Southern Ute Community-Scale Solar Project

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2015 Tribal Energy Program Review
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Southern Ute Statistics Today

- **Tribal Members**: 1,400+
- **Reservation**: 313,070 acres
  exterior: 681,306 acres
- **Unemployment**: 5-7%
- **Employment**: The Tribe is the largest employer in La Plata County with more than 1,300 employees.
Southern Ute Indian Tribe Organization

Southern Ute Tribal Membership

Southern Ute Tribal Council

Sky Ute Casino

Permanent Fund (government)

Growth Fund (business)
Growth Fund Companies

**Energy**
- Red Willow Production Co.
- Red Cedar Gathering Co.
- Aka Energy Group, LLC
- Southern Ute Alternative Energy, LLC

**GF Real Estate Group**
- Regional Division - Tierra Group, LLC
- National Division - GF Properties Group, LLC

**Investment**
- GF Private Equity Group, LLC

**Tribal Departments**
- Department of Energy
- Southern Ute Utilities Division
- Sky Ute Fairgrounds
Southern Ute Alternative Energy is the Tribe’s newest energy company. It was formed in early 2008 to invest in alternative and renewable energy.

- Funds
- Operating Companies

Alternative Energy’s objective is to focus on opportunities with

- positive environmental impact
- sound technologies
- sound economics

Primary areas of focus include: 🌞 Solar ✋ Wind

Alternative Energy is a for-profit business owned by the Tribe and designated to manage the DOE solar project for the Tribe.
2. Solar Project Overview
Solar Project Overview

- 800-1,000kW ground mount PV project
- Interconnection at an underutilized substation
- Electricity generated offsets consumption at Tribal Buildings (Similar to a Solar Garden)
- $3M budget including $1.5M award from TEP/EERE - Community-Scale Clean Energy Projects in Indian Country
Proposed Solar Project Location

Durango

Oxford Tract

Ignacio

SUIT Reservation Boundary
Proposed Solar Project Location

- Area for Final Siting
- Red Willow Well Pad
- Rock Creek Substation
- Access Road
Solar Project Objectives

- Offset at least 15% of the fuel usage at the selected buildings
- Reduce energy costs for the Southern Ute Indian Tribe
- Increase Tribal energy security and build capacity of the Tribe to develop additional clean energy projects
- Improve sustainability and increase economic and environmental benefits to the Tribe through the development of a clean-energy operating business.
Solar Project Participants

- Southern Ute Indian Tribe
  - Southern Ute Growth Fund
    (Southern Ute Alternative Energy)
  - Lands Division
  - Environmental Programs
  - Water Resources
  - Facilities & others

- US Department of Energy
  - Tribal Energy Program
  - Office of Indian Energy-START
  - NREL

- La Plata Electric Association

- EPC Contractor and various Subcontractors (tbd)
Southern Ute Indian Tribe

3. Pre-Grant Development
Solar Feasibility Study

SUAE conducted a broad study of solar energy options on the Reservation (2012-2013)

• Goals
  o Identify Lands and Buildings best suited for solar PV projects
  o Identify if Utility and/or Commercial scale solar is currently viable on the Reservation
  o Identify needed conditions for economically viable projects

• High level analysis of solar energy opportunity within Reservation boundaries
  o Utility Scale – wholesale energy, ground mount, greater than 1MW
  o Commercial Scale – net metered, roof mount, less than 1MW

• Solar photovoltaic (PV) technology
  o Low Technology Risk
  o Rapid Price Decline
  o Widely Deployed
Location of Reservation
(~6 kWh/m²/Day)
Solar Feasibility Study

Identified most suitable areas for utility scale solar

- Utilized site based parameters that impact energy generation, development cost and/or development risk
  - Proximity to transmission infrastructure
  - Proximity to roads
  - Topography (slope, aspect and flood plains)
  - Solar resource
  - Land Ownership
  - Habitat for threatened and/or endangered species
  - Others

- Utilized GIS data and developed parameter weighted scoring methodology to compare sites (Solar Suitability Score)
- Collected data and mapped all Reservation lands
- Selected 8 most promising areas
GIS Based Solar Suitability

Proposed Project Location
Solar Feasibility Study Results

• Reservation has good locations and resource for utility-scale projects
  o Oxford Tract is the highest rated
• Utility-scale solar is not currently viable if energy sold locally
  o Tri-State offered $52/MWh in 2013 for solar energy from Bodo Canyon project
• Continue to evaluate options to sell energy
  o Distant markets (Phoenix, Las Vegas) have higher prices but not viable due to other issues
    • Potential projects closer than our location
    • Transmission capacities and costs to distant markets are unknown
  o “Solar Garden” model a hybrid of utility and commercial models
5. Post-Award Progress & Next Steps
Project Status - Accomplishments

- Archaeological and Biological Surveys complete and approved
- DOE has made the NEPA determination (Categorical Exclusion)
- Completed geotechnical survey
  - Revealed expansive soils (not unexpected)
- Identified and Surveyed Boundaries for Tribal Land Dedication
- Completed Visual Modeling of the Project
- Drafted RFP for EPC Contractor
# Project Status - Challenges

## Wheeling/Interconnection Agreement Timeline

<table>
<thead>
<tr>
<th>LPEA Letter of Support for Grant Application</th>
<th>Grant Award</th>
<th>LPEA promises Interconnection and Wheeling Agreement</th>
<th>Agreements still “In Process”</th>
<th>Agreement “80-90% complete”</th>
<th>Agreements “in a week or two”</th>
<th>Draft Agreements Received</th>
<th>Revised Draft Agreements</th>
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</thead>
</table>

LPEA promises Interconnection and Wheeling Agreement.
Project Status - Challenges

Negotiating a Wheeling Agreement with Utility

- Utility staff turnover
- Tri-State contract
- Non-Discrimination
Project Status - Challenges

Negotiating a Wheeling Agreement with Utility

• Approach
  ◦ Legal Precedent
    • Devils Lake Sioux Indian Tribe v. North Dakota Pub. Service Commission
    • North Central Electric v. North Dakota Public Service Commission
  ◦ Limited Indemnification
Next Steps

• Complete “Wheeling/Interconnection Agreements” with local electric utility (Early Summer 2015)
• Complete Tribal Land Dedication (Early Summer 2015)
• Issue RFP for EPC (Early Summer 2015)
• Select EPC (Fall 2015)
• Finalize Design (Winter 2015/2016)
• Construction (Winter/Spring 2016)
• Commercial Operation (Late Spring 2016)
  o O&M contracted initially, then transitioning to Tribal Operation
Southern Ute Indian Tribe

Questions?

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