



***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***

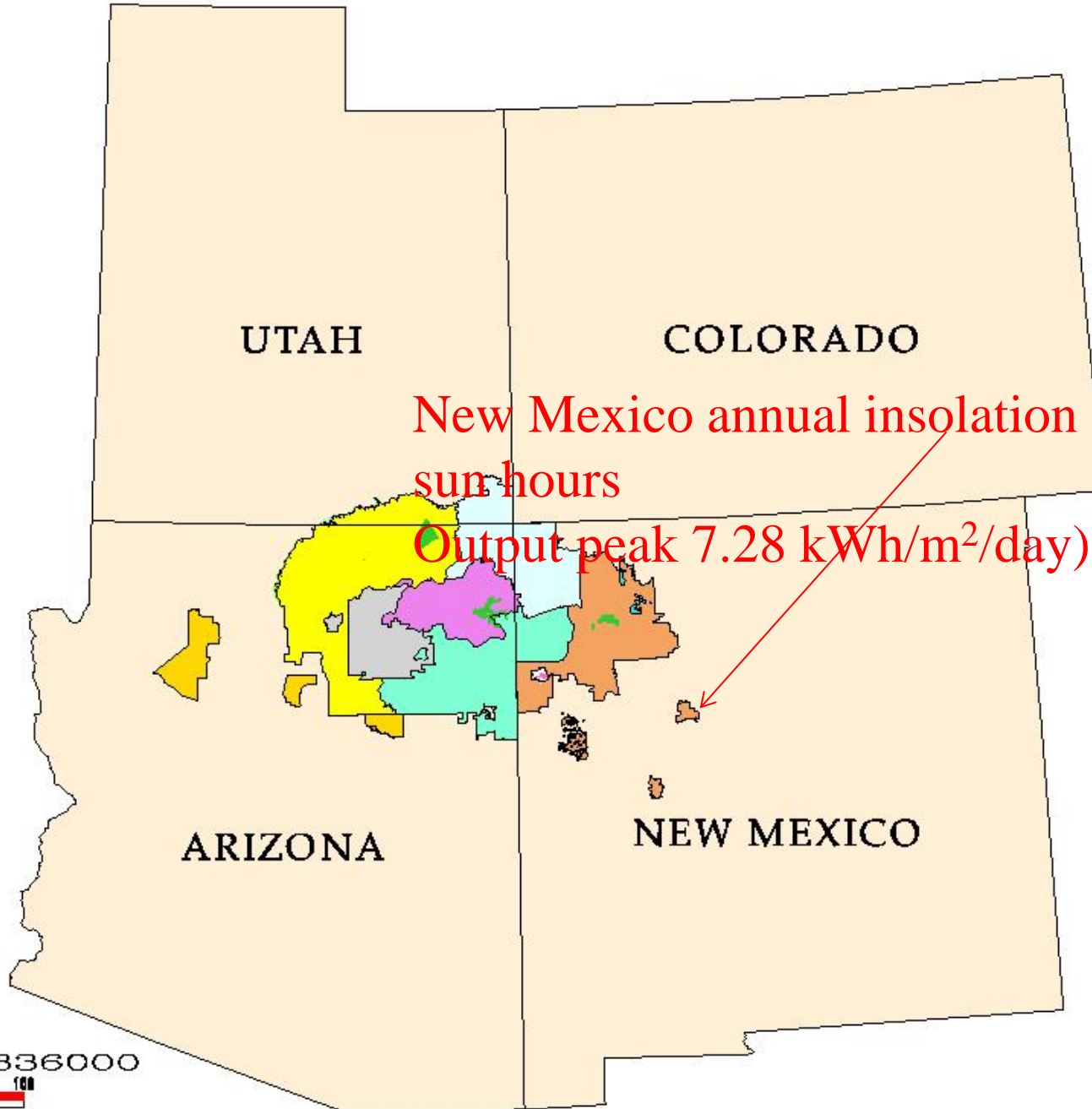
# Overview of Presentation

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- **Goals and objectives of the tribe in developing the project**
- **History, background and project milestones**
- **Essentials for tribal renewable energy projects**



# NAVAJO INDIAN RESERVATION LOCATION MAP



SCALE 1:6336000



February 28, 2003

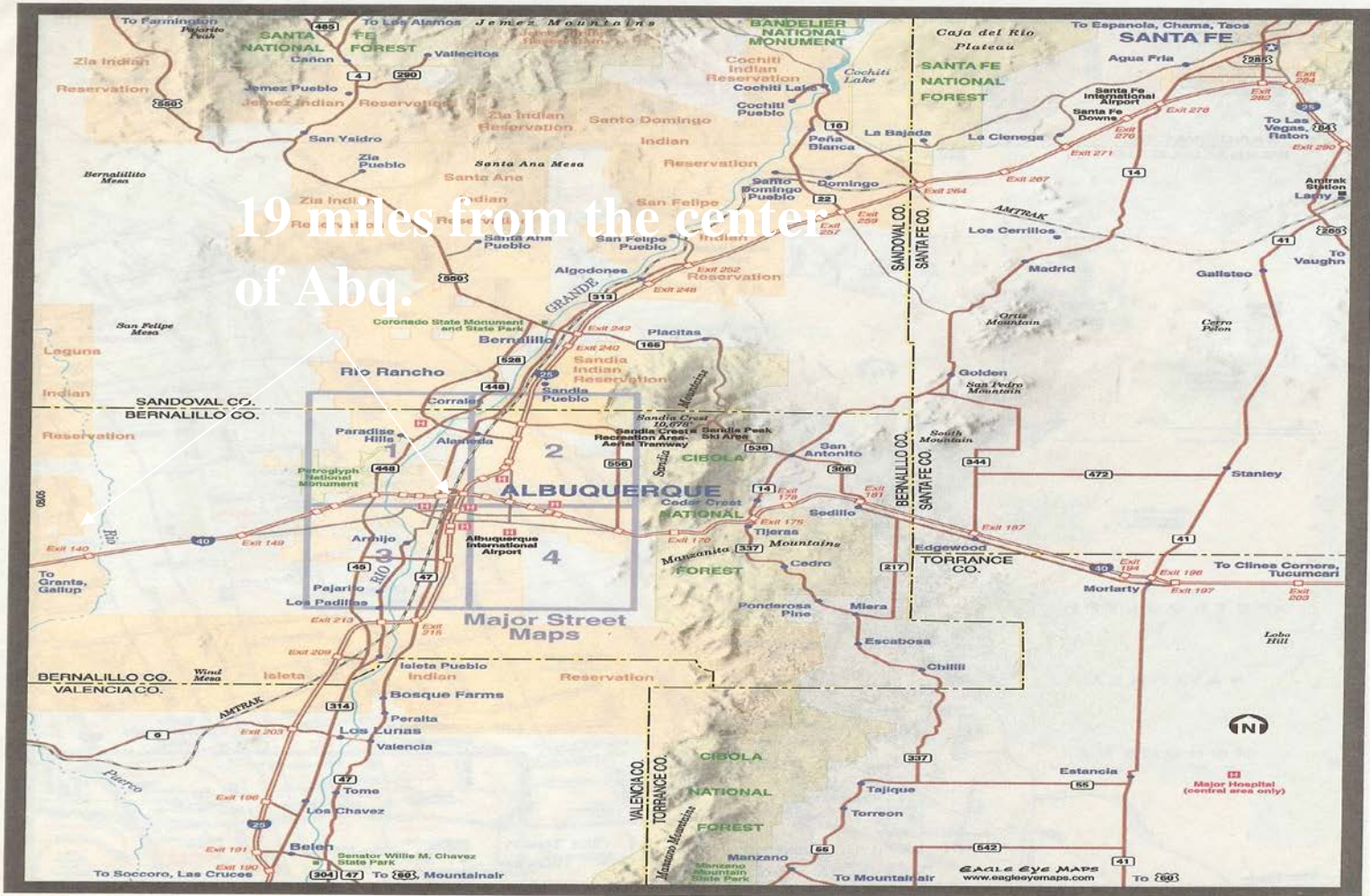
NAVAJO LAND DEPARTMENT

NAVAJO NATION  
200/NAVAJO LAND DEPARTMENT  
GEOGRAPHIC INFORMATION SYSTEMS SECTION  
P.O. BOX 1000  
TUCSON, ARIZONA 85724

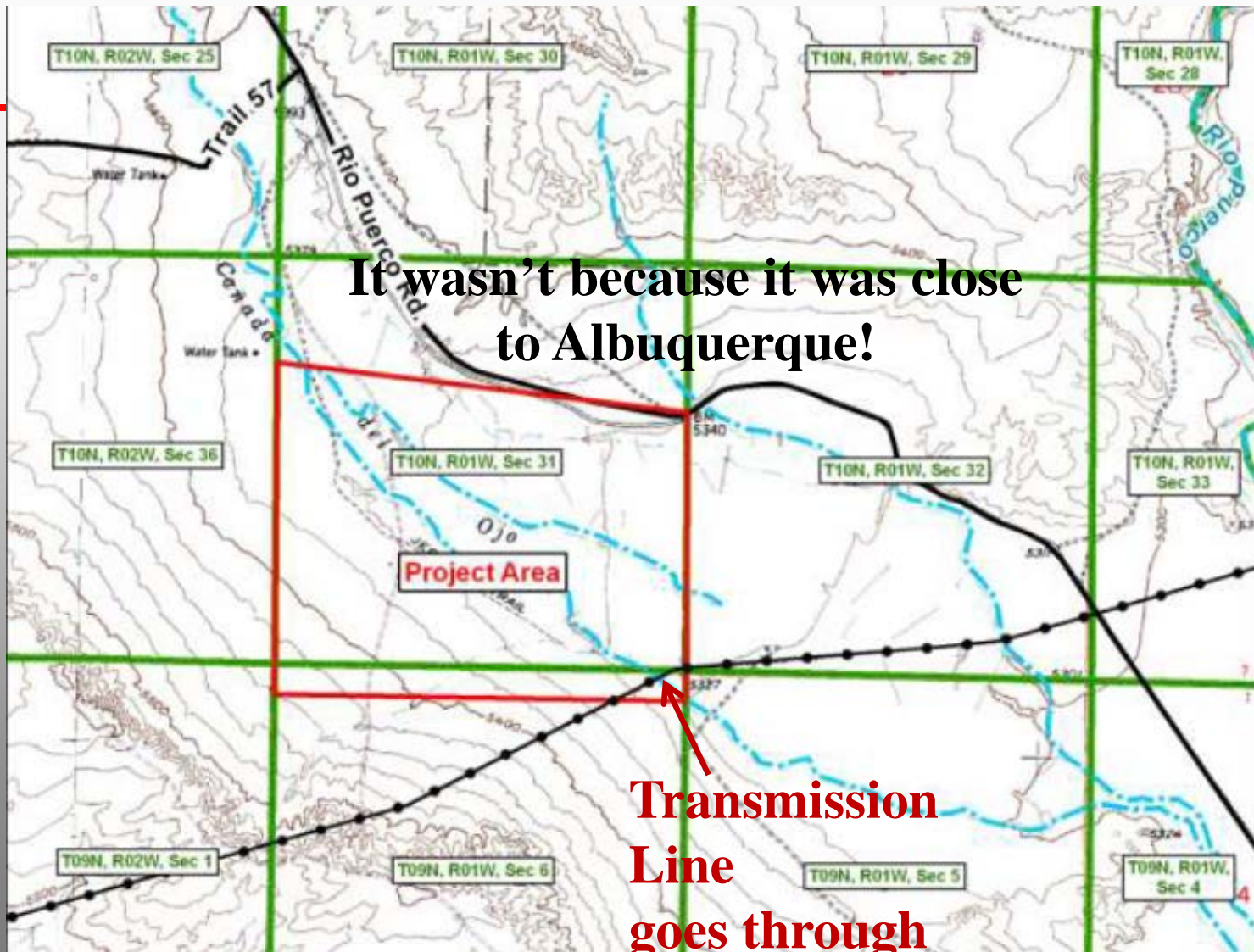
# Distance from Albuquerque

## Albuquerque Vicinity Map

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

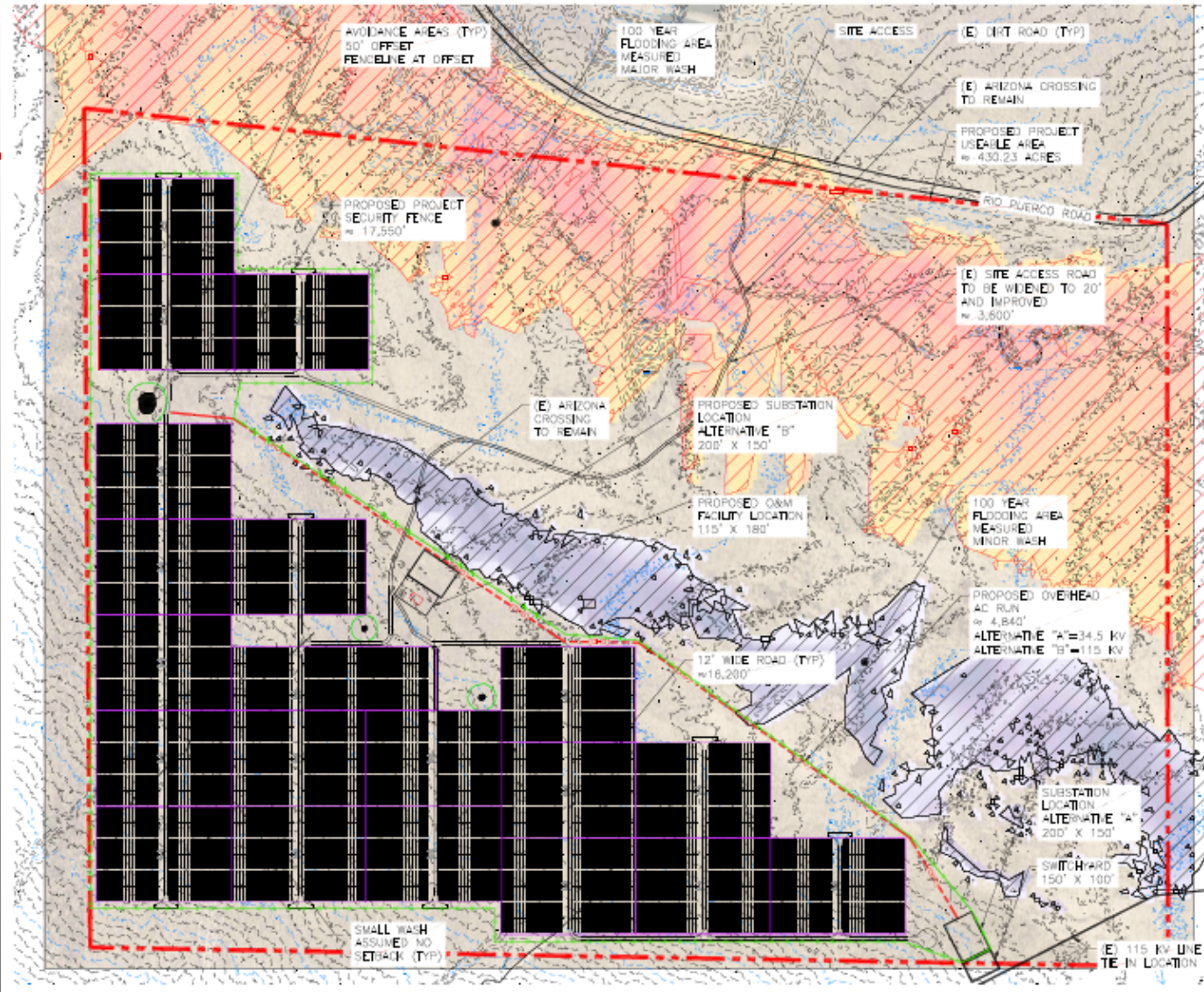
- 30 Megawatts (Enough peak power for approximately 11,000 homes)

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- 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



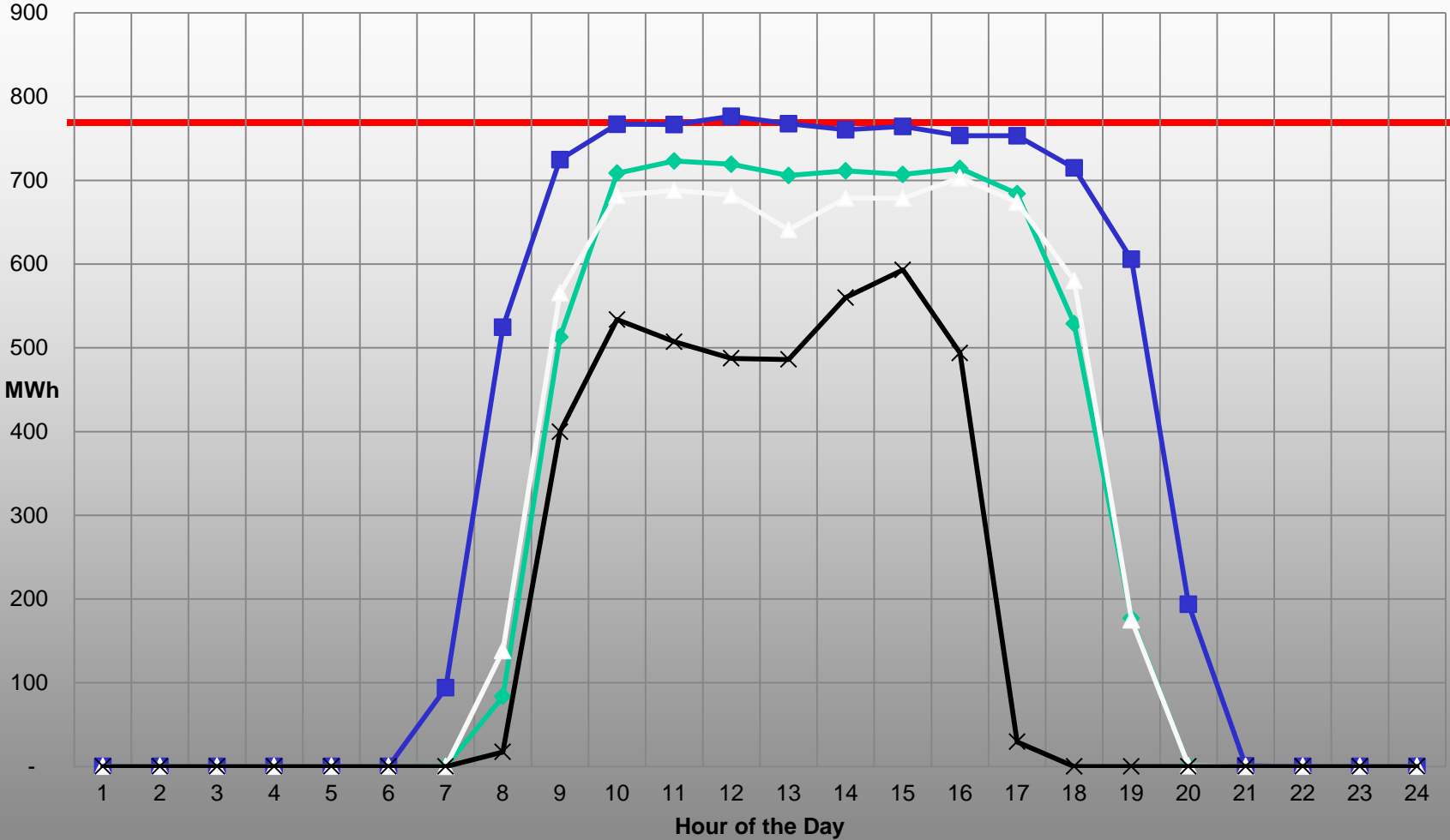




- **2010: Revenue \$2.22B – Publicly traded NASDAQ**
- **5,500 Employees – HQ San Jose, CA**
- **546 MW of PV Panel Shipped in 2010**
- **World Leader in Solar Conversion Efficiency**
- **More than 400 Large-Scale Solar Power Plants Deployed Worldwide**



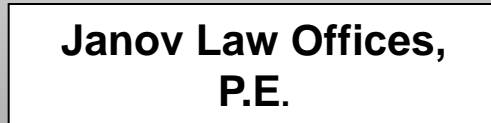
# Average Daily Output of Shandiin Power Plant



March June September December



# Our Solar Team Now –



# SHANDIIN SOLAR PROJECT TEAM

- **To'Hajiilee Economic Development, Inc. - "TEDI"**
  - Lead Developer and Landholder – Delores Apache, Board Member

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- **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

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- 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

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- ❑ **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**

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- 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

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## □ 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

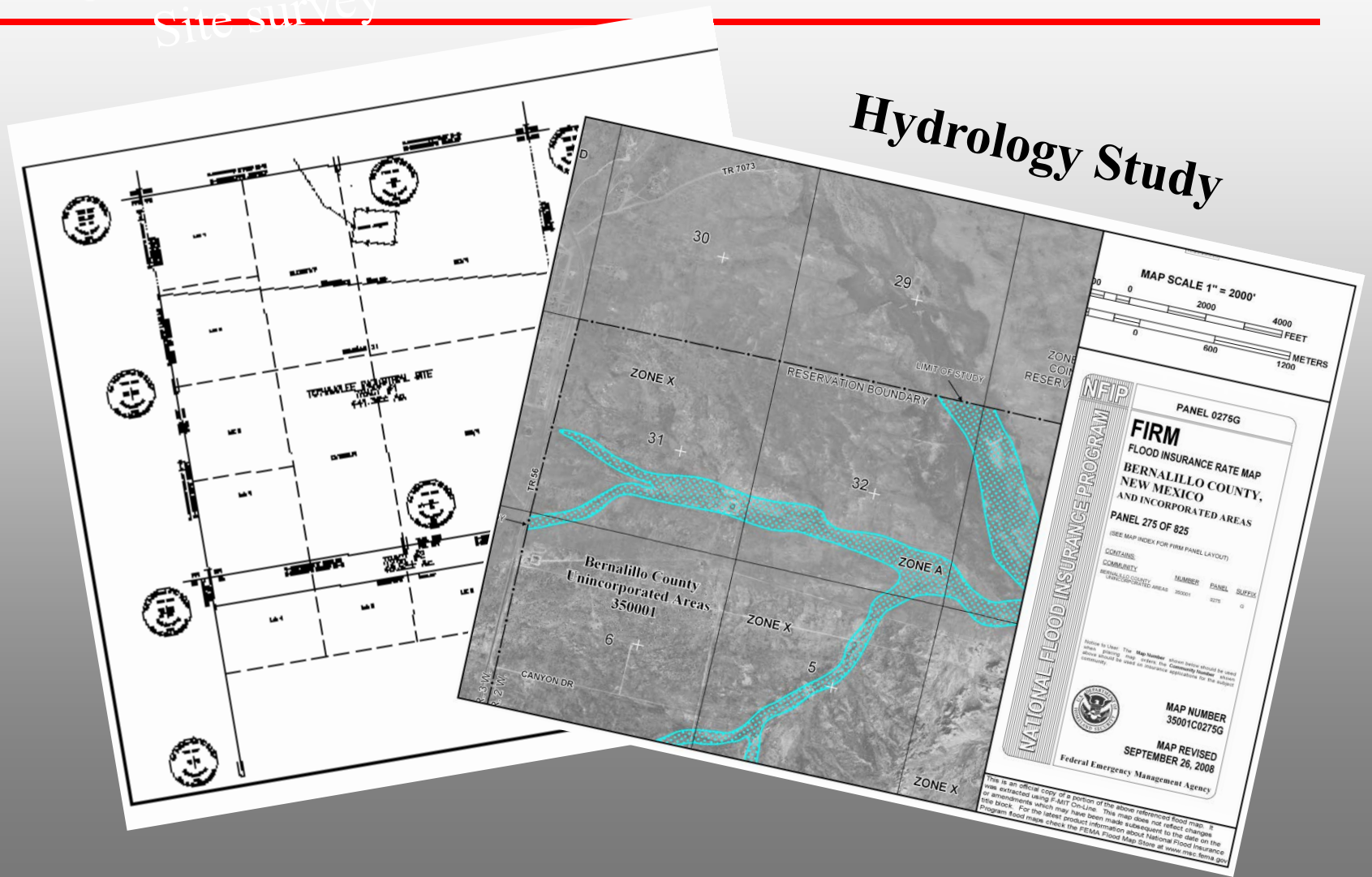




# Steps we have taken so far

Site survey

## Hydrology Study



# Steps we have taken so far

*Handwritten signature and date: 10/2/03*

## CULTURAL RESOURCES COMPLIANCE FORM

THE NAVAJO NATION  
HISTORIC PRESERVATION DEPARTMENT  
PO BOX 4950  
WINDOW ROCK, ARIZONA 86515

# Archeological Approval

ROUTING: COPIES TO  
NM SHPO  
XX REAL PROPERTY MGT/330  
SWCA

NNHPD NO. HPD-10-871  
OTHER PROJECT NO.  
SWCA 2010-309

PROJECT TITLE: A Cultural Resources Inventory for the Proposed Tohajiilee Solar Generation Facility, Tohajiilee, Bernalillo County, New Mexico

LEAD AGENCY: BIA/NR

SPONSOR: Michael Utter, Rural Community Innovations, 210 Cirque Driver, Bozeman, MT 59718

PROJECT DESCRIPTION: The proposed undertaking will involve the construction of a solar generation facility. The facility will include an array of Sun Power 400 or 425 watt series of Photovoltaic modules with SunPower T0 tracker electric motor drives for collection solar energy, pad-mounted transformers with combiner boxes and inverters on 200-acres. Ground [redacted] will be intensive and extensive with the use of heavy equipment.

LAND STATUS: Navajo Tribal Trust

CHAPTER: Tohajiilee

LOCATION: T.10N, R.1W - Sec. 31; T.9N, R.1W -Sec. 6; La Mesita Negra Quadrangle, Bernalillo County, New Mexico NMPM

PROJECT ARCHAEOLOGIST: John Risetto, Jennifer Walborn, & Matthew Bandy

NAVAJO ANTIQUITIES PERMIT NO.: B10372

DATE INSPECTED: 07/12/10 - 07/23/10

DATE OF REPORT: 07/23/10

TOTAL ACREAGE INSPECTED: 492.7-ac

METHOD OF INVESTIGATION: Class III pedestrian inventory with transects spaced 15 m apart.

LIST OF CULTURAL RESOURCES FOUND: (5) Sites (NM-S-64-8, NM-S-64-9, NM-S-64-10, NM-S-64-11, NM-S-64-12); (35) Isolated Occurrences (IO); (1) In-Use Site (IUS)

LIST OF ELIGIBLE PROPERTIES: (1) Site (NM-S-64-8)

LIST OF NON-ELIGIBLE PROPERTIES: (4) Sites (NM-64-9, NM-S-64-10, NM-S-64-11, NM-S-64-12); (35) IO; (1) IUS

LIST OF ARCHAEOLOGICAL RESOURCES: (1) Site (NM-S-64-8)

EFFECT/CONDITIONS OF COMPLIANCE: **No historic properties will be affected with the following conditions:**

### Site NM-S-64-B:

1. Site boundary will be flagged/ fenced by a qualified archaeologist prior to ground disturbing activities.
2. Site will be avoided by all ground disturbing activities by a minimum of 50-ft
3. Two track road will be closed to project-related traffic.
4. All construction activities within 50-ft of the site will be monitored by a qualified archaeologist.
5. A monitoring report/letter will be submitted to NNHPD within 30-days of monitoring.

HPD-10-871 / SWCA 2010-309

Page 2, continued

### Site NM-S-64-11:

1. Full recoredation 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) 871-7148.

FORM PREPARED BY: Tamara Billie

FINALIZED: December 27, 2010

Notification to

Proceed Recommended: Yes  No

Conditions: Yes  No

*Man S. Downer* 1-4-11  
Man S. Downer, Navajo Nation  
Historic Preservation Officer Date

Navajo Region Approval: Yes  No

*Billie* 1-31-11  
Billie Regional Director Date

# NEPA

## DRAFT ENVIRONMENTAL ASSESSMENT FOR THE TO'HAIJILEE 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 Cirque Drive  
Bozeman, Montana 59718

And

TO'HAIJILEE ECONOMIC DEVELOPMENT, INC.  
P.O. Box 3168  
To'Hajilee, New Mexico 87026

Prepared by:

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

SWCA Project No. 16715

March 2011

# EA



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



MC-820/Division of Environmental, Cultural, & Safety Management

Ms. Coleman Burnett, Natural Resources Planner  
SWCA Environmental Consultants, Inc.  
5647 Jefferson Street, NE  
Albuquerque, NM 87109

MAY 31 2011

RE: Final Environmental Assessment for the To'Hajilee Solar Project

EA-10-148

Dear Ms. Burnett:

The Environmental Assessment, EA-10-148, for the To'Hajilee Economic Development Incorporated (TEDI), proposed To'Hajilee Solar Project, located on Canyoncito Band of Navajo Indians trust lands in To'Hajilee Chapter, Bernalillo County, New Mexico has been reviewed in the Division 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 quality of the natural and human environment. An Environmental Impact Statement for the proposed project is not required.

Should you require additional information, you may contact Ms. Harrilene J. Yazzie, Navajo Regional NEPA Coordinator, at (505) 863-8287.

Sincerely,

Acting Regional Director, Navajo Region

Enclosure

# FONSI

# Tribal Approval



## Canonicito Band of Navajos

P.O. Box 3992 To'hajiilee New Mexico 87026

Phone: 505-908-2730 Fax: 505-908-2731

*Raymond Santos, President*

*Mark Chapp, Vice President*

*Scott Haines, Secretary/Treasurer*

*Lorraine Haines, Council Delegate*

### RESOLUTION: TOH 10-07-01

RESOLUTION OF THE CAÑONCITO BAND OF NAVAJOS/TO'HAIJILEE CHAPTER APPROVING AND AUTHORIZING APPLICATION BY TO'HAIJILEE ECONOMIC DEVELOPMENT, INC. FOR BUSINESS LEASE ON 489.1 ACRES OF CANOÑCITO BAND LAND LOCATED IN PARTS OF SECTIONS 31 AND 6, IN ACCORDANCE WITH APPLICABLE RULES AND REGULATIONS IN 25 USC AND AS LAND OWNERS, TO DEVELOP AND CONSTRUCT A SOLAR ENERGY PLANT TO PRODUCE RENEWABLE ENERGY ON SAID CBN LANDS

### WHEREAS:

1. The Cañoncito Band of Navajos ("CBN") was granted by the United States Government certain lands in New Mexico to be held in trust for CBN by the Act of August 13, 1949 and with this recognition the CBN/To'Hajiilee Chapter government has provided services to the CBN people; and
2. The CBN/To'Hajiilee Chapter ("Chapter") government currently provides services to enrolled members of the Cañoncito Band of Navajos; and
3. The Chapter delegated to the To'Hajiilee Economic Development, Inc. ("TEDI") the Chapter's responsibility for and performance of economic planning and development and other ventures and activities for the To'Hajiilee community and members of the Cañoncito Band of Navajos; and
4. Although TEDI was originally wholly owned by Dine Development Corporation ("Dine"), on September 9, 2009, full ownership was transferred from Dine to the Chapter at no cost to the Chapter, pursuant to CBN Resolution No. TOH-09-09-08-01, dated September 8, 2009, in which the Chapter requested and accepted full ownership of TEDI; and
5. In December 2008, TEDI made a formal request to the Chapter to secure a Business Lease to develop a solar energy project ("the Solar Project") on CBN land located in parts of Sections 31 and 6; and
6. The Chapter approved TEDI's request for a Business Lease at a meeting held on December 18, 2008, but the written resolution approving said request was never signed; and
7. The Chapter wishes to confirm its support of the Solar Project and approval of TEDI's request for a Business Lease for that purpose; and

## 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

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- **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

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- 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

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- 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

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- **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%**

## **For Updates:**

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**Doug MacCourt**

**Ater Wynne LLP**

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**Portland, Oregon 97201**

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