and the confirmation of Michael Regan to lead the Environmental Protection Agency who is the first African American to lead the EPA. All of these culminating together can't help but signal to those in favor of green projects that hopefully opposition will be weakened and green energy projects can advance more quickly.

Conclusions:

Following thorough research of numerous articles, websites, documentaries and the two case studies, a few key conclusions can be made regarding tribes and their relationship with green energy. First, there is overwhelming support from tribal communities across the country to focus on green energy initiatives. As the effects of climate change become more apparent and severe, clean green energy projects are viewed as a means of protecting vital resources now and into the future. So far green projects of all sizes that have been developed and are in operation have had extremely beneficial results within the communities they serve. They are improving economic and social aspects for community members and have provided good paying temporary and permanent jobs within the communities. At the same time, they have begun to provide a more equitable distribution of power within tribal communities, who for so long have either been lacking in power grid infrastructure or were being neglected by larger power utility companies. What is also

important to note is that tribes are taking control of these green projects by asserting their sovereign authority. They are taking the lead and bypassing what would be a lengthy process if under the full guidance of the federal government. There seems to be this paradigm shift in which tribes are deciding to take action to ensure that they are the one who are in control of the energy production, and are trying to be dependent upon themselves and not large energy companies which have historically given tribes the short end of the stick. Tribes, realizing they have the ability to enact these projects independently seemed to be empowered and it seems inevitable that more clean energy projects will be created as time progresses. In most cases while tribes are getting help via the federal government, especially financial help, there are many other ways they have been able to achieve their green energy goals. Most notably and most in alignment with tribes taking back control over energy production is through grassroots initiatives which include the formation of tribal nonprofits, tribal utility/power companies and garnering support from within the community and also with the help of other likeminded groups. Another important aspect to examine when looking at the success's tribes have had in creating and initiating green projects is they serve as examples to other communities that grassroots movements can make substantial changes even in the face of opposition, and that by working collectively mutual goals can be achieved. Although oppositional forces exist primarily from groups who are invested or connected to dirty energy sources, there seems to be a greater focus on green energy not just from tribes but from both the U.S. public and government. With the new administration in power along with positive potential appointments to both the U.S. Secretary of Interior and head of the EPA hopefully green projects within tribal lands but also in the U.S. as a whole will face less opposition. To summarize everything that has been examined, although there is still much work to be done, it is apparent that

tribal communities by and large are heading in the right direction to achieve greener and cleaner communities and hopefully more positive projects will be undertaken in the future.

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