Tribal Renewable Energy

To‘Hajiilee Navajo Case Study

Delores Apache, President
To‘Hajiilee Economic Development Corporation, Inc. “TEDI”

Douglas C. MacCourt, Project Counsel
Ater Wynne LLP

Tribal Energy Program Review
March 24-27, 2014
Overview of Presentation

• Goals and objectives of the tribe in developing the project
• History, background and project milestones
• Essentials for tribal renewable energy projects
New Mexico annual insolation ave 6.58 sun-hours
Output peak 7.28 kWh/m²/day)
Distance from Albuquerque

19 miles from the center of Abq.
Why This Site?

It wasn’t because it was close to Albuquerque!

Transmission Line goes through site
Shandiin Solar Project

- 30 Megawatts (Enough peak power for approximately 11,000 homes)
- The Project consists of twenty 1.5 MW blocks, each approximately 7.2 acres. Each block consists of 18 rows of forty 425 watt solar panels.
- Each block includes inverters and transformers stepping up to 34.5 kV are located on concrete pads with a 12’X 24’ footprint.
- The medium voltage circuits carry power underground to a proposed substation located next to the PNM 115-kV Bluewater transmission line.
- A 30,000 square foot substation will include a switchyard, main transformer and a control room to house communication and equipment necessary to interconnect to the PNM system.
- The Project will include a 2,500 square foot O&M building
- The Project will create approximately 75 to 140 construction jobs during the construction period
Shandiin Solar Project Layout
SunPower Corporation – World Leader in Utility-Scale Solar Power Plants

• 2010: Revenue $2.22B – Publicly traded NASDAQ
• 5,500 Employees – HQ San Jose, CA
• 546 MW of PV Panel Shipped in 2010
• World Leader in Solar Conversion Efficiency
• More than 400 Large-Scale Solar Power Plants Deployed Worldwide
Average Daily Output of Shandiin Power Plant

![Graph showing the average daily output of Shandiin Power Plant with MWh on the y-axis and Hour of the Day on the x-axis. The graph includes lines for March, June, September, and December, each represented by different colors.]}
Our Solar Team Now –

- SunPower
- U.S. Department of Energy
- AterWynne LLP
- First American Financial Advisors
- Janov Law Offices, P.E.
- RCI Rural Community Innovations
- RBC Capital Markets
- USDA
- SWCA
SHANDIIN SOLAR PROJECT TEAM

• To’Hajiilee Economic Development, Inc. - “TEDI”
  – Lead Developer and Landholder – Delores Apache, Board Member

• SunPower Corporation – Richmond, California
  – Co-Developer and Technology Provider, Ed Smeloff, Principal
    Project Developer for Utilities and Power Plants

• RBC Capital Markets – San Francisco & Albuquerque
  – Project Financing Agent, Garth Salisbury and Kevin Powers

• Ater Wynne LLP – Portland, Oregon
  – Project Legal Counsel, Douglas MacCourt, Partner

• Janov Law Offices, PC - Albuquerque
  – TEDI Legal Counsel, Gwenellen Janov, Esq.

• First American Financial Advisors, Inc. - Albuquerque
  – Financial Advisor, Rob Burpo, President
Brief History

• In 2005 Chapter creates a development corporation – To’Hajiilee Economic Development Corp – “TEDI”
• TEDI designed to separate politics from business.
• In early 2008 our state’s largest utility sought to build solar farms around NM in order to meet state mandates for renewable energy & TEDI participated in program.
• TEDI was approached by more than a dozen firms looking to put a solar farm on our trust lands.
• The Chapter voted to allow TEDI to use trust lands in the eastern portion of the reservation for a site.
• TEDI had continued to work with solar companies thru 2009.
• In summer of 2009 TEDI was awarded a $250,000 DOE feasibility study grant.
First Steps With DOE Grant 1

- Seek Development/Industry Partner:
  - Determine transmission capacity – WAPA helped
  - Interviewed more than a dozen firms

- Created Written Agreement:
  - Negotiated a 2 year agreement – just renewed!
  - Firm committed money & expertise to project
  - Community & TEDI pledged site & cooperation

- Start the Work:
  - What has to be done to get lease approved
  - What has to be done to be financially viable
  - Who can we sell power to?
Development Partner – Technology Vendor

- Entered into an agreement with solar panel provider SunPower of Richmond, California:
  - Help us with funding for site development.
  - Help us with financial modeling based on energy to be generated at site.
  - Help us with Power Purchase Agreement discussions and negotiations.
  - Help us with site development & construction management.
  - Important in approval process with Chapter.
Site Design & Lease Approval – Go Hand in Hand

- Lease Approval Needs:
  - Environmental Assessment
  - Archeological & Historical reports
  - Hydrology study & Site survey
  - Appraisal of site as is
  - Finding Of No Significant Impact - FONSI
  - Revenues: base income + profit sharing
  - Lease between Chapter & TEDI

- Site Design:
  - Where to put panels to maximize production
  - Where to put sub-station – critical
  - Where to avoid construction – see lease items
Steps we have taken so far

[Site survey]

Hydrology Study
Steps we have taken so far

Archeological Approval

Site NM-S-64-11:
1. Full recording of the site & consultation with NNHPD has exhausted all research potential, however, features 9 & 11 of the site will be flagged for avoidance by a qualified archaeologist prior to ground disturbing activities.
2. Features 9 & 11 of site will be avoided by all ground disturbing activities by a minimum of 50-ft.
3. All construction activities within 50-ft of the features will be monitored by a qualified archaeologist.
4. A monitoring report/letter will be submitted to NNHPD within 30-days of monitoring.

Sites NM-S-64-9, NM-S-64-10, NM-S-64-12:
No further work is warranted.

In the event of a discovery ["discovery" means any previously unidentified or incorrectly identified cultural resources including but not limited to archaeological deposits, human remains, or locations reportedly associated with Native American religious/traditional beliefs or practices], all operations in the immediate vicinity of the discovery must cease, and the Navajo Nation Historic Preservation Department must be notified at (928) 671-7148.

FORM PREPARED BY: Tamara Billec
FINALIZED: December 27, 2010

Notification to Proceed Recommended: Yes  
Conditions: Yes  

 Alan S. Downer, Navajo Nation Historic Preservation Officer

Navajo Region Approval:

[Signature]

Bill Regional Director
DRAFT ENVIRONMENTAL ASSESSMENT FOR THE TO’HAJILEE SOLAR PROJECT

Prepared for:

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
NAVAJO REGION
P.O. Box 1060
Gallup, New Mexico 87305

On behalf of:

RURAL COMMUNITY INNOVATIONS
210 Cline Drive
Boulder, Montana 59718

And

TO’HAJILEE ECONOMIC DEVELOPMENT, INC.
P.O. Box 3108
To’Hajilee, New Mexico 87526

Prepared by:

SWCA ENVIRONMENTAL CONSULTANTS
5647 Jefferson N.E.
Albuquerque, New Mexico 87109
(505) 254-1115

SWCA Project No. 16715

March 2011

United States Department of the Interior
Navajo Region
P.O. Box 1060
Gallup, N.M. 87305

MAY 5, 2011

Mr. Coleman Brush, National Scenic Area Planner
SWCA Environmental Consultants, Inc.
5647 Jefferson N.E.
Albuquerque, NM 87109

Re: Final Environmental Assessment for the To’Hajilee Solar Project

Dear Mr. Brush:

The Environmental Assessment, EA-10-148, for the To’Hajilee Economic Development, Incorporated (ToHDC) proposed To’Hajilee Solar Project, located on the Navajo Nation that touches To’Hajilee, Church Rock, and Saltwater, Navajo Nation has been reviewed at the Office of Environmental, Cultural and Safety Management, Navajo Regional Office. A Finding of No Significant Impact (FONSI) has been determined for the proposed action. It will not have a significant impact on the environment. An Environmental Impact Statement for the proposed project is not required.

Should you require additional information, you may contact Ms. Bernadine J. Yazzie, Navajo Regional NEPA Coordinator, at (505) 254-7507.

Sincerely,

[Signature]

[Signature]

[Title]

Regional Director, Navajo Region
Tribal Approval

Chapter Resolution approving site for solar farm & Lease
Interconnection Study Completed

Transition Definitive Interconnection System Impact Study

Cluster 1

IA-PNM-2011-02 and IA-PNM-2011-04

May 2012

Prepared by: Public Service Company of New Mexico

Required by Federal Energy Regulatory Commission (FERC)
Next Steps

- Finalize Ownership in Limited Liability Corporation:
  - TEDI sub-leases site to Shandiin Solar LLC
  - Chartered in Delaware
  - Allows for legal remedies suitable for investors and lenders.
  - Allows for tribal and non-tribal ownership
  - Allows tax payers to put money into project in exchange for tax benefits
  - When tax benefits expire (5-7 years) they exit ownership
  - Provides 50% equity – reduces price per kwh
  - Tribe/tribal corporation then owns majority/ exclusive shares of company
What Chapter Voted To Do With Rent Income

1. Senior Affairs
2. Community Health Needs
3. Community Infrastructure Development
4. Housing Needs
5. Education & Scholarship
6. Economic Development
7. Veterans Affairs
8. Emergency Fund
9. Land Acquisition

10. NO PER CAPITA PAYMENTS EVER
Final Steps

- **Current Use of Grant Funds:**
  - **Studies on Transmission line:**
    - Capacity determined by Interconnect Study – done
    - Next study determines sub-station issues – 5 mo.
    - Last is the interconnection agreement – 2 mo.
    - Transmission capacity – 1 mo. or so.

- **Sell Power:**
  - Negotiating with buyers
  - Need to find better access to federal buyers!

- **Finalize Financing** – 2 years of work already done
Financing and Cost of Funds

• Debt is only 46.16% of total cost of the project:
  – If power is delivered to rural communities, a federal government agency could become the lender = 4-5% interest rate
  – If power is delivered to metro communities, other credit enhancements available = 7% interest rate
• Various forms of equity comprise 53.84% of the cost of the Project:
  – Tax Equity Investors = 19.59%
  – Federal Investment Tax Credits = 25.3%
  – New Market Tax Credits = 8.23%
  – Road Grant = .72%

25
For Updates:

Doug MacCourt  
Ater Wynne LLP  
222 S.W. Columbia, Suite 1800  
Portland, Oregon  97201  
dcm@aterwynne.com  
503-226-8672 telephone  
503-705-6031 cell  
503-226-0079 facsimile