U.S. DEPARTMENT of ENERGY | Office of Indian Energy Policy and Programs

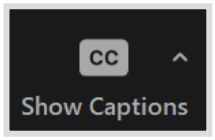
Navigating the Complex Landscape of Tribal Energy Projects

Tribal Energy Program Review Mini-Series

October 15, 2026

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Today's Webinar Will Cover

Successful Tribal energy projects require more than funding and technology. They depend on the ability to adapt, plan strategically, and build local capacity. This webinar explores how three Tribes have overcome critical challenges, from complex supply chains and contractor constraints to project coordination and workforce development, by leveraging flexibility, planning, and education to achieve lasting project success.

Office of Indian Energy Overview

Michael Spencer

Technical Project Officer/

Physical Scientist



Office of Indian Energy Leadership

Office of the
Under Secretary of Energy

Office of Indian Energy



Eric Mahroum
Director



David Conrad
Deputy Director

Office of Indian Energy Mission

The Office's mission is in its Congressional authorizing statute:

- **Promote** Tribal energy development, efficiency, and use.
- **Reduce** or **stabilize** energy costs.
- **Enhance** and **strengthen** Tribal energy and economic infrastructure.
- **Electrify** Indian lands and homes.

The Office of Indian Energy was established by Congress in the Energy Policy Act of 2005 under 45 USC 7144e & 25 USC 3502(b).



The remote Native Village of Unalakleet, Alaska completed two rounds of technical assistance with the Office of Indian Energy, focused on energy efficiency and microgrids. Photo by Werner Slocum / NLR

How the Office Supports Indian Country

Financial Assistance



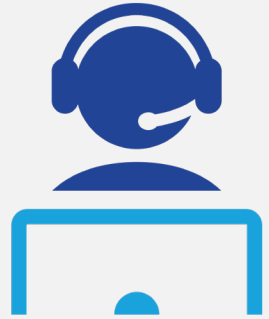
Cost-share leveraged funding to support Tribal energy development

Technical Assistance



No-cost planning, analysis, commerce, and engineering support for successful project outcomes

Capacity Building



Capacity building to enable Tribes to fully participate in unleashing American energy

Who the Office of Indian Energy Supports

The Office of Indian Energy supports **Indian Country,** specifically:

- Indian Tribes
  - Federally recognized Indian Tribes
  - Alaska Native Corporations
- Intertribal Organizations
- Tribal Energy Development Organizations

Eligible entities listed under (25 USC §3502(b)(2))



Fond du Lac Band of Lake Superior Chippewa (MN) Biomass District Heating System for its Brookston Community Center in 2025 Photo by Josh Gregory, DOE



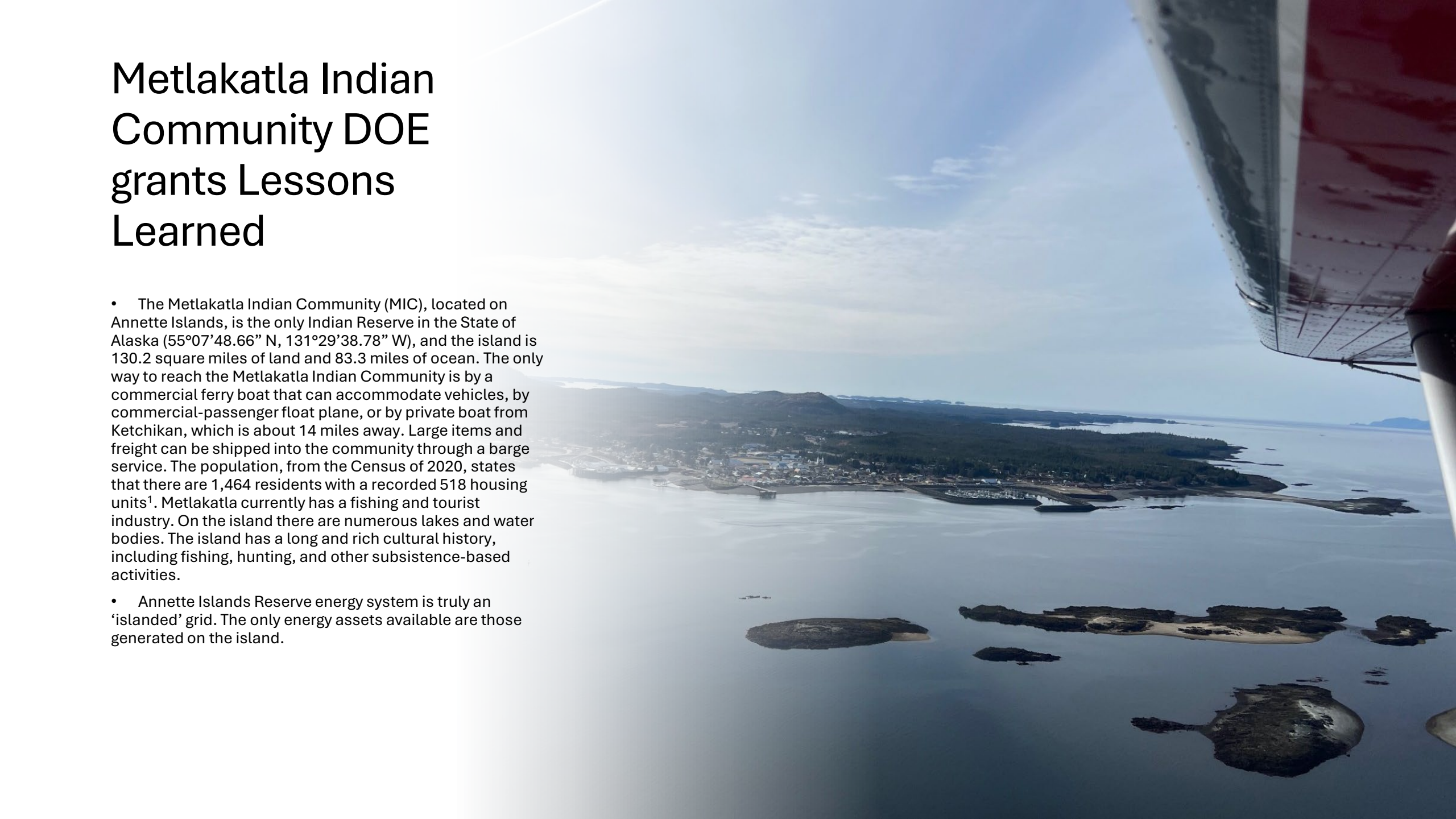
Igiugig, AK installed its first RivGen in 2019 with support from DOE Water Power Technologies Office. In 2021 the Village began installing a second device co-funded by the Office of Indian Energy. Photo from ORPC

Metlakatla Indian Community Wind Turbine Grant.
Lessons Learned and Still learning



Metlakatla Indian Community DOE grants Lessons Learned

- The Metlakatla Indian Community (MIC), located on Annette Islands, is the only Indian Reserve in the State of Alaska (55°07’48.66” N, 131°29’38.78” W), and the island is 130.2 square miles of land and 83.3 miles of ocean. The only way to reach the Metlakatla Indian Community is by a commercial ferry boat that can accommodate vehicles, by commercial-passenger float plane, or by private boat from Ketchikan, which is about 14 miles away. Large items and freight can be shipped into the community through a barge service. The population, from the Census of 2020, states that there are 1,464 residents with a recorded 518 housing units[1]. Metlakatla currently has a fishing and tourist industry. On the island there are numerous lakes and water bodies. The island has a long and rich cultural history, including fishing, hunting, and other subsistence-based activities.
- Annette Islands Reserve energy system is truly an ‘islanded’ grid. The only energy assets available are those generated on the island.



How we got here



In 2015 MIC faced an unprecedented drought that resulted in an effort to diversify the energy resources of the tribe.



Therefore, wind was pursued as an option.



In the meantime, MIC/MPL now faced with a new challenge, due to a variety of reasons, the Contractor was removed from the project.



The good part of that is that the community has stepped up and is able to now take over project implementation and management



The challenge is that MIC now needed to bring New Council recently elected, up to speed on the project.

Award in Hand

In fall of 2024, that award was in MIC’s hands and that is when things got very challenging

Working with the contractor was even more difficult as we navigated the transition away from the contractor and attempted to establish the best use of funds.

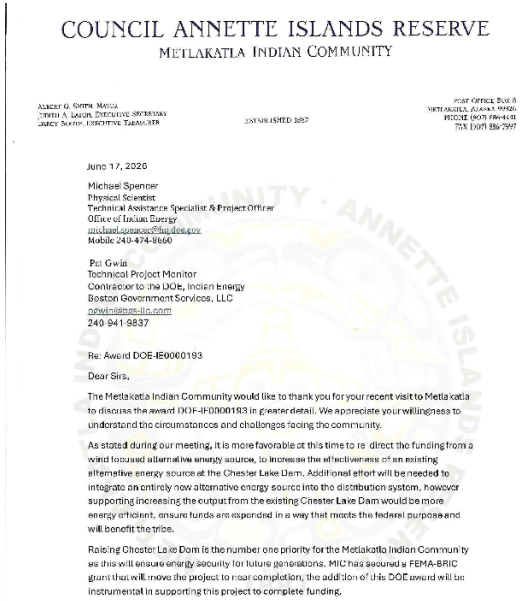
At the end of 2025, no meaningful progress had been made on the grant

Attempt to pivot

- MIC and MPL strengthened their working relationship and along with that evaluated the energy portfolio of MPL

- A decision was made to request a change in the scope of work for the grant.

- MIC formally requested DOE if we could reallocate the funds to support raising Chester Lake Dam instead of installing a wind turbine.



COUNCIL ANNETTE ISLANDS RESERVE
METLAKATLA INDIAN COMMUNITY

June 17, 2026

Michael Spencer
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Technical Assistance Specialist & Project Officer
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Mobile 240-474-8660

Pat Gwin
Technical Project Monitor
Contractor to the DOE, Indian Energy
Boston Government Services, LLC
pgwin@mpl-llc.com
240 941-9837

Re: Award DOE-IE0000193

Dear Sirs,

The Metlakatla Indian Community would like to thank you for your recent visit to Metlakatla to discuss the award DOE-IE0000193 in greater detail. We appreciate your willingness to understand the circumstances and challenges facing the community.

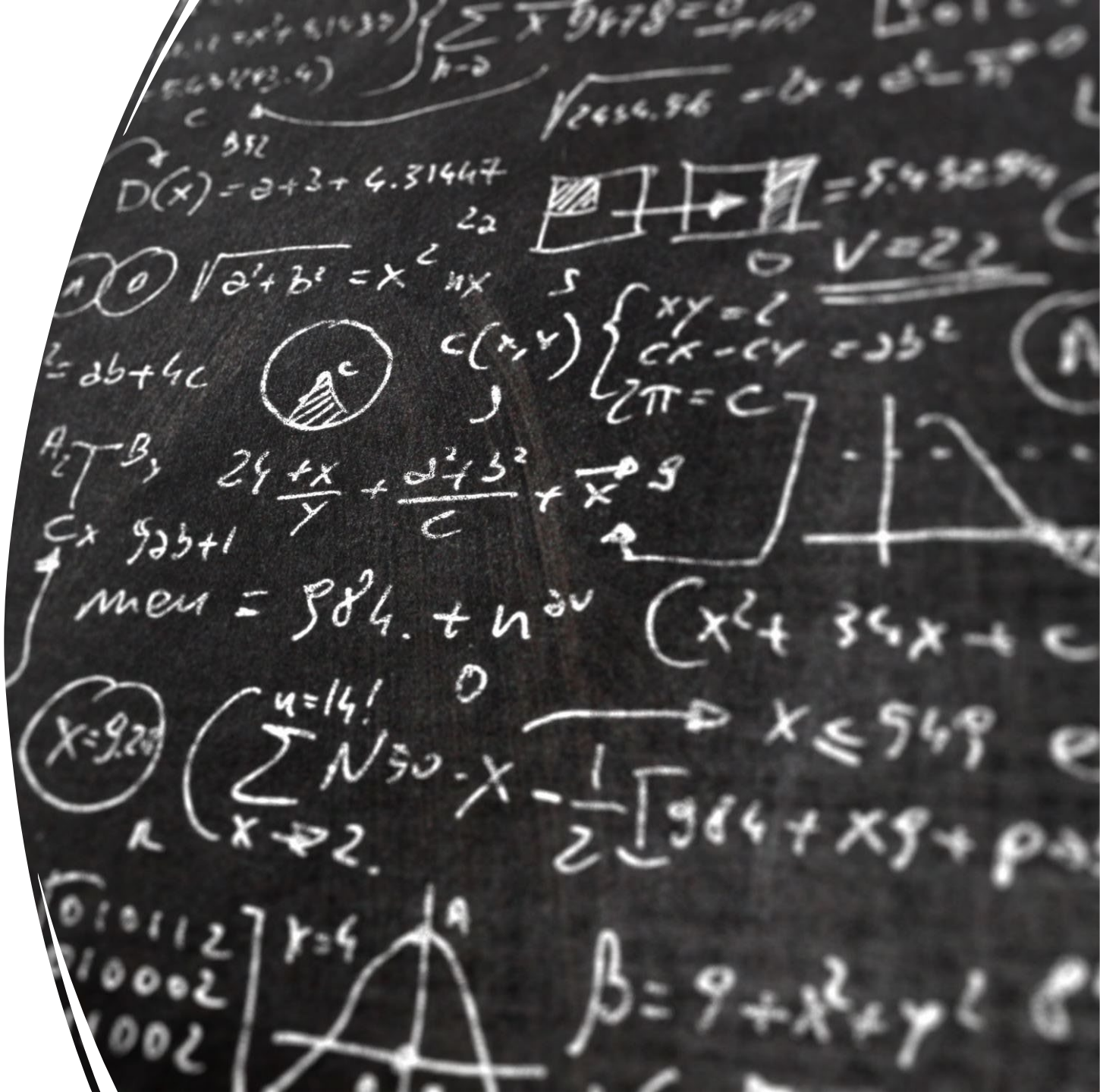
As stated during our meeting, it is more favorable at this time to re direct the funding from a wind focused alternative energy source, to increase the effectiveness of an existing alternative energy source at the Chester Lake Dam. Additional effort will be needed to integrate an entirely new alternative energy source into the distribution system, however supporting increasing the output from the existing Chester Lake Dam would be more energy efficient, ensure funds are expended in a way that meets the federal purpose and will benefit the tribe.

Raising Chester Lake Dam is the number one priority for the Metlakatla Indian Community as this will ensure energy security for future generations. MIC has secured a FEMA-BRIC grant that will move the project to near completion, the addition of this DOE award will be instrumental in supporting this project to complete funding.



Another change in direction

- Unfortunately, the request to rescope the project was not approved.
- So now, MIC and MPL are back at the drawing board. We are re-evaluating the project and trying to decide what is the best path forward.
- Do we continue with wind and hope it works?
- Do we return the grant funds and hope that we figure something else out?
- Do we continue to work the problem and along with our partners at DOE find a solution that meets the needs of all parties.



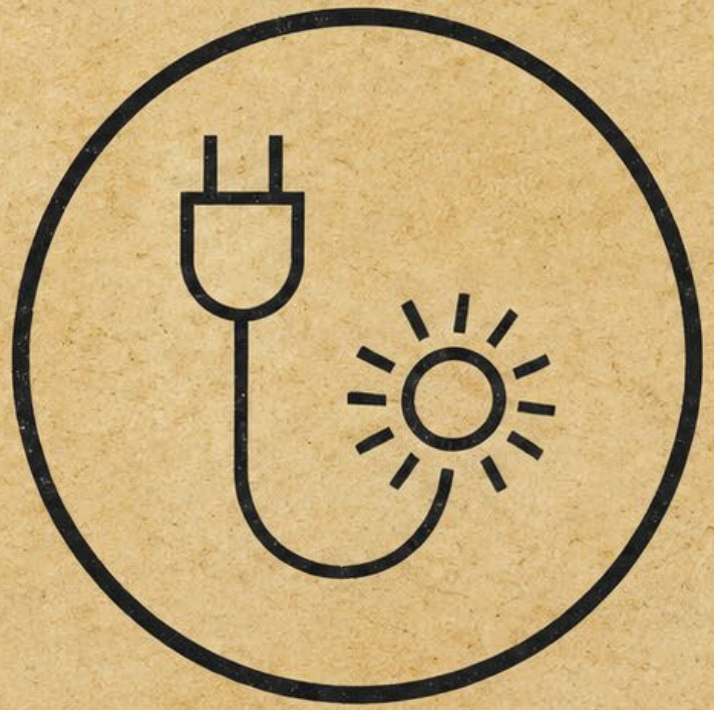
Key Takeaways

- The primary takeaway is that tribes must remain in control of their projects
- When we allow consultants or managers to work without supervision, guardrails or other guidance, we can get off track and end up with funding or projects that are not a good fit or a poor investment
- Another key lesson learned, is to work closely with DOE leadership and program managers to navigate the grant award and management process.
- Moving forward, MIC and MPL will continue to work with DOE and other federal partners to improve the diversity and health of the energy system on Annette Islands Reserve, ensure funds are being used in the most effective manner and see our community be successful.



Thank you
Questions?

- Genelle Winter, Special Projects Director
- Metlakatla Indian Community
- Box 8, Metlakatla, AK 99926
- gwinter@metlakatla.com
- Floyd Russell Sr., General Manager
- Metlakatla Power & Light
- Box 359, Metlakatla, AK 99926
- frussell@metlakatla.com



OJO ENCINO SHAANDIIN
SOLAR PROJECT

Project Information

RECIPIENT ORGANIZATION

Ojo Encino Chapter House, Navajo Nation

PROJECT TITLE

Ojo Encino Shaandiin Solar Project

AWARD NUMBER

DE-IE0000181

COVERING PERIOD

May 1, 2024, to September 30, 2027

DATE OF REPORT

October 15, 2026

PROJECT MANAGER

Gloria Chiquito

Chapter House Manager
Ojo Encino Chapter House

505 731-2262

gchiqto@nnchapters.org

OJO ENCINO SHAANDIIN
SOLAR PROJECT

Business Contact & Partners

Organizations and people supporting the Ojo Encino Shaandiin Solar Project

Ojo Encino Chapter House

BUSINESS CONTACT

Tim Willink

Manager
Ojo Encino Chapter House

timothydubz1@gmail.com

Local project leadership and coordination

University of Utah

TECHNICAL PARTNER

Mingxi Liu

Assistant Professor, Electrical Engineering

Mostafa Ardakani

Associate Professor, Electrical Engineering

Shundana Yusaf

Associate Professor, Architecture

Technical consultants and administrative support

Navajo Technical University

WORKFORCE DEVELOPMENT PARTNER

Darrick Lee

Technical Instructor of Energy Systems

dlee@navajotech.edu

Training partner for local workforce capacity

Ojo Encino Chapter House

Tsé Ch'ízhí Bii'Tó • “Oak Springs”

Ojo Encino was established in 1951, and is located in the Eastern Agency of the Navajo Nation in Northwest New Mexico.

It is called Tsé Ch'ízhí Bii'Tó in Navajo, meaning “oak springs.” It was recognized and certified as a chapter of the Navajo Nation in June 1957, and received Local Governance Act (LGA) certification in 2012.



96.4
square miles
Chapter Area

835
Residents
(2024 ACS)

97%
Native
Americans

Project Overview

At-a-glance summary of the residential solar deployment and expected household benefits

60

residential, grid-tied solar PV systems

Approximately 5 kW-DC each

The Ojo Encino Chapter House is installing systems to offset approximately 75–95% of residents' electric utility bills.

75%–95%

of residents' energy use

8,467–9,276

kWh of electricity annually

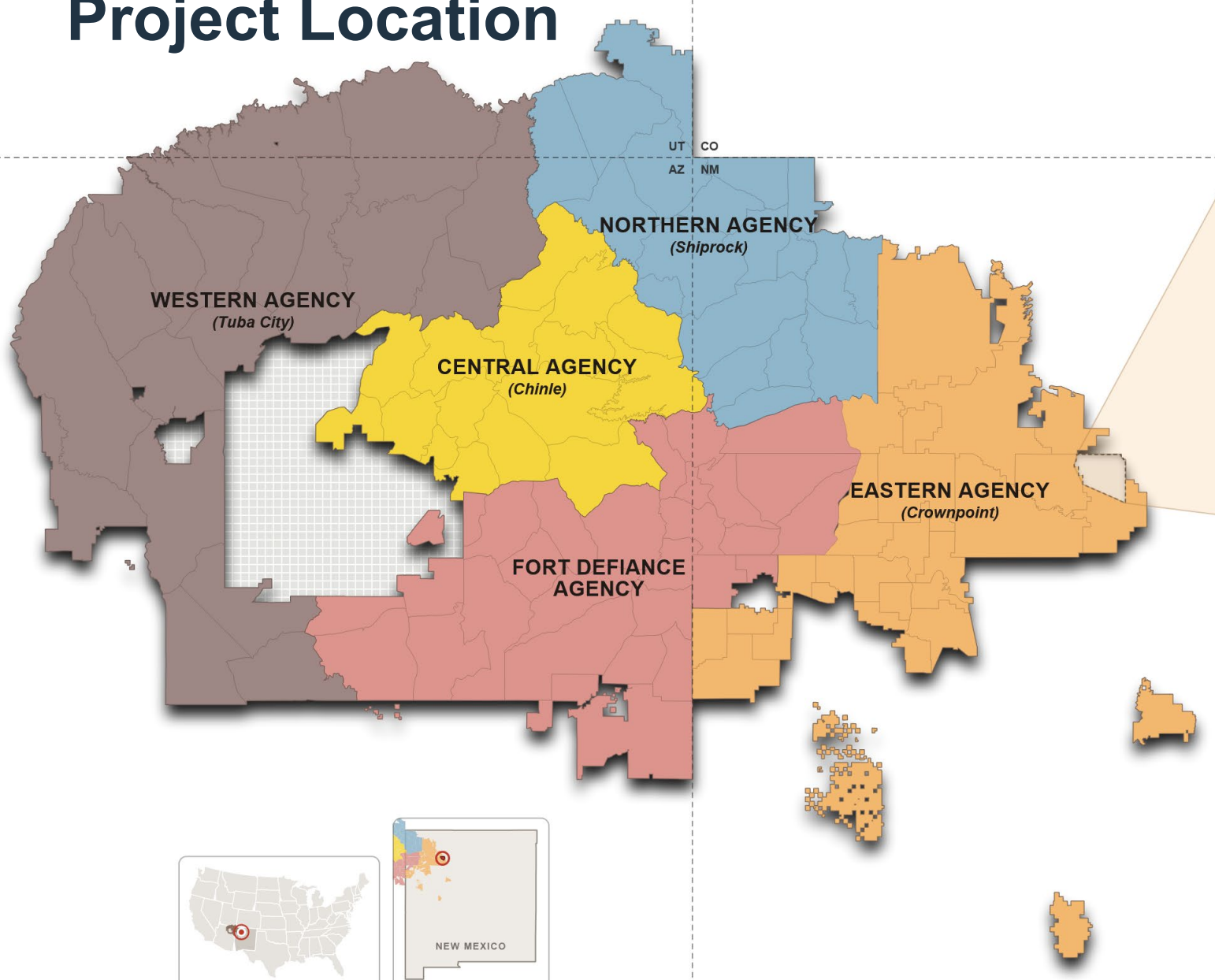
$24,750

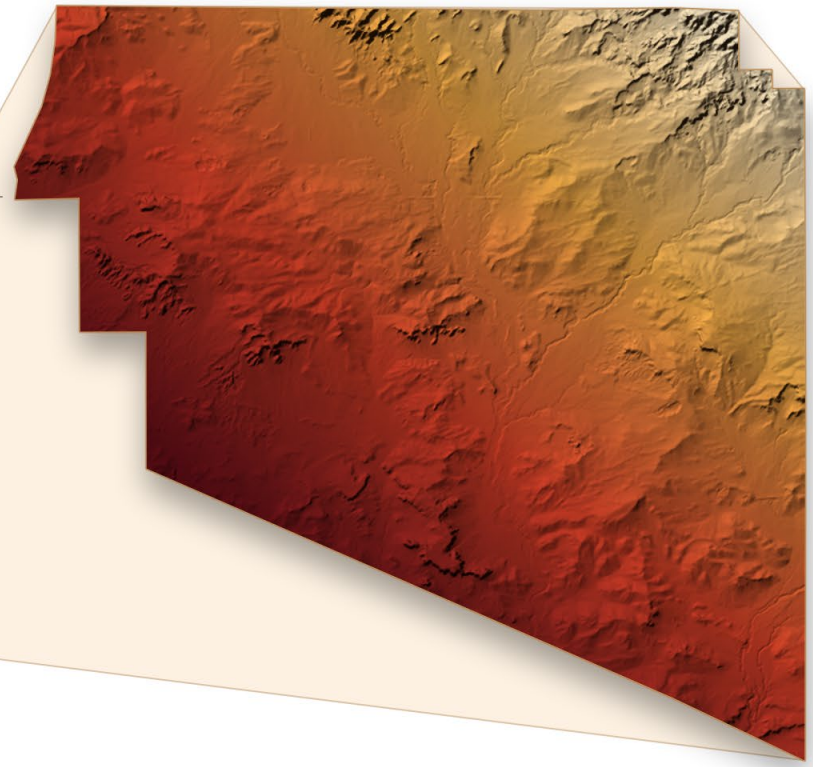
cumulative lifetime savings over a 25-year period

JMEC NET METERING

Interconnected through Jemez Mountain Electric Cooperative (JMEC) and net metered through current JMEC policies.

Project Location





Navajo Nation

OJO ENCINO

E

Eastern Agency · Crownpoint

96.4 sq mi · 61,718 acres · 250 km²

Solar GHI, annual: 5.49 kWh/m²/day (NASA POWER)

Elevation 1,966 – 2,202 m (mean 2,050)

Slope ≤ 5 %: 79 % of the ground · facing south: 17 % · solar factor ×1.00

Solar on the terrain (est., annual): mean 5.50, 5.33 – 5.66 kWh/m²/day

Solar GHI, annual (5.48 – 5.50 kWh/m²/day)

Elevation — shaded relief

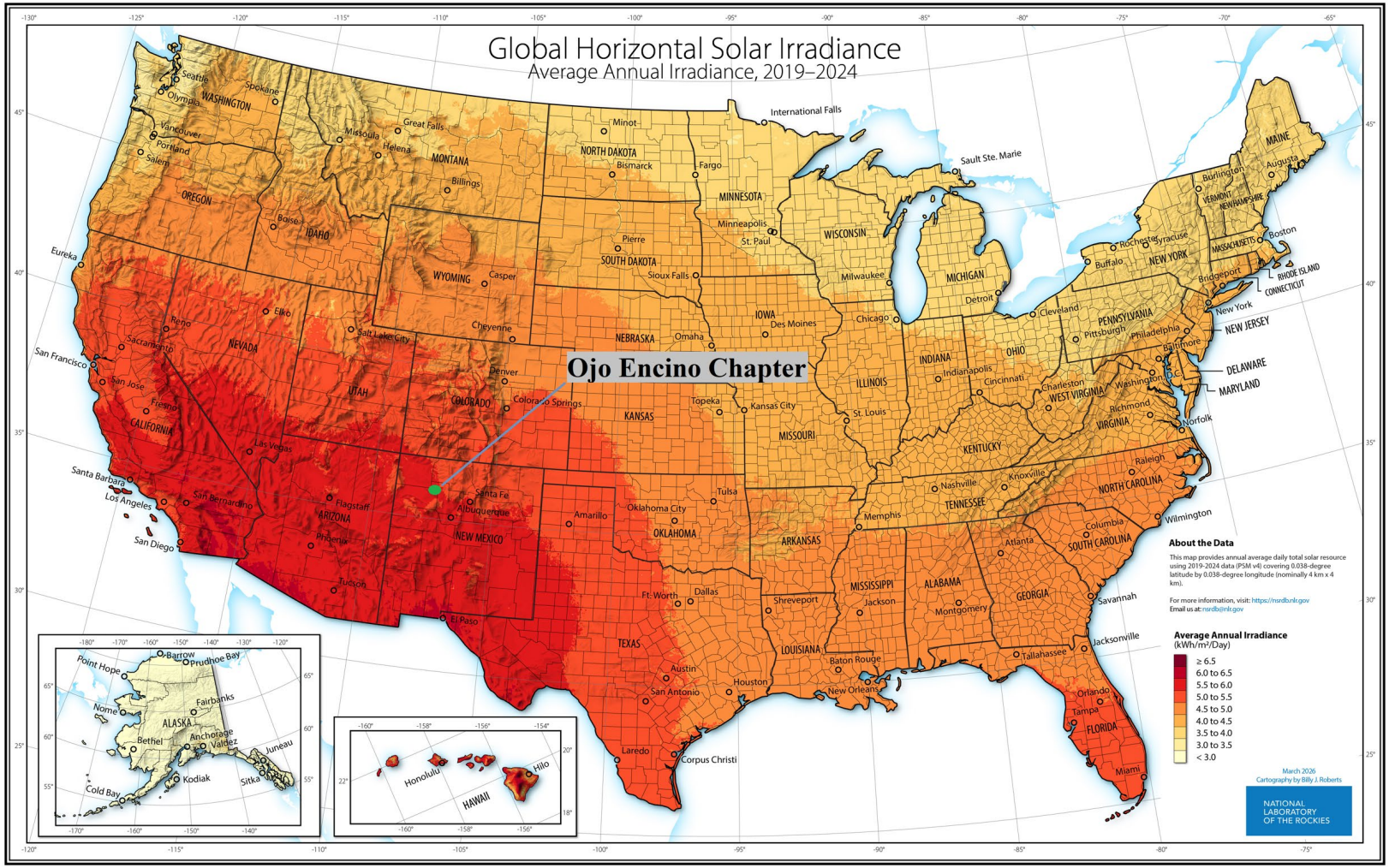
0 2.5 5 km

0 1.3 2.5 mi

Chapter boundaries: Navajo Nation chapter map (NN_ChapterMap_EA_Census)
States: U.S. Census Bureau cartographic boundaries, 2017 · Solar irradiance: NASA POWER climatology (GHI)

For general planning purposes only; not a survey or site assessment. Data from public sources may contain errors: verify before use. Ojo Encino Chapter and the author accept no liability for its use.

Solar Resource



Modified from: "Global Horizontal Solar Irradiance." [(2026)]. National Laboratory of the Rockies. Accessed [September 2026]: www.nlr.gov/maps.

Project Objectives

01 Transition to clean energy

02 Financial savings

03 Capacity building

04 Strengthening partnership

05 Self Governance



Residential solar reduces household utility costs while advancing local clean-energy capacity and energy sovereignty.

Energy Burden

Understanding why reducing utility costs matters for participating households

6%

or greater

of gross household income is considered a high energy burden household

DOE benchmark referenced on this slide

DEFINITION

According to the Department of Energy, Energy burden is defined as the percentage of gross household income spent on energy costs.

CALCULATION

It is calculated by dividing the average housing energy cost by the average annual household income.

Energy burden =

average housing energy cost
÷ average annual household income

Energy Burden for Indigenous Nations

The issue is not just higher bills — it is a larger share of household income going to energy costs.

45%

higher median energy burden

for Native American households compared with non-Hispanic white households

Energy burden = share of gross household income spent on home energy costs.

WHAT THAT MEANS IN PRACTICE

Health & stress

Higher risk for respiratory disease, stress, and economic hardship.

Rural access

Many communities are rural or isolated and often served by electric cooperatives.

Energy poverty

High energy costs make it harder for families to move out of poverty.

2013 TRI-CHAPTER HOUSEHOLD SURVEY: COUNSELOR, OJO ENCINO, TORREON

44.6%

felt they lacked access to some type of energy they needed

28%

could not warm their home enough to be comfortable in cold months

23%

reported no electricity; only ~3% of those with power used solar

Sources: MEEA (2022); Rio Puerco Alliance & Hasbídító, Tri-Chapter Food and Energy Survey (Aug. 2013).

Workforce Development — Local Jobs





The crew at the Ojo Encino Chapter House using a multimeter testing volts and amps

PICTURED FROM L TO R

Irvin Martinez, Darrick Lee, and Douglas Woody

Progress to-date and Project Status

35 installations completed

30 are operating and saving clients on their utility bills

7 local jobs created





Irvin Martinez, Construction Lead, Ojo Encino Chapter House

Project Status / Next Steps

Key priorities for the next phase of implementation

01 **Continue Installations**

Continue solar installations toward the 60-home project goal.

02 **Complete Commissioning**

Complete commissioning and energization of installed systems not yet operating.

03 **Coordinate with JMEC**

Continue coordinating with JMEC on interconnection approvals, net meters, and required electrical service changes.

04 **Continue Training**

Continue training the local installation crew on electrical components, commissioning, and system monitoring.

05 **Homeowner Outreach**

Continue homeowner outreach and complete applications/designs for the remaining project homes.

06 **Collect and Monitor Data**

Begin collecting post-installation utility bills and monitoring data to document homeowner energy and cost savings.

Demonstrated Household Savings

Real utility bill comparisons show on-the-ground impact of the solar installations.

$200.05

total savings across 3 households

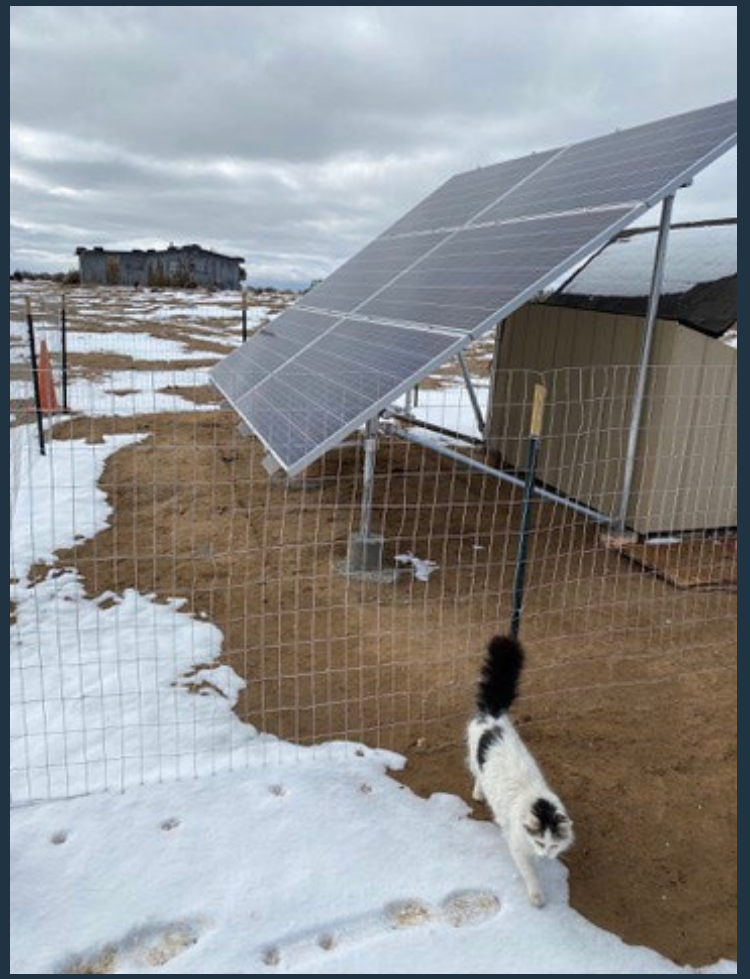
BASELINE 08.17.2024 | COMPARISON 08.17.2026

	SM	CW	KH
Baseline use	625 kWh	465 kWh	711 kWh
Baseline amount due	$100.66	$80.86	$111.42
Comparison use	475 kWh	789 kWh	254 kWh
Current amount due	$30.81	$31.69	$30.39
Solar production	730 kWh	895 kWh	719 kWh
PV Watts estimate	686 kWh	686 kWh	686 kWh
kWh rollover	255 kWh	106 kWh	465 kWh
Household savings	**$69.85**	**$49.17**	**$81.03**

Sample utility bill snapshot from participating households. Savings shown are based on amount due comparisons for the dates listed.

Lessons Learned

- Communication with all stakeholders
- Timelines
- Weather
- Future maintenance



Process

From application to system energization

START

1 Application

2 Required Documents
Contact info + proof of income
Homesite lease + signatures
12 months utility bills

3 Site Visit
Assess site and identify possible electrical upgrades.

4 JMEC Design + Approval
Design team submits application. Approx. 60 days for approval.

5 Installation Contract
Homeowner signs installation agreement.

6 Construction
Install crew completes system in approximately 3-4 days.

7 Completion / Meter / Turn-On
Submit completion certificate. Meter set and system turned on.

8 Sign Utility Letter
Signed after one year of utility history.

FINISH

Ahéhee'

Thank you!

OJO ENCINO SHAANDIIN
SOLAR PROJECT



DOE Financial Award: Restructuring and Leveraging Flexibility

DOE TRIBAL ENERGY PROGRAM REVIEW

OCTOBER 15, 2026

Barona Group of Capitan Grande Band of Mission Indians of the Barona Reservation



The Barona Ranch is the second reservation for the community now known as the Barona Band of Mission Indians.

The original reservation, Capitan Grande, was established in 1875. In 1932, the People living in Capitan Grande were forced to leave when the growing City of San Diego made a deal with the federal government to build a dam on their reservation lands. The community was paid fifty cents an acre for the lands that were flooded, including their school house and cemetery.

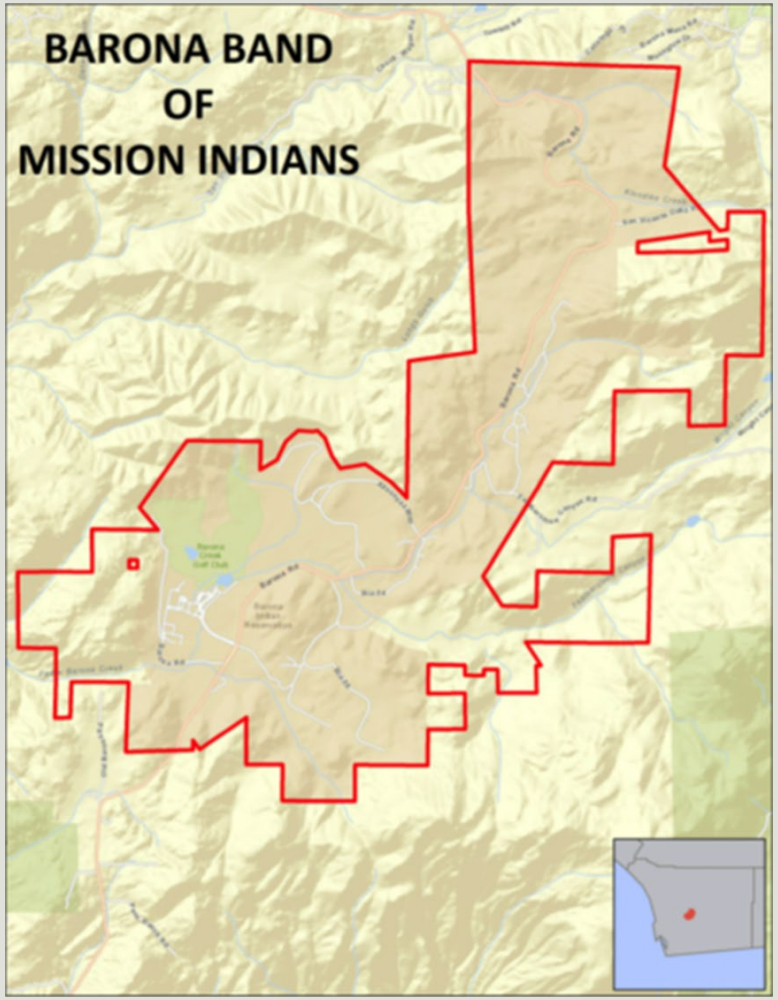
After living for many years next to a free flowing river, the majority of the families pooled their funds, purchased the Barona Ranch and moved in 1932 to an arid land having to rely on only groundwater.

- The Barona Indian Reservation, near the town of Lakeside, is about 30 miles northeast of the City of San Diego.
- For many years living without electricity and other services, the tribal members tried to create a living through the ranch and farming.
- Until the early 1990s, the Barona Tribe was still struggling economically in very rural San Diego County.
- In 1994, the tribe, opened the Barona Casino "Big Top", which eventually became the Barona Resort and Casino.
- The casino has become the means to a restoration of self-sufficiency and provides for healthcare, housing, education, water, general welfare, and youth, elder, and culture programs.



Barona Today ~

- The reservation is approximately 7,800 acres, and is comprised of mostly rocky and mountainous terrain with the middle section mostly flat and rocky.
- There are 634 tribal members, 202 are minors.
- There are 300 homes on the reservation - approximately 85% of tribal members live on reservation.
- Barona is governed by its General Council, which is comprised of approximately 432 adult voting members of the Tribe. In addition, there is a Tribal Council comprised of seven elected Tribal officials each serving four-year terms.
- The Barona community includes the Barona Government Building, Barona Cultural Center and Museum, Barona Fire Station, Barona Gas Station, Mission Church, Barona Community Center, Tribal Enforcement, Barona Charter School, Barona Pre-School, Barona Tribal Water Authority and multiple walking trails, softball fields and community parks.



Project Partners

- Prime Recipient and Site Owner: Barona Band of Mission Indians
  - Technical Contact / Director Govt Affairs: Sheilla Alvarez
  - Business Contact / General Counsel: Kathy Clenney
  - Facilities Director: Robert Key
- Owner's Representative: Prosper Sustainably
  - Lead Owner's Rep: Josh Simmons
  - Project Manager: Michael Burr, Microgrid Institute
  - Owner's Engineer: TBD
- Project Developer / EPC Firm: TBD

Prosper Sustainably

Objectives: Community Microgrid Projects



INCREASE RESILIENCE



REDUCE ENERGY COSTS



ADVANCE SOVEREIGNTY & ENERGY INDEPENDENCE



CLEAN ENERGY & CULTURAL PRESERVATION



SCALABILITY

Original Projects

Barona Community Microgrid Map

- A Fresh Water Well Pumps (2) and Filtration System
- B Water Reclamation and Treatment Facility
- C Food and Supplies Storage Warehouse
- D Facilities Maintenance Services Building

921.3 kW Solar PV System (new)

Lithium-Ion Batteries*
(350 kW/4-hr new)

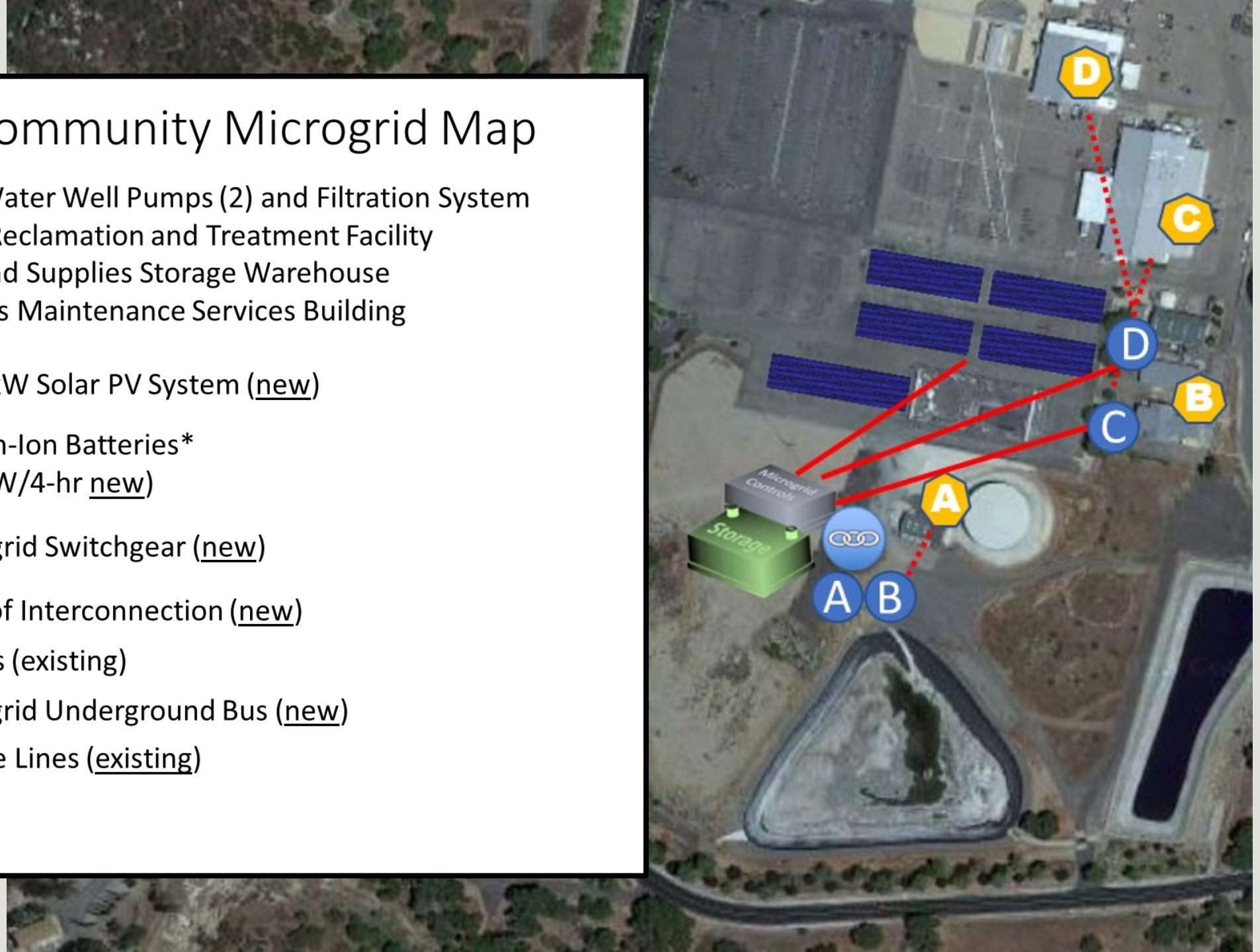
Microgrid Switchgear (new)

Point of Interconnection (new)

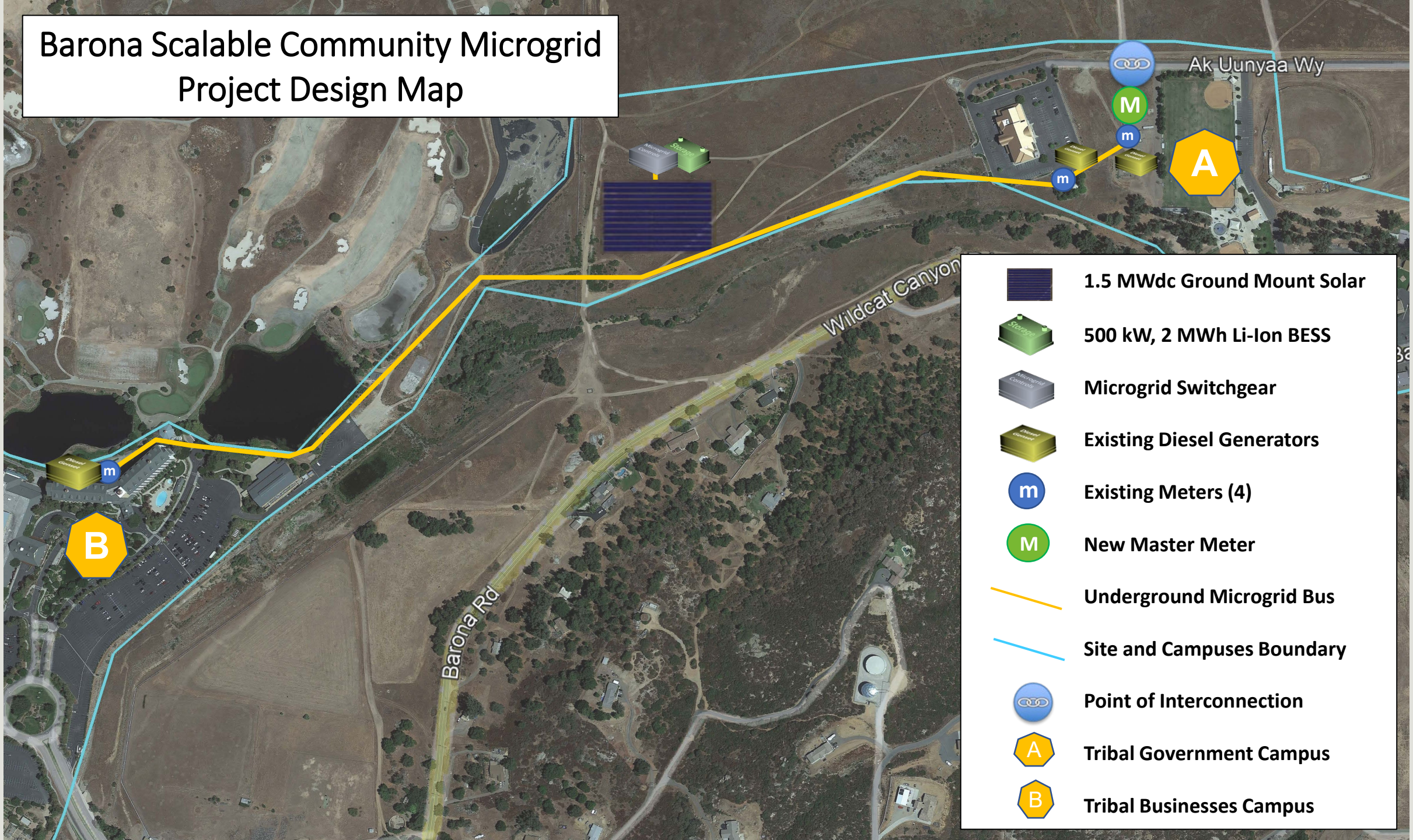
Meters (existing)

Microgrid Underground Bus (new)

Service Lines (existing)



Barona Scalable Community Microgrid Project Design Map




Barona Solar Power Project
Design Map
M
m
New 2.3 MW (AC) PV Array
Existing Meters (4)
New Master Meter
New Underground Distribution Line
Point of Interconnection

Original Barona DOE Grant Budgets

- DOE OIE Grant #1: Microgrids
  - Grant = $4,000,000
  - Match = $1,802,744
  - Total = $5,802,744
- DOE OIE Grant #2: Microgrids
  - Grant = $5,000,000
  - Match = $4,304,579
  - Total = $9,304,579
- DOE OIE Grant #3: Solar Only
  - Grant = $5,000,000
  - Match = $7,332,497
  - Total = $12,332,497
- All Grants
  - Grants = $14,000,000
  - Match = $13,439,820
  - Total = $27,439,820

Project Obstacles

- Financial Challenges
  - Changes to and uncertainty around Federal Investment Tax Credit (ITC)
  - Ongoing project cost increases due to supply chain, labor, tariffs, etc.
- Siting Challenges
  - Open space between casino and administration building no longer an option
  - Concerns regarding impacts to Barona casino campus and operations

Restructuring Barona's DOE Grants

- Scope Modifications
  - Casino campus + admin building → 10+ government buildings
  - 4.7 MW of solar → ~1 MW of solar
  - 3.4 MWh or energy storage → ~6-8 MWh of energy storage
- Budget Modifications
  - Total budget across three grant projects reduced by ~$10M
    - Tribal cost-share reduced to 20% ($13.4M → $3.5M)
    - Leveraging remaining ITC option for energy storage
  - Redistributing grant consistent with original scope requirements
    - Grants 1+2 → Energy storage for all sites (and maybe back up generators)
    - Grant 3 → All solar for all sites

THANK YOU! QUESTIONS?

Sheilla Alvarez
Director of Government Affairs
Barona Band of Mission Indians
salvarez@barona-nsn.gov

Josh Simmons
President, Principal Consultant
Prosper Sustainably
jsimmons@prospersustainably.com

Q&A



How do I submit a question?

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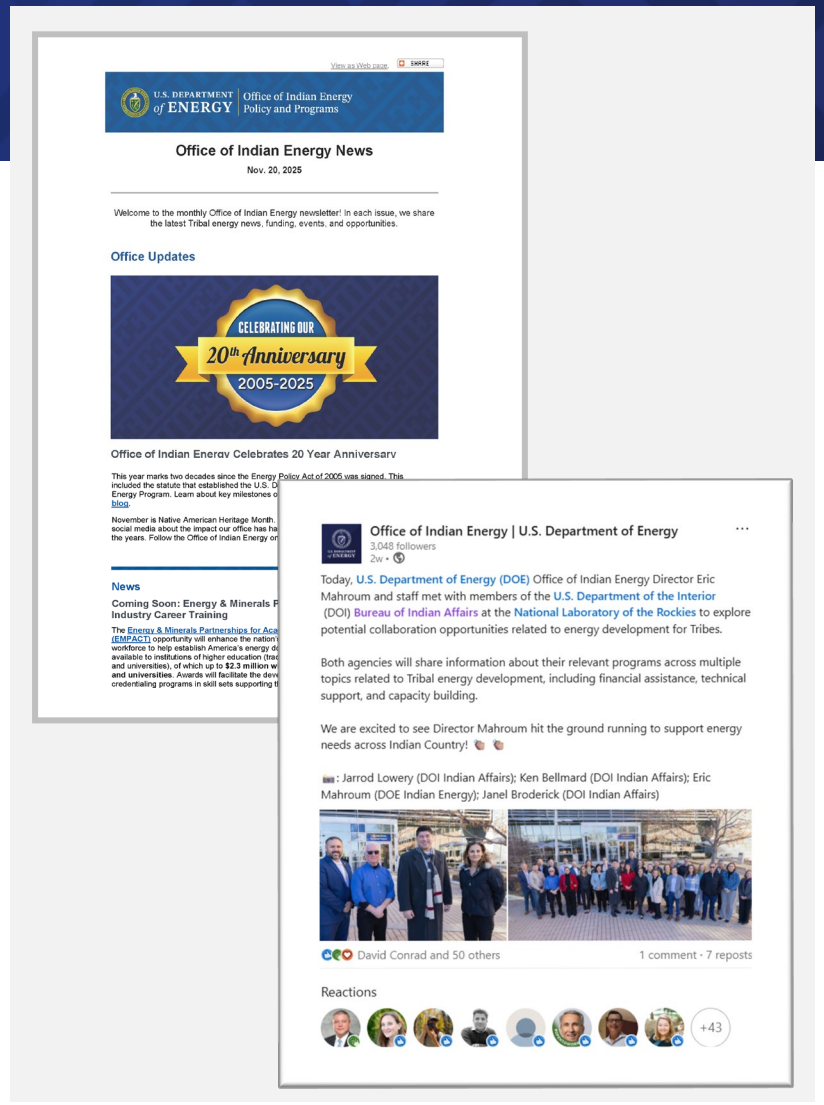
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Thank you!



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