



VOICES FROM THE WEST

FINDINGS FROM INTERVIEWS REGARDING ENERGY ON TRIBAL LANDS

Power of Place - West Companion Report





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Acknowledgements

The Nature Conservancy acknowledges that lands and waters across the United States were – and continue to be – traditional territories of Indigenous communities. As one of the world’s leading conservation organizations, we have both the responsibility and unique opportunity to work with Indigenous communities to advance shared interests. By adapting our work with guidance from Indigenous communities and Tribal Nations, the Conservancy can support large-scale conservation outcomes for the benefit of all people and the natural world.

This project would not have been possible without the time, vision, expertise and insights generously shared by those who participated in our interviews. The names and affiliations of the participants can be found in the Appendix of the report. We recognize and are grateful for their leadership in creating a more just and equitable future for Indigenous Peoples and communities across the United States. The Nature Conservancy is committed to building trusting relationships with Indigenous communities as we move towards

a cleaner, healthier energy future while addressing historic inequities.

The Nature Conservancy and partners started outreach to participants in 2020, just as the COVID-19 pandemic started crisscrossing the globe. As the pandemic continued to unfold, it became more and more apparent that American Indian and Alaska Native communities were experiencing a disproportionate burden of COVID-19 infections, deaths and severe outcomes.¹ Participants generously took precious time to share their insights and communicate with tribal members, all while making critical health decisions to protect their families and communities. The Nature Conservancy is extraordinary grateful to participants for their commitment to working together on this project.

This project was made possible through generous donor support of The Nature Conservancy’s United States Climate Program. We would like to thank the many team members who contributed to producing this report.

¹ <https://www.cdc.gov/media/releases/2020/p0819-covid-19-impact-american-indian-alaska-native.html>



Background

The Nature Conservancy's 2019 Power of Place study was an effort to identify pathways towards a clean, reliable, cost-effective and low-impact energy future for California by 2050. The study modeled California's mid-century electricity needs to determine how to meet the state's ambitious clean energy targets, while also considering impacts to nature. The 2019 study demonstrated the possibility for California to achieve its clean energy goals, while limiting impacts to important natural and agricultural lands.

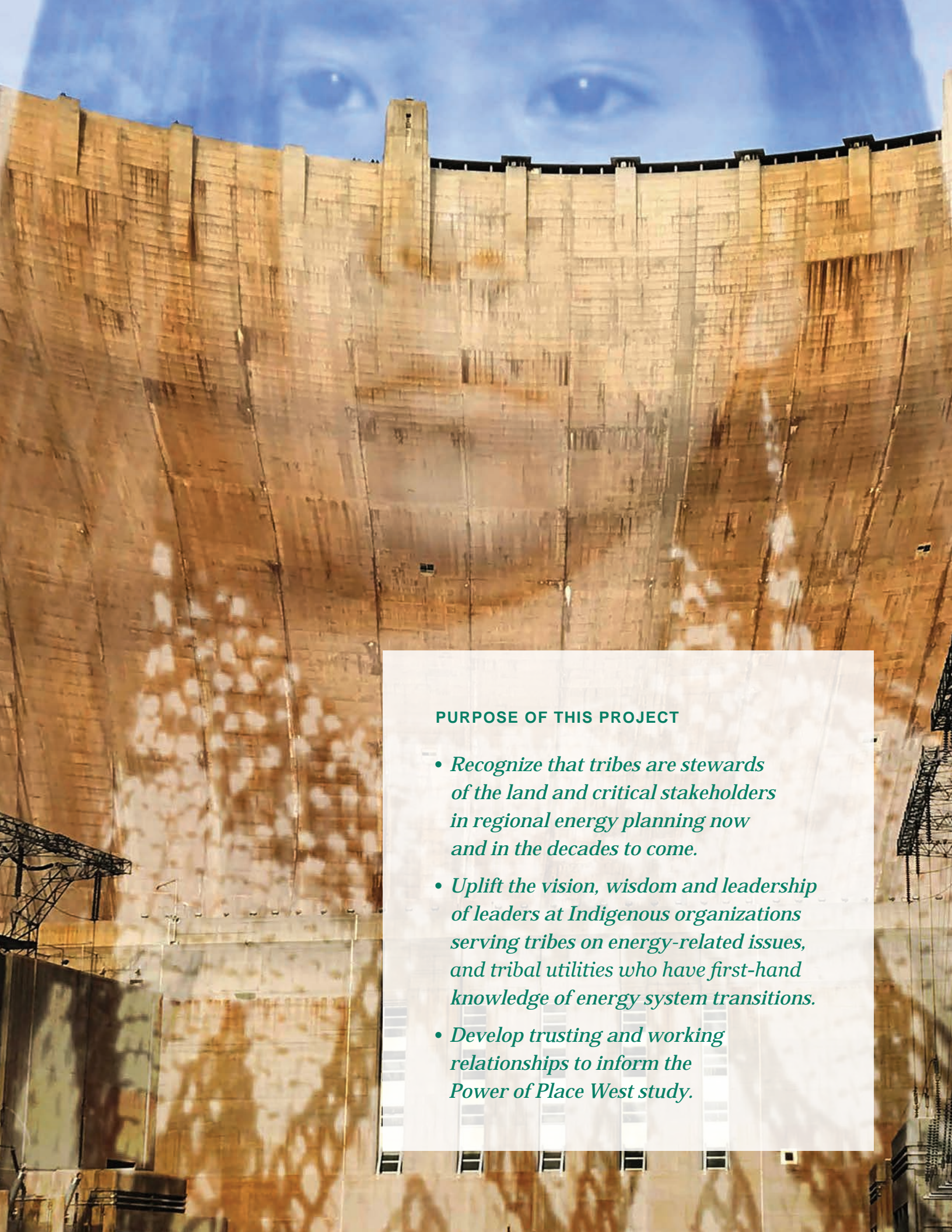
The methodology of Power of Place was well received by a wide range of partners, including state planning agencies, regulators, nonprofits, academics and the public and private utility sector; however, there were areas noted for improvement including outreach to Indigenous communities and Tribal Nations to better understand the impacts of energy policy and renewable energy projects in development across the West. Overall, the Power of Place study demonstrated the potential to successfully balance that conservation of natural lands, cultural resources, and iconic landscapes while accelerating the deployment of new clean energy infrastructure.

In 2020, the Nature Conservancy launched the Power of Place West study to identify pathways towards a clean, reliable, cost-effective and low-impact energy future by mid-century for the eleven western states making up much of the western interconnect. Modeling these western states presented the opportunity to better understand the potential to build out a resilient and efficient electrical grid supporting a diversity of western communities.

In preparation for the Power of Place West study, The Nature Conservancy recognized the responsibility to develop the study to support people and nature. This project, as a companion to the study, was designed to engage Indigenous Peoples and Tribal Nations as advisors in the effort to balance conservation of lands, waters and cultural resources with the growth of clean energy infrastructure on traditional lands of western Indigenous communities. This project builds on existing work underway with many Conservancy offices across the West and acknowledges we need to do more outreach and knowledge sharing to make the equitable clean energy transition.

Indigenous Peoples have extensive knowledge and experience effectively managing and stewarding lands across the west. It's crucial that they have a strong voice and choice in the decisions and actions that shape the energy system transition and impact their lands, waters, livelihoods and culture. The Conservancy recognizes the sovereignty of Tribal Nations, and supports Tribal Nations in their self-determination and self-sufficiency, in all cases, including when it comes to energy decisions and development, as set out in the [Conservancy's Human Rights Guide](#).

This project aims to uplift the vision and wisdom of leaders in Indigenous organizations serving tribes on energy-related issues and tribal utility managers who have first-hand knowledge of energy infrastructure. Participants shared their knowledge and experiences with historic energy and infrastructure decisions, including recent clean energy infrastructure siting decisions. Their experiences underscore the need for early inclusion of tribal voices in energy and infrastructure planning, permitting, and development.



PURPOSE OF THIS PROJECT

- *Recognize that tribes are stewards of the land and critical stakeholders in regional energy planning now and in the decades to come.*
- *Uplift the vision, wisdom and leadership of leaders at Indigenous organizations serving tribes on energy-related issues, and tribal utilities who have first-hand knowledge of energy system transitions.*
- *Develop trusting and working relationships to inform the Power of Place West study.*

Introduction

Communities across the western United States are experiencing impacts of climate change through more frequent extreme heat events, worsening drought and devastating wildfires. The impacts of climate change are disproportionately creating a burden for communities of color, low-income communities and Indigenous communities with exposure to unmitigated heat, drought and pollution. Indigenous Peoples are facing direct consequences of climate change due to their dependence on, and close relationship with, the environment and its resources.³ Climate change exacerbates the difficulties already faced by Indigenous communities including political and economic marginalization, loss of land and resources, human rights violations, discrimination and unemployment.

Many western Indigenous communities and Tribal Nations, currently and historically, have been excluded from energy planning and infrastructure development decisions that have compromised cultural resources, dispossessed communities of land and water rights, and generated or staved off economic opportunity. As many western states are embarking on ambitious multi-decade efforts to transition to cleaner forms of energy and build greater climate resilience it is essential to engage Indigenous communities and Tribal Nations in meaningful inclusive consultation for planning processes early. Among the challenges to effective

consultation is that many Indigenous communities lack funding, technical staff and other resources to engage in these planning processes or advance renewable energy projects and energy infrastructure upgrades on tribal lands.

The clean energy transition has multiple benefits from mitigating climate change to protecting human health. The scale of infrastructure required to transition towards cleaner forms of energy is unprecedented. Communities across the west, including Indigenous communities and Tribal Nations, will need to examine the land use trade-offs of low-carbon energy infrastructure as part of this transition.

Many Indigenous communities and Tribal Nations are knowledgeable about their sovereign lands and waters and those lands they depend on for sustenance and customary use beyond the reservation boundaries. Scientists can also provide information and data about the places that are rich in wildlife, the habitats that are most imperiled, and the lands that store the most carbon, but this data alone should not be the sole guide for decisions that will shape the energy transition. Through dialogue and meaningful consultation with Indigenous communities and all who work to protect lands and waters, spatial data sets should become more comprehensive, while also respecting sacred areas so they include the many values of Indigenous Peoples.

³ <https://www.un.org/development/desa/indigenouspeoples/climate-change.html>

Renewable Resource Technical Potential on Tribal Lands in the Western United States

Tribal land comprises approximately 7% of the eleven-state study area. The total technical potential on tribal lands for electricity generation from utility-scale solar resources is about 15 million GWh, or 19% of the western U.S. technical potential. The technical potential on tribal lands for electricity generation from wind resources is about 1.5 million GWh, or about 25% of the total study area technical potential.⁴ The tribal land in the study area is 45 percent of the total U.S. tribal land.

⁴ Developing Clean Energy Projects on Tribal Lands: Data and Resources for Tribes (Revised) (Book), DOE Office of Indian Energy (nrel.gov)

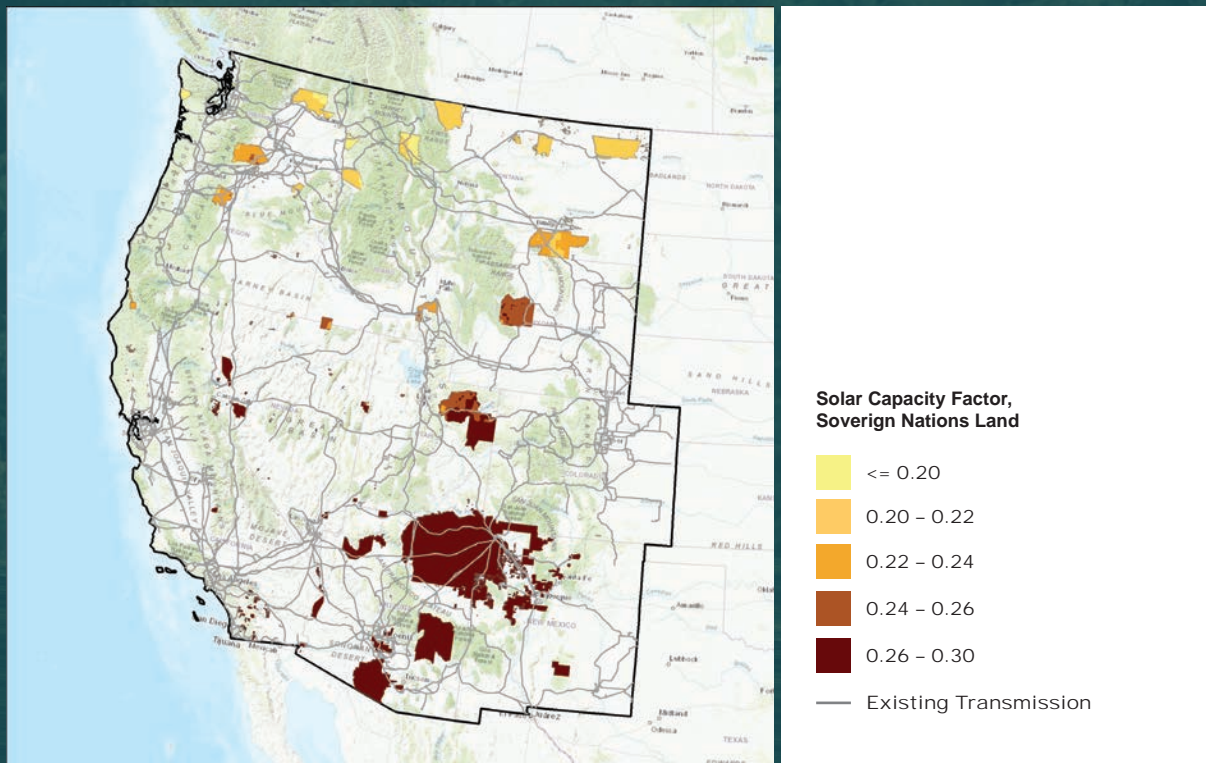


Figure 1. Solar resource technical potential on tribal lands across the Western United States (range: 57GW–1,234GW)

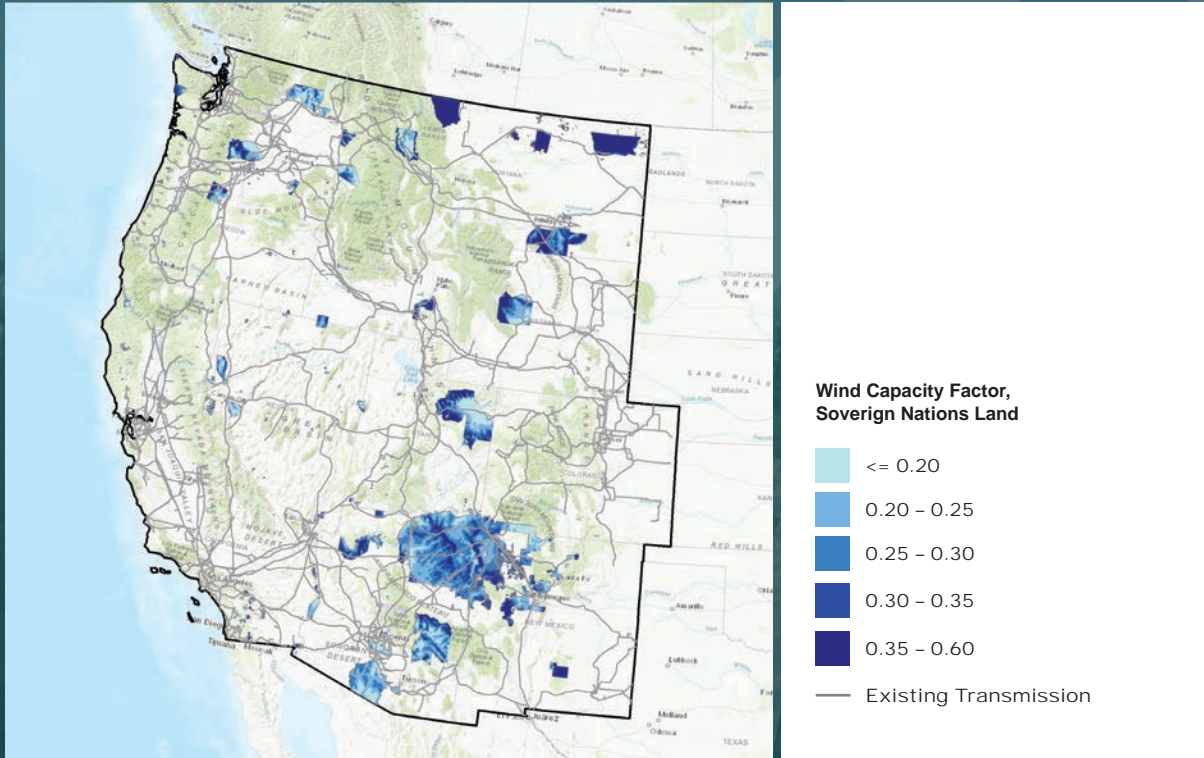


Figure 2. Wind resource technical potential on tribal lands across the Western United States (range: 5.1GW–111.5GW)

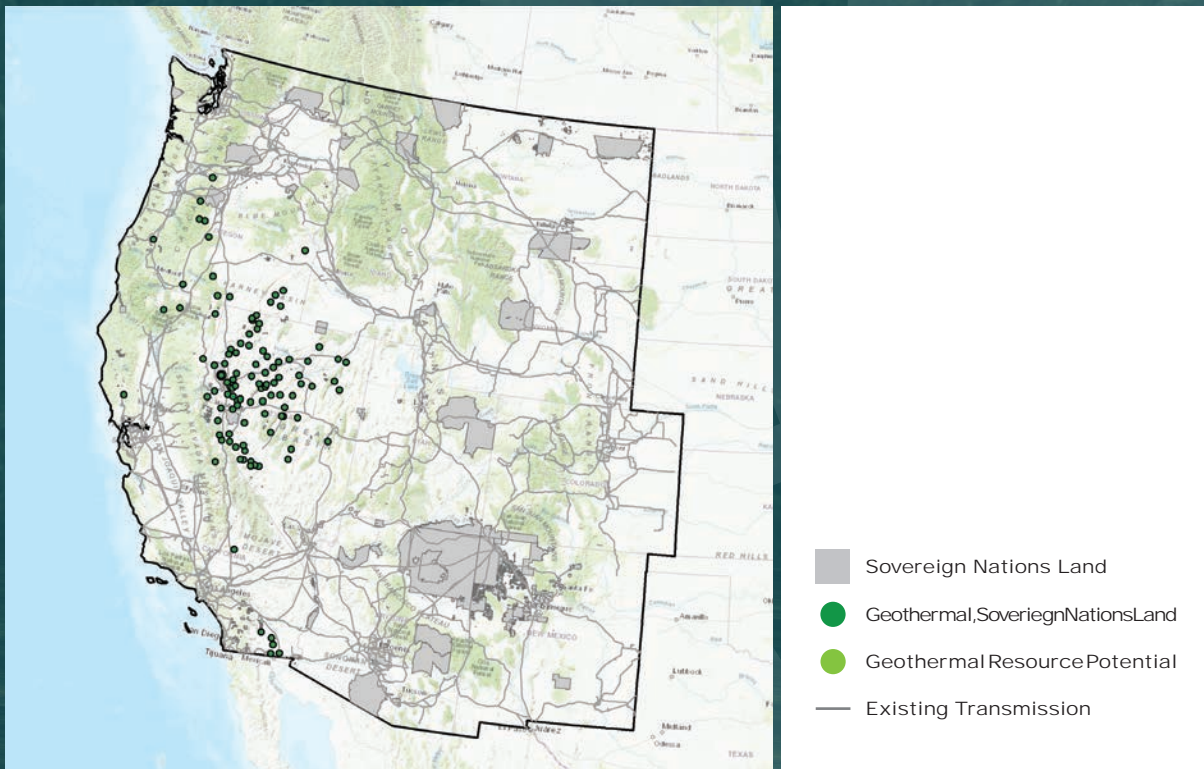


Figure 3. Geothermal resource technical potential on tribal lands across the Western United States, (Pyramid Lake Paiute: 16 MW)



Method of Interviews

A series of interviews were conducted between March - July 2021 with leaders within Indigenous organizations, regulators working with Tribal Nations, tribal utility representatives, tribal consultants, and agency staff working with tribal organizations. Interviews were also conducted with those who directly serve Indigenous communities' interest in climate and energy infrastructure issues.

Most interviews were completed remotely for the project. 7Skyline and JASenergies supported The Nature Conservancy with outreach, scheduling and interview documentation. The Nature Conservancy introduced the project to participants and shared the discussion questions. Detailed meeting minutes from the interviews were organized to address common themes.

PARTICIPANTS RESPONDED TO FIVE QUESTIONS:

1. Historically tribes have not been consulted early in the development of energy projects. What considerations and concerns would tribes in your region like to raise? What has been the region's experience with energy and electricity?
2. Historically tribes have not been consulted in long-term energy planning processes, such as those led by utilities, state agencies, or counties. How should tribal perspectives be included in these decision processes?
3. Has your organization developed policies or procedures at the tribal or regional level to support a just and equitable transition to clean energy?
4. What has been the region's experience with renewable energy development? How could adoption of renewable energy impact environmental, cultural, and socioeconomic issues for the tribe or region?
5. Have there been renewable energy siting issues in your region raised by tribes? If so, what have been the issues?

Several responses from participants validated and reinforce each other, amplifying the need for tribal participation in infrastructure development planning and the broader renewable energy movement.



Participants indicate that intergenerational traumas endured by tribal communities are not just in the past but present now in the form of long-standing, institutionalized political, regulatory, and geographic barriers that impinge upon tribal sovereignty, prevent meaningful participation in energy planning, and limit access to the socioeconomic benefits that can come from renewable energy development.

What We Heard

The following are findings from 16 interviews held between March - July 2021. Findings are organized by each question with key themes, highlights and select quotes.

1

Historically tribes have not been consulted early in the development of energy projects. What considerations and concerns would tribes in your region like to raise? What has been the region's experience with energy and electricity?



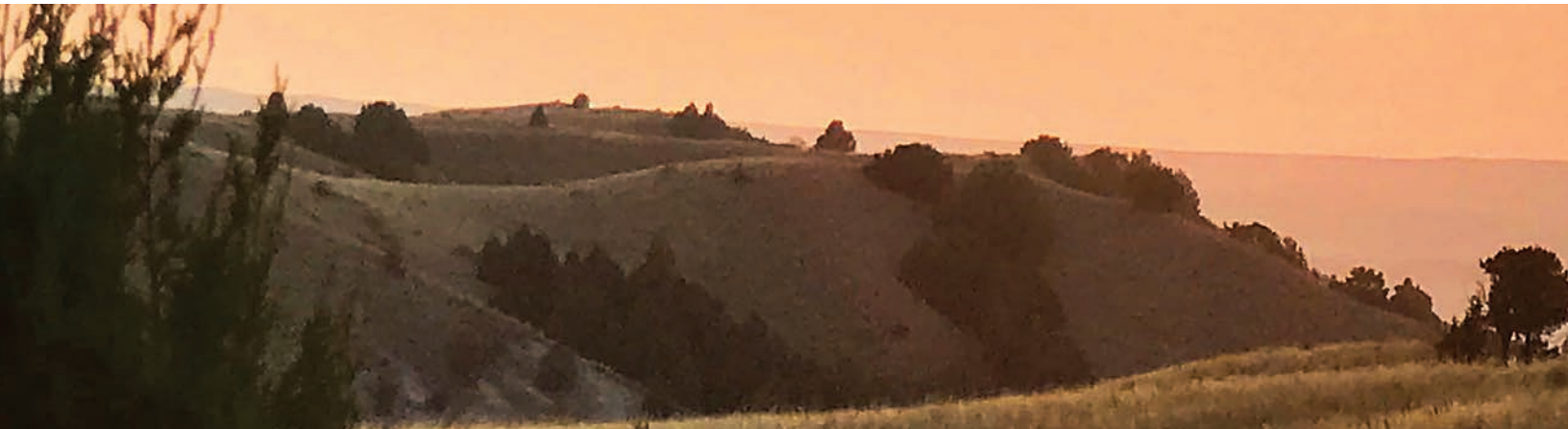
HISTORICAL PERSPECTIVE:

“When you are dealing with communities that are still suffering traumas, and their wounds are being opened again and again...out of respect, you cannot move quickly.” *(Smith)*

“No one thinks about the tribes until way down the road.” *(Jose)*

“Tribes have been engaged in a much broader sense than they were two decades ago. We have high voltage lines built in the 50's when the tribes were not consulted at all.” *(Manion)*

“These kinds of issues don't come to the forefront until someone comes to the tribes and says ‘we want to use some of your land.’” *(Schaff)*



THE ROAD FORWARD:

“Consulting with the tribes early in the process’ – that statement sounds very colonial. Asking tribes what they think should be done from the outset is more appropriate. Before development begins. They may not be energy experts but they know their land. Many tribes have been exploited by well-intentioned and not-so-well-intentioned developers who haven’t engaged with them from the start.” *(Smith)*

“If there is one thing that tribal communities will dig their heels on is the land. All our tribal lands were taken from us from the beginning. We don’t own the land. It’s the federal government that is holding lands in trust for us. We were never put here to own. We were here to care for the land and that is something that we will do. That is why things don’t move as quickly. That is why education is very important to have win-win situations in the end.” *(Jose)*

“Tradition is important but to live in today’s world, the tribes we are working with now... they want to be on the playing field, too.” *(Riley)*

“The renewable energy transition will have a big impact on the tribal economies. We don’t want this transition to replicate the bad practices of the past of haste and not consulting the tribes until the end.” *(Isaac)*

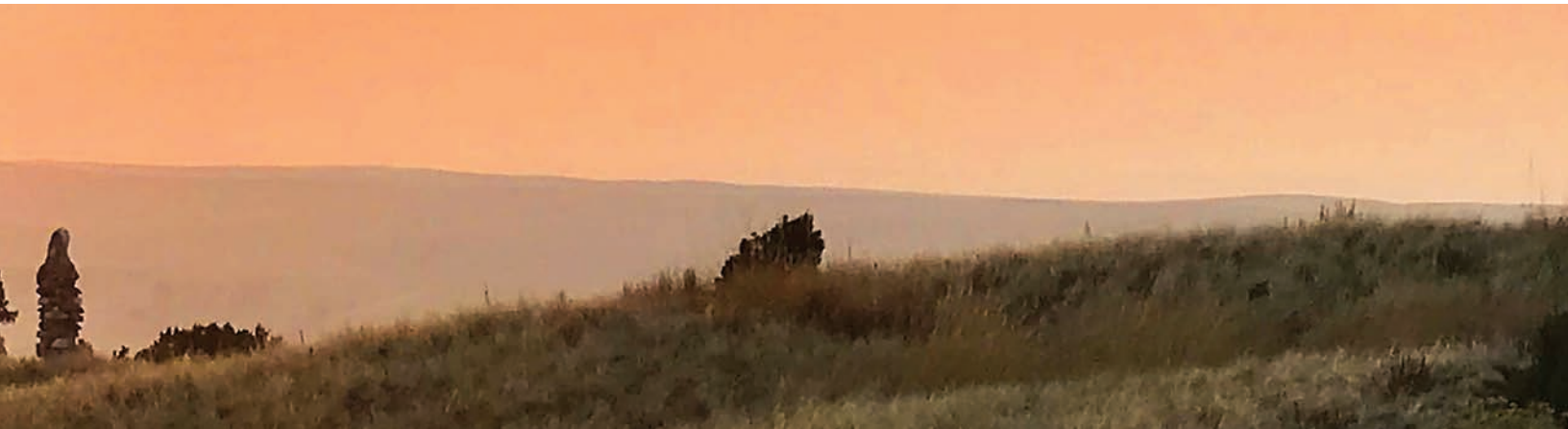
“Tribes are a lot stronger now than they were in the past. We are not asking for repatriation; we are asking for inclusion. The policy part of it always tends to shy away from inclusion because of a lack of understanding of how collaborative we actually are... It feels as if they are trying to build the road around us.” *(Isaac)*

“Without community approval it does not go anywhere.” *(Jose)*

“Tribes want to do energy projects and produce electricity, but do they have the resources to do that? When they have the resources then they have to decide which small pocket of land that they do have.” *(Jose)*

“It is about trust, respect, and education.” *(Jose)*

“Expansion of infrastructure has increased on tribal lands. The federal agency regulating the vast majority of distribution have recognized that tribes do have a seat the table, tribes are concerned and can help identify the impacts of these projects.” *(Manion)*



“Most tribes would like to be at least involved in the discussion to hear what people are saying about the movement to zero carbon or complete renewables. They value the land and value wanting to see nature protected and greenhouse gases reduced. *(Bethurem)*”

THE CHALLENGES:

“Long term energy planning is in the future and the tribes are rooted in the past. Here we are trying to merge two worlds. Not a lot of trust with the folks launching headlong into the future.” *(Wiseman)*

“Some companies are doing a better job and some are just checking a box.” *(Wadsak)*

“Companies that check the box and companies that go well out of their way, might make that some tribal staff might experience that they have not been consulted properly about projects that are happening.” *(Wadsak)*

“Relationships are weak and it is hard to figure out who the right person to talk to is” *(Wadsak)*

“Inviting the tribes in early has really proven to be a more efficient way to get things done.” *(Ganion)*

“Tribal energy utilities are unique, and the use of land has many different meanings and significances to different tribes. The value of land is more than just monetary and “open” can mean different things.” *(Gold)*

“Tribes lack the experience and understanding around issues related to energy development. There is such a wide variety of electricity available in reservations. i.e. Close to 13,000 people in the Navajo nation do not have electricity at times.” *(Bethurem)*



2

Historically tribes have not been consulted in long-term energy planning processes, such as those led by utilities, state agencies, or counties. How should tribal perspectives be included in these decision processes?



“Indigenous people are the original stewards of our land. It is right and just for them to be at the table for these discussions.” *(Smith)*

“Tribes want to control their own direction... tribes are looking for the ability to set their own terms with the federal government.” *(Isaac)*

“My perspective of the management of the tribal utility might be different from the perspective of the tribal leader.” *(Bethurem)*

“Engaging in long-term planning processes is a long-term commitment.” *(Wadsack)*

“Tribes are largely excluded from any type of process.” *(Bulltail)*

“it is important to get tribal perspective from the get go.” *(Jose)*

“Tribal perspective has been more and more included. Often that is because we basically took a seat at the table. Warm Springs is not a litigious tribe. We always approach issues by sitting down and discussing to find solutions. Working together has outcomes that are more prosperous for most parties. Inviting tribes early has proven to be a more efficient way to get things done.” *(Manion)*

Participants indicate there is interest from tribal organizations and tribal utilities contributing to infrastructure planning and being part of the solution.

As tribes become more engaged in energy issues and assert their sovereignty to become partners, more integrated and appropriate energy solutions can emerge.



Tribal utility and tribal organizations indicate that engagement goes beyond allocating limited roles, such as tribal cultural monitoring during solar construction. Instead ensuring that space and time is made early for interested tribal leadership to fill strategic, decision-making roles in energy planning projects, especially when projects will directly affect their cultural footprints.

“When people want to look at the future of what the grid should look like, tribes would welcome tribal engagement.” *(Bethurem)*

“The development of hydropower has led to a loss of water rights and communities.” *(Bulltail)*

“For the states that don’t feel that they are allowed to perform additional outreach to try to engage tribal perspectives, either the rules have to change or their understanding of the rules need to change if those tribal perspectives are important to them.” *(Wadsack)*

“Indian Country can be part of the solution. Tribes can be active participants and illustrate a healthy environment and a balanced economy that includes tribal and non-tribal businesses to build out energy infrastructure.” *(Deshene)*

“Tradition is important but to live in today’s world, the tribes we are working with now... they want to be on the playing field, too.” *(Smith)*

“There is a lack of trust and being ignored in the trust responsibility.” *(Bulltail)*

“Our best wind resource areas will never be developed due to the presence of cultural resources. We did do the studies to identify what is available. That is a choice, what is left is where we plan [for renewables development].” *(Wiseman)*

“How can tribes get a seat at the table for energy planning and who bears the responsibility? “...they [the Tribes] need to be at the table too, so to not include they might think they have no place to participate.” *(Wiseman)*

“As stewards of the land since time immemorial, we do have issues that need to be recognized and are substantial. These are issues people have relied on for generations. Respecting and managing for it is the message we would like to convey when we are sitting at the table.” *(Manion)*

3

Has your organization developed policies or procedures at the tribal or regional level to support a just and equitable transition to clean energy?

“It is important that the tribes be in control. We are working with tribes doing energy planning towards tribally owned utilities, so they can control their own energy, and regain their self-reliance. It is impossible to be sovereign when your energy supply is controlled by outsiders.” *(Smith)*

“A lot of infrastructure deals were done under duress with absence of community benefits and without due diligence that have been unfair and exploitative. We want our projects to include the voices of the communities we are working with.” *(Isaac)*

“Difficult to find resources on tribal communities specifically.” *(Bulltail)*

“It is important to look at state and local issues as well as regional interfaces. Diversity of options to achieve clean energy goals is important since there is a jurisdictional collision, and the management risks and timing are not aligned. It is important to stress the regional nature of the electric grid.” *(Mignella)*

“We have been putting tribal policies in place, but we don’t have the resources or procedures dedicated to transition to clean energy.” *(Jose)*

“If tribes can make the transition from dirty fossil-fueled energy to clean regenerative energy, and the development is in line with Indigenous lifeways and culture, many will welcome it. The Northern Plains region is ideal for solar development, by tribes for tribes.” *(Smith)*

“Tribal leadership recognizes we have climate change issues and we recognize that those issues have an impact to our sustainable food supply. There are issues that impact our food chain and our lifestyles that we need to address. While we haven’t taken an official stance on how we should approach it, it ends up more times than not, becoming an issue when addressing projects that reduce the impact. We need to manage the resource for our use today and recognize that we have future generations to come that will rely on these resources as well.” *(Manion)*

Diversity, equity, and sovereignty concerns were raised during the interviews. Participants expressed the need for developers, agencies, utilities and other stakeholders to respect tribal sovereignty, tribal laws, customs and traditions, and individual tribe’s consultation requirements.

The BIA, DOE, NREL, USEPA and other Federal agencies that have trust responsibility to tribes to providing education and technical support. Tribes seeking to evaluate their natural resources for possible viable renewable alternatives to existing coal economies, can secure support to make informed decisions. (See resources section of this report)

“Many tribes have figured out what they need to do to force the utilities to acknowledge their sovereignty. They know there needs to be tribal codes and laws to do that.” *(Schaff)*

“We are looking at our distribution system and looking at the different cures and how solar can’t be the cure for all. We are also looking into batteries and small nuclear modular reactors. We need renewable energy to help solve our problems. The need for local and regional capacity is critical.” *(Gold)*

“Some tribes are better at forming utilities and exerting their sovereignty to be able to participate in management. And that is rare.” *(Bulltail)*

“Sometimes one person gets informed but the word does not get around to other government divisions which can happen for a complex government.” *(Wadsak)*

“In this administration [Biden 2021] we are really focused on equity, environmental justice and making sure any transition efforts are equitable for communities that have not been served or have been left out of conversation on transmission and efforts to do policy that will impact their communities or lands in the past.” *(Johns)*

“If we did not provide internet to these folks it would never happen. Disparity - tribal houses no internet and phone, across the street on non-tribal lands houses have all of these services.” *(Wiseman)*

“Every Tribe is different with different resources on and off reservations with different goals and different levels of support in the communities.” *(Deschene)*

“How do you define a sacred landscape? How do you tell a developer what they need to study? The socioeconomic and cultural resources are intertwined. This is not easy, and energy developers are concerned about a big degree of uncertainty.” *(Shaw)*

“It is naive to assume there will be consensus between tribes. We must educate ourselves about the history of tribal affiliations and colonization before engaging with tribes.” *(Smith)*

VI. WHAT WE HEARD



“Tribal leaders from many tribal nations have talked about top down and bottom up to try to meeting the middle. There is not a default setting for the tribal nations to be the authority for energy utilities on tribal lands, yet. At the highest strategic levels we are working to build models that would create something like a Tribal Utility Commission. Money and resources needed to get the utilities stood up. Need tribal council consistency over a long time.... Community and cultural leaders also need a seat at the table for these discussions for equity.” *(Ganion)*

“We start by asking questions, but mostly listening. We seek to learn before we teach. We learn from tribal elders, seek their permission to engage with tribal members and tribal government. Within tribes there is traditional leadership, spiritual leadership, and western leadership which must be respected and consulted. We seek guidance from all three before we set foot on a reservation. This is not settler business as usual.” *(Smith)*

“Key thought leaders from Indian country and tribal leaders are moving forward and the more we can incorporate tribal land components –identify benefits of tribal lands- the better for tribes and policymakers.” *(Thomas)*

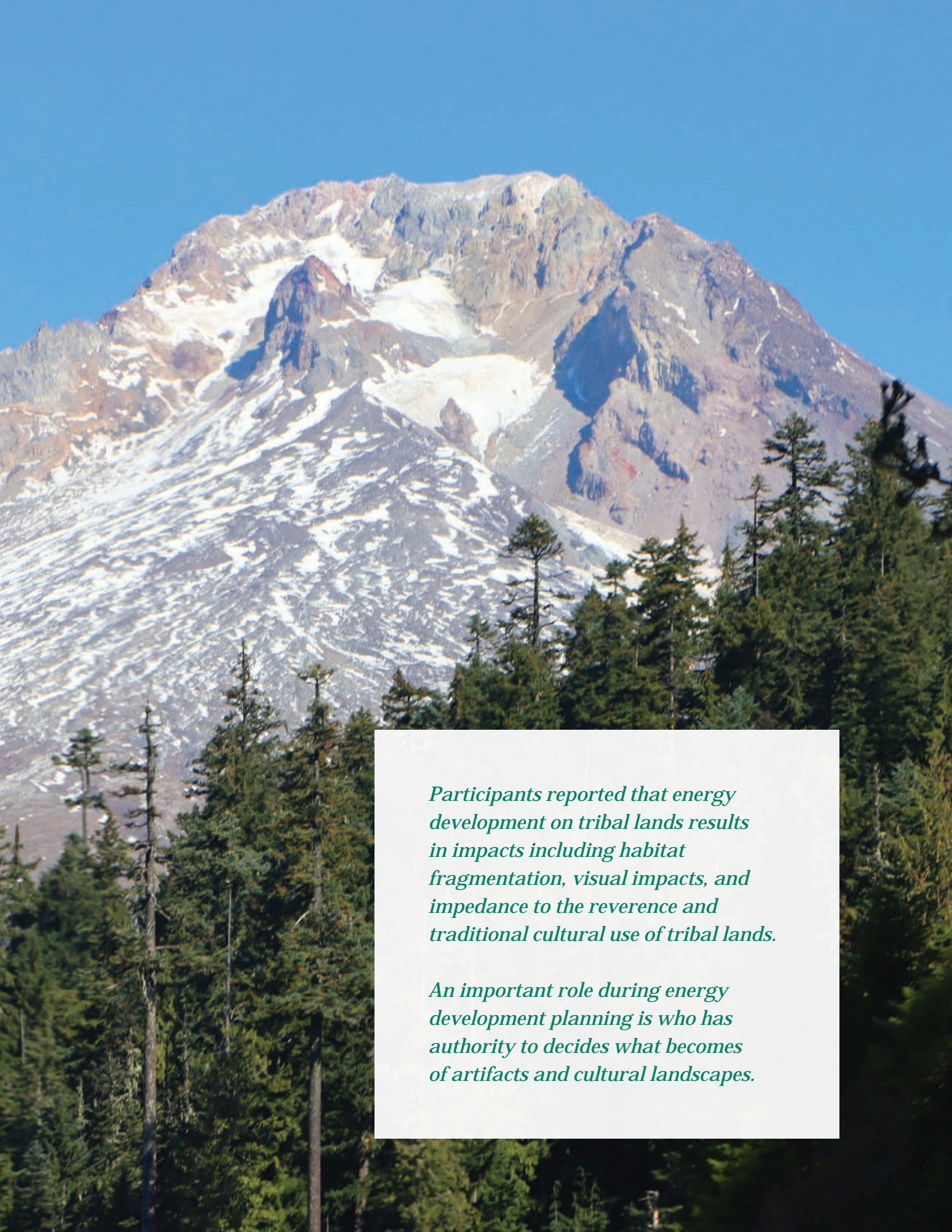
“We are trying to be robust about getting community feedback. We do community open houses but it is also good to go out to specific communities or chapters to sit and have the conversations outside of our government buildings.” *(Shaw)*

“There are some companies that go out of their way to inform or inquire when they are developing projects on lands that are of interest and important to a tribe but not on a reservation, but that is not universal or required.” *(Wadsak)*

“It is a chicken and the egg issue when working with the tribes. Tribes need to be shown that renewables are a viable opportunity.” *(Thomas)*

If not built by Native people, for Native people, renewable energy development can be just as exploitive as fossil fuel development.” *(Smith)*

“Working with tribal colleges is important.” *(Bulltail)*



Participants reported that energy development on tribal lands results in impacts including habitat fragmentation, visual impacts, and impedance to the reverence and traditional cultural use of tribal lands.

An important role during energy development planning is who has authority to decides what becomes of artifacts and cultural landscapes.

4

What has been the region's experience with renewable energy development? How could adoption of renewable energy impact environmental, cultural, and socioeconomic issues for the tribe or region?

“If tribes understood a little more about the transition – there needs to be information conveyed in an understandable format. There is a bridge between potential and execution. No one has been able to translate that bridge to the communities.” *(Isaac)*

“Not all tribal resources are on reservations. Most tribes have off reservation historical resources and many tribes have off-reservation rights by treaty, by law and by their inherent rights and sovereignty to practice their religion and culture off their reservation.” *(Schaff)*

“The adoption of renewable energy has thrust the forefront for climate change initiatives for obvious reasons. The tribes have concerns on the cultural impact on renewable energy development on tribal lands and ceded area lands in regard to the cultural uses of those lands. These issues bleed into the socioeconomic components. It doesn't just mean the financial cost or financial benefit to the tribes, but what is the impact to the food supply chain that we have relied on and what can we do to manage those impacts.” *(Manion)*

“Success looks different in the eyes of the people that are impacted by it. People care about energy prices and putting food on the table.” *(Isaac)*

“The challenge I see with tribes is that none of them have the ability to pay the increased cost, and even though prices are coming down for renewable, that seems to be the biggest barrier to getting into renewable energy. The cost is higher than what we are paying right now. That doesn't take into account the whole issue of greenhouse gas or the environment, but the underlying issue is cost, even if they want to protect those things, can they afford it?” *(Bethurem)*

“When it comes to solar, because it is a sovereign nation, because the land is held in trust BIA, we get into issues of third parties getting enough collateral in place to want to do the project.” *(Bethurem)*

“The old model needs to be broken. Government needs to treat tribes as partners and bring them in as partners.” *(Gates)*

“There is a lot of opportunity in tribes being active participants in how these projects are being developed. Communities will always be centered around projects when it comes to land use.” *(Bulltail)*

“Few cared about the desert until the Government decided that a lot of sun was needed... Government then realized that there are some tribes that do care about the desert and determined that dialogue should occur but then it was too late.” *(Gates)*

“Western scientists developed the use of fossil fuels and the generation and transmission of electricity and thus created the carbon problems. We then come to tribes and say this is your problem too, you have fossil fuels and need electricity, so because your reservation has renewable energy potential and it needs to be harnesses, so step up and work with us to develop it.” *(Gates)*

“There are cultural artifacts on and off reservations, any project anywhere could impact tribal resources.” *(Schaff)*

“We have four casinos, and yes, we make millions of dollars, but those are pennies in the bucket. We’re still catching up to society. Some of us don’t have running water or electricity. We are focusing on getting our foundation built.” *(Jose)*

“At Yakama Power we do 200 miles of fiber, cable TV, and electricity... We have low head hydro, a wind turbine to be deployed shortly and some solar. We are getting in the game, starting training programs, and going for it. We do not have to contract out this work.” *(Wiseman)*

“If you know one tribe, then you know one tribe.” *(Deschene)*



5

Have there been renewable energy siting issues in your region raised by tribes? If so, what have been the issues?

“Raptors that we have a concern over that could be impacted as a result of wind projects. We have a concern over the wind turbine development in the birds of prey issues that are impacted. Without certainty of knowing that we will have a negative impact on them, we cannot proceed or pursue because of that impact. There are impacts that will be discovered as we build out these renewable projects. If there are impacts, what are we going to do to identify the project as it continues to operate?”
(Manion)

“Putting covenants in land use agreements that there needs to be a significant effort in managing impacts before it becomes a crisis.” *(Manion)*

“Society’s conscious effort to conserve energy is often overlooked. What are we using as energy and is that needed? Energy is to be respected. How do we educate our consumers that energy is to be respected as any other element from mother nature and conserving it and using it wisely is our responsibility to reduce the demand that we as society have on that resource. We have spoiled our consumer and when it comes to energy, we build more projects. Can we focus on a conservation effort to undertake less use – means less project – means less pressure on the landscape.”
(Manion)

“Policymakers make decisions on future projects based on their experience with past projects. The information they are using is outdated or on projects not fully constructed. We have to look at energy siting in layers. Are the tribes ready for it? Is policy ready for it? Are people on the ground ready for it? What are the development challenges? There is resistance when there is miscommunication. Education and training needs to occur, information sharing and trust building.” *(Isaac)*

“Be intentional about what the purpose is. Not all audiences are the same.” *(Isaac)*

“There is no ‘one size fits all’ set of challenges or solutions when it comes to Tribal Nations.” *(Jose)*

“Involving Tribes has been an afterthought even when there are long planning processes. It’s like you’ve building the ship, then ask if the tribes want to get on board.” *(Jose)*

“There are cultural issues that have to be resolved, reviewed and signed off on along with an environmental review.” *(Bethurem)*

“Reliability is an issue. Tohono O’odham Utility Authority does not have the flexibility to economically build redundancy into systems.” *(Bethurem)*

Participants shared several factors that support successful tribal renewable energy projects, including projects that promote self-determination, sovereignty, and provide socioeconomic benefits to tribal governments and tribal communities.



“Infrastructure is hard for tribes to overuse if they do not have access to it and without planners and engineers, the limited tribal staff are multi-tasking job duties.” *(Bethurem)*

“The State of California conducts the cultural landscape assessments prior to project approval in order to determine project impacts on historic properties and cultural landscapes. Some federal agencies deny that there are historic properties that make up a cultural landscape. They will refuse to do assessments and approve projects. If a tribe protests the lack of assessments, the agency will conduct an assessment after approval as a form of mitigation.” *(Gates)*

“The government says that they are very interested in honoring and respecting the tribes. But when leveling down an area for renewables energy projects - what happens to the artifacts unearthed? Many end up in boxes and shipped to distant curation facilities, which is not good from the tribal perspective.” *(Gates)*

“It starts by doing the cultural analysis way ahead of time.” *(Gates)*

“These artifacts are the footsteps of their ancestors, every place you find an artifact is where historic Native Americans footprints have been. This is why artifacts can be called “footprints of the ancestors.” Artifacts for Native Americans are more than items for scientific study, artifacts intact are proof of a claim to a historic and enduring indigenous presence.” *(Gates)*





VII

PARTICIPANTS

We list organizational affiliations at time of interviews in 2021 and for identification purposes only.

Blue Lake Rancheria Tribe

Jana Ganion

California Energy Commission Tribal Program

Commissioner Karen Douglas and Tom Gates

Coconino County, Arizona

Melissa Shaw, Long Range Planner, Planning and Zoning

Covenant Solar Initiative

Cheri Smith, descendant of Mi'Kmaq Tribe and David Riley

Department of Energy Office of Indian Energy

Wahleah Johns, Albert Petrasek

Gila River Indian Community Utility Authority

Lenny Gold, General Manager Gila River Indian Community

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National Renewable Energy Laboratory Tribal Program

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“There is a ton of expertise out there, just need to know where to look.” MARGIE SCHAFF

“Help tribes in developing strategic energy planning.” KARIN WADSACK

Additional Resources

Many of the participants and contributors referenced additional resources and materials in developing this project. The Nature Conservancy offers these resources to support continued dialogue on the intersection of energy, tribal sovereignty, and climate policy. While not an exhaustive list, those who wish to explore the spectrum of experiences, perspectives, knowledge, and tools may find these resources useful.

CATEGORIES:

- Tribal Organizations
- Federal Agencies
- National Labs
- Renewable Energy on Tribal Lands
- State Agencies
- Tribal Energy Companies/Utilities
- Technical Assistance
- Tool Kits and Geographical Information
- Reports

TRIBAL ORGANIZATIONS

Tribal Utility and Energy Infrastructure Legislation for Indigenous People (TUEILIP)

<https://www.localsolarforall.org/news/coalition-calls-on-congress-expand-solar-access>

Comprehensive Economic Development Strategy for the Confederated Tribes of the Umatilla Indian Reservation

https://www.ctuir.org/media/1smb1zr4/ctuir-ceds-2017-21-final-draft_o.pdf

The National InterTribal Energy Council (NITEC) is a non-profit national intertribal energy association dedicated exclusively to advancing tribal energy policies, investment opportunities and business developments with Indian Country. Committed to protecting and educating the energy industry on the value of tribal energy development and business.

<https://itenergy.org/>

The National Center for American Indian Enterprise Development

<https://res.ncaied.org/Register>

The Affiliated Tribes of Northwest Indians (ATNI) Energy Program is another great resource for tribes interested in solar energy, including upcoming events.

[Link to ATNI website](#)

Comprehensive Economic Development Strategy for the Confederated Tribes of the Umatilla Indian Reservation

https://www.ctuir.org/media/1smb1zr4/ctuir-ceds-2017-21-final-draft_o.pdf

FEDERAL AGENCIES

White House Memorandum on Tribal Consultations

<https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/26/memorandum-on-tribal-consultation-and-strengthening-nation-to-nation-relationships/>

2021 Federal Infrastructure Bill (with Tribal allocations)

<https://www.congress.gov/bill/117th-congress/house-bill/3684/text>

EPA's State and Local Climate and Energy Program offers free tools, data and technical expertise about energy strategies, including energy efficiency, renewable energy and other emerging technologies, to help state, local and tribal governments achieve their environmental, energy and economic objectives.

<https://www.epa.gov/statelocalenergy/tribal-climate-and-energy-resources>

US Department of Transportation. Value capture tribal solar projects tap into the vast potential of renewable energy on tribal lands across the nation. Created by Federal and tribal officials working together, they provide new jobs, economic growth, reduced carbon footprint, and greater self-sufficiency—with significant energy savings that are reinvested into tribal community programs.

https://www.fhwa.dot.gov/ipd/value_capture/strategies_in_practice/value_capture_tribal_solar_program.aspx

The U.S. Department of Energy Office of Indian Energy supports a variety of energy-related projects on tribal lands. USDOE project map

<https://www.energy.gov/indianenergy/tribal-energy-projects-database>

<https://www.energy.gov/indianenergy/current-funding-opportunities>

<https://www.energy.gov/indianenergy/request-technical-assistance>

The U.S. Department of Energy Office of Indian Energy offers regional interactive workshops and forums designed to provide tribal leaders and their staff members with the information and guidance needed to navigate the complexities of developing and implementing energy projects.

<https://www.energy.gov/indianenergy/resources/education-and-training/workshops>

For guidance on tribal energy projects, see the **DOE Resource Library and DOE Education and Training** offerings.

Indian Country Energy and Infrastructure Working Group

www.energy.gov/indianenergy/services-0/indian-country-energy-and-infrastructure-working-group

DOE Office of Indian Energy Newsletter

www.energy.gov/indianenergy/resources/newsletter

Webinar Series

www.wapa.gov

Click on the Renewable tab, then the Tribal Webinar Series links.

US Department of Transportation Federal Highway Administration. Center for innovative Finance Support. Value Capture Spotlights on Value Capture Strategies in Practice > Spotlights on Value Capture Strategies in Practice (United States)

Bureau of Ocean Energy Management (BOEM) implements tribal consultation policies through both formal government-to-government consultation and informal dialogue, collaboration, and engagement. BOEM is committed to maintaining open and transparent communications with Tribal governments, Alaska Native Organizations, Native Hawaiian Organizations and other indigenous communities.

<https://www.boem.gov/about-boem/tribal-engagement>

US Forest Service, Indian Lands Map Viewer. Tribal Connections

<http://usfs.maps.arcgis.com/apps/webappviewer/index.html?id=fe311f69cb1d43558227d73bc34f3a32>.

US Bureau of Indian Affairs, “Indian Entities Recognized by and Eligible To Receive Services From the United States Bureau of Indian Affairs,” 84 FR 1200
www.federalregister.gov/d/2019-00897.

National Park Service, US Department of the Interior, Native American Consultation Database, National NAGPRA Online Databases
<https://grantsdev.cr.nps.gov/NagpraPublic/Home/Contact>.

National Park Service, NPS National NAGPRA data related to NAGPRA Consultation Tool
https://services1.arcgis.com/fBc8EJBxQRMchlei/arcgis/rest/services/NAGPRA_WebMap_Draft/FeatureServer

USDA Forest Service, Tribal Land Cessions in the United States (2018)
https://data.fs.usda.gov/geodata/edw/edw_resources/meta/S_USA.TRIBALCEDEDLANDS.xml.

Bureau of Indian Affairs Establishing a Tribal Utility Authority
https://www.bia.gov/sites/bia_prod.opengov.ibmcloud.com/files/assets/as-ia/ieed/ieed/pdf/tribalutility_handbook.pdf

The FERC OPP work on providing intervenor funds should be noted and added to the dialogue of equitable participation.
<https://www.ferc.gov/news-events/events/opp-listening-sessions-tribal-governments-03242021>
<https://www.ferc.gov/news-events/events/opp-listening-sessions-environmental-justice-communities-and-tribal-interests>

NATIONAL LABS

Sandia National Laboratories has sample plans and there has been a structure for that activity for 8-10 years. Tony Jemenez at DOE Office of Indian Energy manages it.

<https://www.osti.gov/servlets/purl/1642143>

<https://www.sandia.gov/labnews/2018/11/21/nnaahm-gutierrez/>

<https://www.sandia.gov/labnews/2018/06/07/iceiwg/>

<https://energy.sandia.gov/programs/tribal-energy-security/>

National Energy Renewable Lab

<https://www.nrel.gov/docs/fy18osti/70807.pdf>

Look for examples of NREL work on the [DOE Office of Indian Energy News and Blog](#).

NREL technical service:

<https://www.nrel.gov/state-local-tribal/technical-support-services.html>

NREL Clean Energy Potential on Tribal lands

<https://www.nrel.gov/state-local-tribal/decision-support-tribes.html#:~:text=Solar%20resources%20account%20for%20nearly,scale%20renewable%20energy%20technical%20potential.>

NREL Tribal Energy Atlas

https://maps.nrel.gov/tribal-energy-atlas/?aL=urhvHj%25Bv%25D%3Dt%26Zo_B3u%25Bv%25D%3Dt%26Zo_B3u%25Bd%25D%3D1&bL=clight&cE=o&lR=o&mC=53.225768%2C-103.18359375&zL=3

Tribal Energy Program/Climate Resilience Toolkit

<https://toolkit.climate.gov/tool/tribal-energy-program>

RENEWABLE ENERGY ON TRIBAL LANDS

President Nez asking the Arizona Corporation Commission for Just and Equitable Transition funds to help with energy efficiency and renewable energy projects, jobs, trainings and more

<https://docket.images.azcc.gov/E000004596.pdf>

Hopi Tribal Chairman: Timothy Nuvangyaoma comments to TEP

<https://docket.images.azcc.gov/E000005229.pdf>

Measuring progress toward an equitable economy on Navajo and Hopi Nations

<https://www.navajoequitableconomy.org/>

STATE AGENCIES

Here is the link for the CA grant we have been discussing the **CPUC's Self Generation Incentive Program (SGIP) for microgrid battery funding**:

<https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/self-generation-incentive-program>

And the **California Energy Commission's Electric Program Investment Charge (EPIC) program** that funds energy innovation and pilot projects:

https://www.energy.ca.gov/sites/default/files/2019-05/how_to_apply.pdf

California Energy Commission State Awards \$2 Million to 10 California Native American Tribes for Climate and Clean Energy Projects

<https://www.energy.ca.gov/news/2021-01/state-awards-2-million-10-california-native-american-tribes-climate-and-clean>

TRIBAL ENERGY COMPANIES/UTILITIES

Tohono O’odham Utility Authority, a tribal entity, was originally established in 1970 as the Papago Tribal Utility Authority (PTUA) by the Papago Tribal Council. The original charter authorized it to provide electric and water service to the reservation.

<http://www.tonation-nsn.gov/toua/>

Tohono O’odham Utility distributes electric power to over 3,000 customers. The electric department operates and maintains over 600 miles of distribution lines that are fed through five substations ranging in size from 40 MVA to 5 MVA.

<https://toua.net/electric/>

Warm Springs Power Enterprises is responsible for managing the Tribes interest in the largest hydroelectric project within the State of Oregon: The Pelton/Round Butte Hydroelectric Project located on the Deschutes River.

<https://warmsprings-nsn.gov/program/warm-springs-power-water-enterprises/#:~:text=Warm%20Springs%20Power%20Enterprises%20is,first%20powerhouse%2C%20the%20Pelton%20Dam.>

Yakama Power’s commitment to employing as many tribal members as is currently possible, and in the long run, we are looking to provide the entire reservation with electrical service.

<https://www.yakamapower.com/>

Navajo Power was founded to maximize the economic benefits of clean energy for tribal and impacted communities

<https://navajopower.com/>

The Morongo Band of the Mission Indians is on track to become the first Native American tribe to be a participating transmission owner in the California Independent System Operator (ISO) footprint, creating a critical connection to help meet the state’s green energy goals.

<https://indiancountrytoday.com/news/tribe-is-now-an-owner-of-the-power-grid>

<http://www.caiso.com/Documents/First-Native-American-Tribe-Set-To-Be-A-Transmission-Owner-In-The-ISO.pdf>

Important funding resources may be available to help assess feasibility and implement solar energy projects, as well as provide workforce development training to promote tribal members’ involvement in the renewable energy industry.

https://www.solarwa.org/solar_for_tribal_indigenous_communities

Native Renewables is an indigenous-led, women-led organization working to address energy security while overcoming the trends of climate change.

<https://www.nativerenewables.org/>

The organization formerly known as the **Covenant Tribal Solar Initiative**, a Native-led nonprofit that aims to diminish energy poverty, mitigate climate change and create thriving American Indian communities with solar power, has been relaunched as the **Indigenized Energy Initiative (IEI)**.

<https://indigenized.energy/>

Looking for climate data? Need to compile a **Climate Vulnerability Assessment or Adaptation Plan**? Our catalog of more than 200 digital tools can help you take steps to build resilience, from engaging a community to developing a climate action plan.

<https://toolkit.climate.gov/case-studies/blue-lake-rancheria-tribe-undertakes-innovative-action-reduce-causes-climate-change>

Grid Alternatives: Tribal Solar and GRID works with tribes to install solar electric systems for tribal homes and community centers. Our workforce training program gives Tribal members hands-on training to gain solar installation skills and open up a new career path. Take a step towards energy sovereignty with renewable energy.

<https://gridalternatives.org/tribal-solar>

We build renewable energy projects for the future generations of Turtle Island and Mother Earth. We give people the power to make their own energy decisions—because no one owns the sun.

<https://solarbear.earth/>

Native Sun mission is a native-led non-profit that promotes renewable energy, energy efficiency and a just energy transition through education, workforce training and demonstration.

<https://www.nativesun.org/>

Shoshone-Bannock Tribes' purpose of the Tribal Utilities Department is to provide a safe and dependable supply of treated potable water and to treat and dispose of wastewater for those on the Tribal water and sewer system. The Tribal Utilities Department operates and maintains the Tribes Water & Sewer System surrounding the Fort Hall Agency and Town site located on the Fort Hall Indian Reservation.

<http://www.sbtribes.com/energy/>

TECHNICAL ASSISTANCE

The **Institute for Tribal Environmental Professionals** strengthens tribal capacity and sovereignty in environmental and natural resource management through culturally relevant education, research, partnerships and policy-based services.

<http://www7.nau.edu/itep/main/Home/>

American Founded in 1977, growing the **AISES** membership above our current 5,900 individual members is key to achieving our mission. AISES supports 230 affiliated pre-college schools, 196 chartered college and university chapters, 3 tribal chapters, and 18 professional chapters in the U.S. and Canada.

<https://www.aises.org/>

In **Coconino County**, coordination with tribe on official sites of concern for ordinance. Example of a jurisdiction trying to go beyond Federal requirements to include tribal involvement in renewables siting.

<https://coconino.az.gov/2435/Grant-Opportunities>

DOE Office of Indian Energy Renewable Energy Curriculum

www.nterlearning.org

DOE Office of Indian Energy START Programs

www.energy.gov/indianenergy/resources/start-program

On-Demand Technical Assistance

www.energy.gov/indianenergy/technical-assistance

Tribal Leader Energy Forums

www.energy.gov/indianenergy/resources/education-and-training Tribal Renewable Energy

Elemental Accelerator

<https://elementalaccelerator.com/wp-content/uploads/2020/01/Elemental-Excellerator-Impact-Report-Jan-2020.pdf>

Race Forward: A Racial Equity Impact Assessment (REIA) is a systematic examination of how different racial and ethnic groups will likely be affected by a proposed action or decision.

https://www.raceforward.org/sites/default/files/RacialJusticeImpactAssessment_v5.pdf

Climate Advocacy Lab and Regulatory Advisor Project – “Making a Clean Energy Future an Equitable One.”

<https://www.climateadvocacylab.org/resource/making-clean-energy-future-equitable-one-0>

“Legacy in Motion: Building Momentum for the Future” (2018-2019 Annual Report, **National Congress of American Indians**, Washington, DC, 2019);

www.ncai.org/resources/ncai_publications/2018-2019-ncai-annual-report.

Transform Finance is a research and implementation partner that supports investors and social change actors to challenge legacy investment approaches, seed transformative investment models, and build movement power.

<http://transformfinance.org/programs>

Financial Terms

<https://www.northwesternmutual.com/life-and-money/23-financial-terms-everyone-should-know/>



TOOL KITS AND GEOGRAPHICAL INFORMATION

April 25-29, 2022 Albuquerque, NM.

<https://tribalgis.com/tribal-gis-events>

Native Land Digital conducts the research for the map and also works to connect nations, academics, and the general public in understanding more about Indigenous history, current issues, and ways of knowing.

<https://native-land.ca/>

LandMark is the first online, interactive global platform to provide maps and other critical information on lands that are collectively held and used by Indigenous Peoples and local communities. The global platform is designed to help Indigenous Peoples and communities protect their land rights and secure tenure over their lands.

http://www.landmarkmap.org/map/#x=-102.46&y=13.47&l=3&a=community_FormalDoc%2Ccommunity_NoDoc%2Ccommunity_FormalClaim%2Ccommunity_Occupied%2Cindigenous_FormalDoc%2Cindigenous_NoDoc%2Cindigenous_FormalClaim%2Cindigenous_Occupied

Farrell et al. constructed a new dataset within the boundaries of the current-day United States and found that Indigenous land density and spread in has been reduced by nearly 99%. The lands to which they were forcibly migrated are more vulnerable to climate change and contain fewer resources. Research and policy implications of these findings are discussed.

<https://www.science.org/doi/10.1126/science.abe4943>

ILTF is a national, community-based organization focused on American Indian land recovery and management.

<https://iltf.org/>

The goal with **The National Tribal Geographic Information Support Center (NTGISC)** or “Tribal GIS” is to establish “the best practices and standards for Geographic Information Systems withing Indian Country.

<https://tribalgis.com/>

<https://tribalgis.com/tribal-gis-events>

Maps: Exploration, Resources, and Production. U.S. Energy Information Administration

<https://www.eia.gov/renewable/>

<https://www.eia.gov/energyexplained/renewable-sources/>

<https://www.eia.gov/maps/maps.htm>

GIS Maps and Opportunity Zones

<https://www.nrdc.org/experts/julia-prochnik/opportunity-zones-can-assist-just-equitable-transitions>

WECC formed the **Environmental Data Task Force (EDTF)**, formerly called the Environmental Data Work Group (EDWG), in June 2010. This diverse team identifies and evaluates geospatial data about and, wildlife, water, and cultural, historical, and archaeological resources, and explores ways to make that data useful in WECC's transmission planning models.

<https://www.wecc.org/Administrative/2021%20EDTF%20Fact%20Sheet.pdf>

ProtectedLands.net showcases examples and other information about the Protected Lands Database of the U.S. (PAD-US), published by the U.S. Geological Survey (USGS) Science Analytics and Synthesis (SAS). The USGS Gap Analysis Project is a key part of the SAS mission, and publishes PAD-US, Species and National Land Cover databases while also conducting biodiversity research and analysis. These efforts support regional, state and federal decision makers, staff and researchers addressing conservation, energy development, climate change, recreation, and other uses. ProtectedLands.net was developed and is managed by GreenInfo Network, a nonprofit USGS Cooperator that supports public interest groups and agencies with a wide range of geospatial technology. GreenInfo publishes the California Protected Area Database (CPAD), a comprehensive inventory of all parks and open space in California, along with undertaking among many other public interest projects.

<http://www.protectedlands.net/>

REPORTS

Regulation of Electric Utilities on Indian Reservations: Tribal Governments' Oversight of Renewable Energy Development and Utility Providers and Authority to Create Tribal Utilities

[https://www.eba-net.org/assets/1/6/10_-_\[Schaff\]\[261-283\]\[Final\].pdf](https://www.eba-net.org/assets/1/6/10_-_[Schaff][261-283][Final].pdf)

Native American Student Perspectives of Challenges in Natural Resource Higher Education. *Journal of Forestry* [00221201], Vol 115, Issue 5. Gervais et. al

<https://doi.org/10.5849/JOF.2016-065R1>

This updated handbook is designed to provide an overview of the electric power industry and how it is regulated in the public interest.

<https://www.raponline.org/knowledge-center/electricity-regulation-in-the-us-a-guide-2/>

Orrick Report: Financing renewable energy development on Native American lands

<https://media.orrick.com/Media%20Library/public/files/1/1720-pdf.pdf>

Renewable Power Generation Costs in 2020. The International Renewable Energy Agency (IRENA) is an intergovernmental organization that supports countries in their transition to a sustainable energy future, and serves as the principal platform for international cooperation, a center of excellence, and a repository of policy, technology, resource and financial knowledge on renewable energy.

<https://www.irena.org/publications/2021/Jun/Renewable-Power-Costs-in-2020>

Western Regional Partnership presentations

www.wrpinfo.org

Western Regional Project: Renewable Energy Development on Tribal Lands

https://wrpinfo.org/media/1042/renewable_energy_development_on_tribal_lands_2015.pdf

Tribal Energy Development Opportunities Abound: A Summary of the Energy Act of 2020 and Fiscal Year 2021 Omnibus Appropriations

<https://www.quarles.com/publications/tribal-energy-development-opportunities-abound-a-summary-of-the-energy-act-of-2020-and-fiscal-year-2021-omnibus-appropriations/>

The New Energy Future in Indian Country: Confronting Climate Change, Creating Jobs, and Conserving Nature

https://www.nwf.org/~media/PDFs/Global-Warming/Reports/03-23-10_NWF_TribalLands_LoRes.ashx

This Article examines how legal structures impede utility-scale renewable energy development in Indian country and limit tribal self-determination.

<https://scholarship.law.wm.edu/cgi/viewcontent.cgi?article=1730&context=wmelpr>

R. Dunbar-Ortiz, An Indigenous Peoples' History of the United States (Beacon Press, 2014)

https://bookshop.org/books/an-afro-indigenous-history-of-the-united-states/9780807011683?gclid=Cj0KCQiAq7COBhC2ARIsANsPATFPdDmdaKMPyFu4imCul4Bx6tSw7ztgRXJ8-ukJxg6NKfZT8TvZV-gYaAiKfEALw_wcB

G. Dillon, "Wildfire Hazard Potential (WHP) for the conterminous United States (270-m GRID), version 2018 classified. 2nd Edition" (Forest Service Research Data Archive, 2018);

www.arcgis.com/home/item.html?id=fc7f208f4bf34cf3ad34eff72261b140.

Framework for Equitable Energy Supply Transformation

https://cadmusgroup.com/wp-content/uploads/2018/08/MCG_Framework-for-an-Equitable-Energy-Supply-Transformation.pdf?hsCtaTracking=e377801b-7a9d-49dd-a264-bcc67d5abab9%7C07ab34d2-6680-4f76-9322-94c41dcd8a3e

A Paradox of Plenty: Renewable Energy on Navajo Nation Lands. Pasqualetti et. al. An International Journal ISSN: 0894-1920 (Print) 1521-0723 (Online) Journal homepage:

<https://www.tandfonline.com/loi/usnr20> <https://doi.org/10.1080/08941920.2015.1107794>

Identifying Barriers and Pathways for Success for Renewable Energy Development on American Indian Lands. SAND2016-311J Unlimited Release November 2016

https://www.energy.gov/sites/default/files/2017/05/f34/Sandia_Report_2016-311J.pdf





