DOE First Steps Project Final Report

PALA BAND OF MISSION INDIANS

Recipient Organization:	Pala Band of Mission Indians
Project Title:	Pala Energy Options Analysis
Date of Report:	Dec. 28, 2020 *(Revised Jan. 26, 2021)*
Award Number:	DE-IE0000073
Total Project Costs:	$74,693
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ACKNOWLEDGMENT
This material is based upon work supported by the Department of Energy, Office of Indian Energy Policy and Programs, under Award Number DE- IE0000073.

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Pala Band of Mission Indians
Energy Options Analysis – DOE Project Final Report

TABLE OF CONTENTS

1.0 Executive Summary

The Pala Energy Options Project scope focused on assessing electric and thermal energy related options for the Pala Band of Mission Indians (the Tribe). Although the assessment also considered options for transportation fuels – including potential for electrification – and other energy uses, initial reviews with PED staff indicated that the most practical and substantial options likely would involve serving current building electric and thermal energy resources and uses. Assessment scope varies by specific options considered; some merited in-depth assessment for immediate action to initiate or advance implementation, while higher level assessments were more appropriate for options that would take longer to implement and would require updated in-depth assessments during project planning and design phases.

The primary objectives of the Project were to 1) identify energy resources/loads, 2) assess energy needs and exports, 3) investigate and evaluate supply-side and demand side energy options, and 4) select and prioritize options in an implementation plan.

The Project's primary deliverable – the Pala Energy Options Analysis Report – supports the Tribe's long term energy goals by identifying cost-effective and/or revenue-generating energy options for saving and producing energy. Most notably, the analysis yielded the following recommended priorities for continued action steps toward implementation:

1) Pursue development of the proposed Tribal Facility Solar+Storage System Project;
2) Request rate plan adjustments for 15 SDG&E meters that analysis showed would save 3% or more with a new rate plan;
3) Reconsider in 2021 submitting an application to enter the lottery for the next Direct Access enrollment period; and
4) Initiate a Tribal Utility Strategy process to establish objectives, costs, and development strategy for prospective formation of a tribal utility or utility authority.

In addition to recommendations for these assessed options, preliminary screening provided additional recommendations regarding other options that were deferred for later or separate consideration. All recommendations are summarized in Section 4.

Implementing the recommendations resulting from the options analysis process will reduce the Tribe's energy costs and minimize the environmental impacts of its energy use, including greenhouse gas (GHG) emissions. Further, the analysis and implementation plan will provide concrete steps and initiatives that advance the Tribe's progress toward energy independence and self-reliance, strengthening tribal sovereignty.

2.0 Objectives of Options Analysis Project

Project Objectives focused on assessing potential for various energy-related options and projects to support the goals of the Tribe in several areas – including costs, pollution prevention, renewable resources, resiliency, self-reliance, and sovereignty. Outcomes of the assessment include the following:

- Summary-level assessments to help PED staff and tribal leaders in decision processes as they consider priority initiatives for 2021 and beyond;
- Quantified estimates of supply and savings potential for various options, in terms of energy produced and saved, costs incurred and avoided, pollution prevented, and other tribal objectives; and
- Specific recommendations and guidance for planning and implementation.\

3.0 Activities Performed

The Pala Energy Options Analysis process was driven by planning efforts led by PED staff. PED staff and consultants on the Project team performed the primary activities in Figure 3.1.

Fig. 3.1: Project Tasks and Activities Performed

Task	Activities Performed
Identify energy resources and loads	The Project Team worked to identify resource potential and uses to be addressed in the Options Analysis
Gather available and relevant energy information and data	The Team collected information about electricity and fuel usage for numerous tribal facilities and assembled it in energy databases to support assessment of various options;
Forecasting and assessing current and future energy needs, energy production, and energy exports	Engaged tribal leaders and stakeholders to establish the Tribe's expectations for future energy consumption and production
Developing criteria to screen energy options	The Team collaborated to establish priorities for assessing various energy options in terms of benefits, costs, and risks
Conducting a thorough investigation and analysis of energy options	The Team worked to identify various options that could serve the priorities identified by tribal leaders and stakeholders, and analyzed them to identify options for further screening and analysis
Applying the screening criteria to the identified energy options	The team screened each identified option with preliminary and advanced analysis steps (*See Fig. 4-A below)*
Preparing an energy options report and implementation plan	The Team documented the outcomes of the planning, screening, analysis, and review efforts and provided recommendations and implementation steps for further action by the Tribe

The analysis team and its key stakeholders included the principal members noted in Figure 3.2.

Fig. 3.2: Project Team

Individual	Organization	Role
Shasta Gaughen	Pala Environmental Department (PED)	Project oversight, guidance, data collection
Robert Halsted	Pala Resort & Casino	Key stakeholder, data collection, guidance
Josh Simmons	Prosper Sustainably	Project management, stakeholder engagement, data collection, analysis
Michael Burr	Microgrid Institute	Analysis, reporting
Dustin Jolley	Sage Renewables	Feasibility assessment
Ahmed Sharif	Golden State Renewable Energy	Modeling and analysis
Mark Tholke	Swell Energy	Modeling and analysis

4.0 Conclusions and Recommendations

The analysis team reviewed a broad range of potential resource options to support the Tribe's objectives for achieving greater energy sustainability, resiliency, and self-reliance. The team applied a preliminary review process to identify options that merit more in-depth analysis. As a result of preliminary reviews, the team identified several options with significant potential, and consolidated them into six (6) priority options for more advanced screening and analysis. Figure 4-A summarizes recommendations for each of six assessed options.

Fig. 4-A: Summary of Recommendations for Six Assessed Options

#	Option	Recommendations
1	Tribal Facility Solar Electricity	• Pursue development of the Tribal Administration Solar Complex project, ensuring systems are designed and developed to enable integration into resilient energy microgrid system. • Design systems for location behind the energy meters of served loads, with interconnection systems capable of supporting safe islanding functionality for microgrid operations. • *NOTE:* Option 1 is somewhat duplicative of Option 2. The assessment team recommends prioritizing Option 2 because it produces more benefits for the Tribe.
2	Tribal Facility Solar+Storage System	• Pursue development of the Tribal Facility Solar+ Storage System project. • Ensure design locates systems behind the energy meters of served loads, with interconnection systems capable of supporting safe islanding functionality.
3	Utility-Scale Solar	• Defer further action on the Canyon Solar Field proposal unless and until such time as the landowner brings a more concrete proposal with verifiable resolutions to all key issues affecting the project's practical viability.
4	Optimized SDG&E Rate Plans	• Request rate plan adjustment from SDG&E – at least for the 15 meters that analysis shows would save 3% or more with a new rate plan. • Apply new rate plan assumptions to future project assessments to ensure cost-benefit analyses use updated estimates of utility costs.
5	Direct Access Electricity Supply	• Re-consider in 2021 submitting an application to enter into the lottery for the njext Direct Access enrollment period. • Update the assessment of potential savings through Direct Energy based on estimated costs under proposed new rate schedules assessed for Option 4. • Seek clarification on how committing to Direct Access electricity supplies might affect the Tribe's future options, especially for developing onsite resources to serve facility loads.
6	Tribal Utility or Utility Authority Formation	• Initiate Tribal Utility Strategy process to establish objectives, costs, and development strategy for prospective formation of tribal utility or utility authority. • If Tribe decides to proceed with Tribal Utility Strategy, request BIA funding for the project through the Tribal Energy Development Capacity program. • Defer entering any service-line agreement with SDG&E pending outcome of Tribal Utility Strategy process. • Timing of the process TBD by PED.

In addition to recommendations for these assessed options, preliminary screening yielded additional recommendations regarding other options that were deferred for later or separate consideration. Two of these options were specific to resort operations, with assessment and decision processes that depend on internal resort planning and development staff. Accordingly,

the Team shared those options with resort management for independent consideration and analysis. Additional recommendations included the following:

- Pala Resort management should consider options for solar thermal energy production to reduce the Tribe's consumption of electricity and fossil fuels for domestic hot water and pool heating;
- Pala Resort management should consider options for thermal energy storage, particularly for peak load management related to HVAC electricity consumption;
- PED should track options for community solar development to serve residential, commercial, and industrial electricity loads, beyond the distributed rooftop PV systems the Tribe already supports for new housing construction. In particular, PED should consider options for community solar+storage that could reduce the Tribe's demand charges in addition to displacing utility-supplied power and perhaps improving local energy resilience.
- PED should track options for Community Choice Energy, and assess the potential for such options after the Tribe first explores and/or implements onsite solar+storage developments that support energy resiliency, as well as Direct Access electricity supply and SDG&E rate plan adjustments.

5.0 Lessons Learned

In executing the Project scope, the Team identified key challenges involving:

1) Obtaining ongoing support and cooperation among key decision-makers and sources of information critical to the analysis effort; and
2) Managing dynamic site conditions, available options, and development priorities.

To address the first challenge, the Team worked to provide regular updates on the analysis process, including preliminary findings, and sought guidance to help focus the assessment efforts. These efforts helped ensure that key tribal representatives remained engaged in the analysis, and that they would be prepared to consider the implementation actions identified through the process.

The methods the Team applied to address the first challenge also helped to manage the effects of the second challenge. Namely, by maintaining ongoing communications and engagement with key leaders and sources of information, the Team was able to adapt its efforts to focus on pertinent options and priorities as factors changed.

Beyond the results of the options analysis itself, the Team learned the following primary lessons through the course of the Project:

1) Ongoing communications and engagement are vital aspects of any options analysis and planning process. Decisions reached without thorough and continued cooperation and cross-departmental communication can lead to lost opportunities and sub-optimal results. The Team anticipates applying this lesson in ongoing efforts to establish common planning frameworks and unify the inter-related and inter-dependent planning and development processes of different tribal departments and business areas.

2) To some degree, the dynamic planning environment presents challenges that are beyond anyone's control. The best approach to applying this lesson is to strive for a consistent and effective approach to planning that not only establishes an action plan, but also provides systematic and timely processes for periodic reviews and updates. Plans must be flexible and adaptive to change, and they must incorporate mechanisms to ensure changes are accommodated to support continued progress toward accomplishing the Tribe's goals.

Finally, one lesson that emerged from the options analysis itself is that various options can affect each other in fundamental ways. The basis of analysis for one option might change if the tribe pursues a second option that affects the assumptions used in analyzing the first option. For example, developing a remote net-metered solar system to serve certain tribal energy loads would render onsite systems duplicative, limiting the tribe's options for ensuring resilient energy supply. In another example, changing rate plans for some electric meters might reduce energy costs in ways that diminish the potential of a planned project for the loads served by those meters.

In sum, energy options analysis is, by necessity, an ongoing process. The results of this Project substantially advanced the Tribe's understanding of the best options available at the end of 2020, and established action steps for priority implementation. Continued development efforts naturally will affect the Tribe's options in the future. To address the changing environment on an ongoing basis, Pala Environmental Department will continue applying the systematic screening and analysis processes that it established and used for this Project.

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