

STANDING ROCK SIOUX TRIBE



RENEWABLE ENERGY & ENERGY
DEVELOPMENT OFFICE; WIND
FEASIBILITY STUDY; COMMUNITY-
SCALE PV SYSTEM INSTALLATION

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OVERVIEW:



- **BACKGROUND INFORMATION ON STANDING ROCK SIOUX TRIBE**
- **WIND ASSESSMENT STUDY**
- **WIND FEASIBILITY STUDY**
- **COMMUNITY SCALE PV INSTALLATION**
- **CONCLUSION:**
 - COMPUTER DATA CENTER
 - OCETI SAKOWIN POWER PROJECT
- **LESSONS LEARNED:**
 - RENEWABLE ENERGY & ENERGY DEVELOPMENT OFFICE
 - ENERGY LEADERSHIP
 - NEW GRANT COMMITTEE
 - OIL & GAS PREPARATION WORKING GROUP

STANDING ROCK



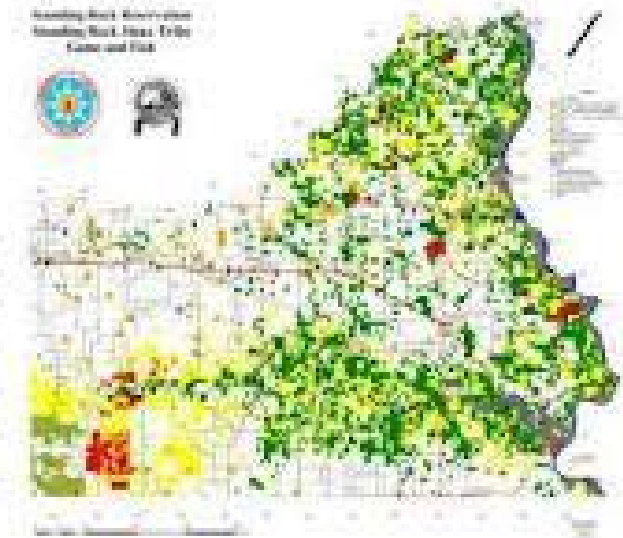
- **ONE OF SEVEN RESERVATIONS OF THE GREAT SIOUX NATION**
- **LOCATED IN SOUTH-CENTRAL NORTH DAKOTA & NORTH-CENTRAL SOUTH DAKOTA**
- **LOCATED IN SIOUX COUNTY, ND; CORSON COUNTY, SD & SMALL PORTIONS OF ZIEBACH & DEWEY COUNTIES IN SD**
- **RESERVATION DIRECTLY TO THE SOUTH IS CHEYENNE RIVER SIOUX TRIBE**



STANDING ROCK



- **LAND**
 - **TERRAIN**
 - WOODLANDS, ROLLING HILLS, RIVER VALLEYS, AND LAKES
- **CHECKERBOARD OWNERSHIP**
 - ALLOTTED, TRIBAL, AND OTHER (STATE, FEDERAL, NON-INDIAN)
- **2,320,247.67 ACRES**
 - ~700,000 TRIBAL LAND, HAS INCREASED DUE TO LBPP
- **LOST NEARLY 560,000 ACRES DUE TO THE PICK-SLOAN FLOOD CONTROL ACT OF 1944**



STANDING ROCK



DAKOTA:

**HUNKPATINA &
CUTHEAD –
YANKTONAI**

**LAKOTA: THE
MAJORITY ARE
HUNKPAPA &
BLACKFEET**



**CETAN WAKINYAN (THUNDERHAWK &
TATANKA IYOTAKE (SITTING BULL):
CHILD-HOOD FRIENDS (HUNKPAPA
LAKOTA)**

STANDING ROCK SIOUX TRIBE



- **ORGANIZATION**
 - CHAIRMAN, VICE-CHAIRMAN, SECRETARY
 - 8 DISTRICT REPRESENTATIVES
 - 6 AT-LARGE REPRESENTATIVES
- **SEPARATED INTO 3 COMMITTEES:**
 - JUDICIAL
 - ECONOMICS
 - HEALTH, EDUCATION, & WELFARE
- **EACH PROGRAM DIRECTOR REPORTS TO ASSIGNED COMMITTEE ON A MONTHLY BASIS**

WIND FARM PROJECT:



- **COUNCILMEN:**
 - DAVE ARCHAMBAULT II (CURRENT CHAIRMAN)
 - JOSEPH MCNEIL
- **LEADERSHIP THAT ENVISIONS RENEWABLE ENERGY BOTH AS AN ECONOMIC SOURCE AND ALTERNATIVE ENERGY SOURCE FOR STANDING ROCK**

ENERGY DEVELOPMENT



- **LOOK GENERATIONS INTO THE FUTURE: HOW WILL OUR DECISIONS TODAY AFFECT FUTURE GENERATIONS?**
- **RESOLUTION STATEMENTS:**
- **TO DIVERSIFY ENERGY (BOTH RENEWABLE & NON-RENEWABLE) SOURCES**
- **TO DIVERSIFY ECONOMIC RESOURCES**
- **TO ADMINISTER SERVICES THAT MAY CONTRIBUTE TO THE SOCIAL & ECONOMIC ADVANCEMENT OF THE TRIBE AND ITS MEMBERS**

WIND ASSESSMENT STUDY



- **FUNDED THROUGH THE DEPARTMENT OF INTERIOR**
- **WORKED WITH CONSULTANT ENGINEERING COMPANY TO ASCERTAIN THE BEST LOCATION FOR A WIND FARM**
- **CRITERIA BASED ON:**
- **ACCESSIBILITY**
- **PROXIMITY TO SUB-STATIONS OR TRANSMISSION LINES**
- **AVAILABILITY OF “TRIBAL-TRUST” OR “TRIBAL-FEE” LAND**
- **WIND DATA TAKEN FROM MET TOWER IN ELGIN ND**
- **SECONDARY: “WHERE’S THE WIND?”**

WIND FEASIBILITY STUDY



- **THE 2ND STEP IN THE VISION FOR A COMMERCIAL WIND FARM ON STANDING ROCK**
- **2 50-METER MET TOWERS ARE NOW LOCATED ON THE SHERWOOD HILL SITE**
- **BUSINESS PLAN:**
- **CONTRACTED LEGAL COUNSEL TO LOOK INTO WIND ENERGY TAX CREDITS, BUSINESS MODELLING, ETC.**
- **WHAT IS BEST FOR STANDING ROCK?**

WIND FEASIBILITY STUDY



**PLANNED YEAR LONG MONITORING BEGAN IN JANUARY
2013**

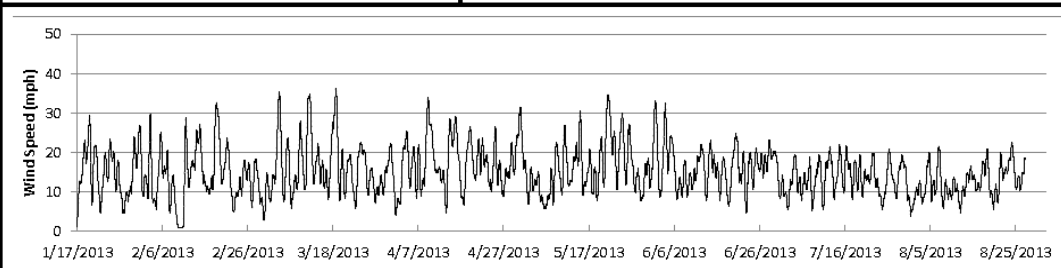
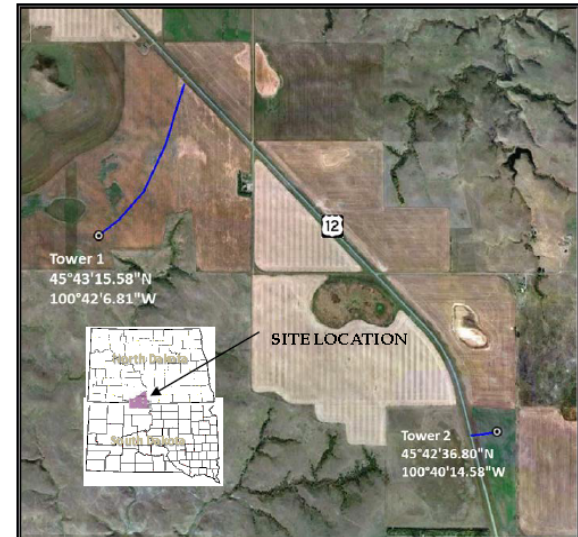
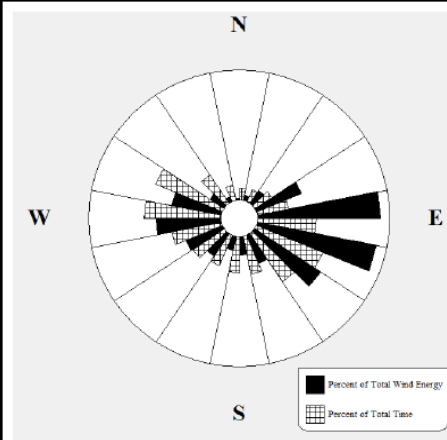
**DESK STUDIES COMPLETED – GEOLOGIC SETTING,
POTENTIAL AVIAN IMPACTS**

**PRELIMINARY INTERCONNECTION INDICATES
CHALLENGES IN GETTING POWER TO MARKET**

WIND FEASIBILITY STUDY : TOWER 1



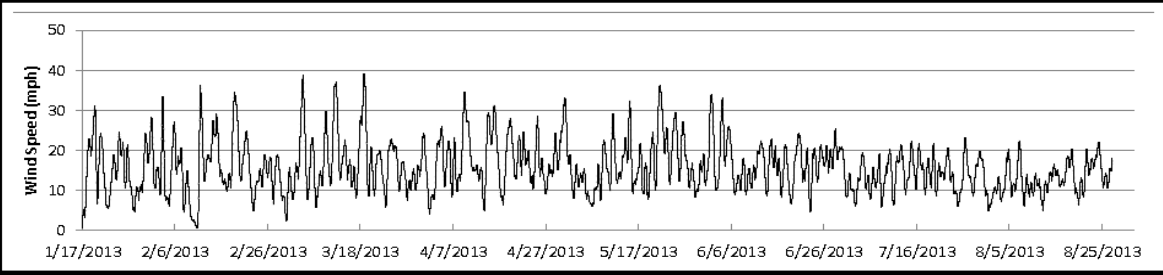
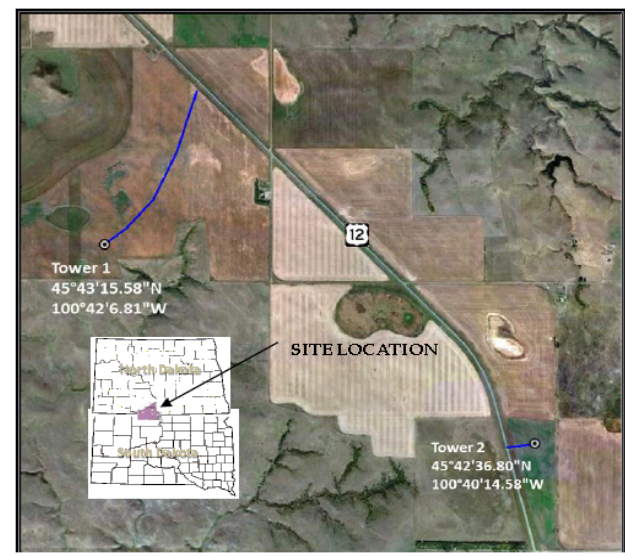
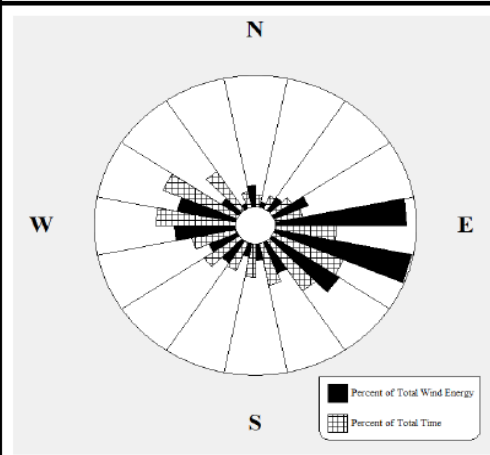
Project Name: SRST Wind Monitoring
Site Name: Tower 1
Period of Report: 01/17/2013 to 08/27/2013
Average Wind Speed: 15.16 mph



WIND FEASIBILITY STUDY: TOWER 2



Project Name: SRST Wind Monitoring
Site Name: Tower 2
Period of Report: 01/17/2013 to 08/27/2013
Average Wind Speed: 15.82 mph



WIND FEASIBILITY STUDY: TAX FINANCING



WIND TAX CREDITS:

**NOT SURE IF WE CAN MAKE THE “BEGIN CONSTRUCTION”
REQUIREMENT**

PROBLEM: NEPA REQUIREMENTS/CLEARANCE

OPTION 1:

**DUE TO OUR TRANSMISSION PROBLEM, WE HAVE
ENTERED INTO NON-DISCLOSURE AGREEMENTS WITH
SEVERAL COMPUTER DATA CENTERS**

SOLVES INTERCONNECTION PROBLEM

SATISFIES “PUBLIC REVIEW” (USE POWER LOCALLY)

POTENTIAL FOR JOB CREATION

COMMUNITY SOLAR PV INSTALLATION



CURRENTLY IN-PROCESS...

Cost Share Structure:

New LLC jointly-owned by Tribe and SunVest Investors

SunVest Solar (through SunVest Investors) contributes the 50% cost share to the projects, so no initial cost share by Tribe.

Tribe contributes DOE grant.

SunVest Investors qualify for 30% Federal Investment Tax Credit and Depreciation of Solar PV Assets.

SunVest provides Tribe credit for value of Investment Tax Credit.

Balance of System Cost is paid overtime by Tribe at rate at or below existing payments to utility provider.

COMMUNITY SOLAR PV INSTALLATION



The Standing Rock Sioux Tribe will partner with NORTH DAKOTA Solar Investments, LLC and SunVest Solar, Inc. to install 636 kW of solar photovoltaic (PV) systems at five Sitting Bull College buildings on Indian Lands in Sioux County, North Dakota. The project will provide solar power to the main administrative and academic buildings on the Sitting Bull College campus..

Building Name	Sitting Bull Science Building	Family Support Building	Entrepreneur Building	Library	Transit Building	Totals
Address	1341 92 nd St.	1341 92 nd St.	1341 92 nd St.	1341 92 nd St.	1341 92 nd St.	5
City, State	Fort Yates, ND	Fort Yates, ND	Fort Yates, ND	Fort Yates, ND	Fort Yates, ND	-
Solar System Size (kW)	200 kW	200 kW	100 kW	100 kW	36 kW	636 kW
Build Total Energy Use (kBTU)	6,389,837	5,005,592	3,397,736	1,482,000	534,740	16,809,904
Energy Usage After Project (kBTU)	3,425,837	2,041,592	1,915,736	0	1,220	30,479,544
Energy Savings	46.4%	59.2%	43.6%	100.0%	99.8%	42.6%
Energy Savings in Dollars (\$)	\$23,400.00	\$23,400.00	\$11,700.00	\$11,700.00	\$4,212.00	\$74,412.00

COMMUNITY SOLAR PV INSTALLATION



**PROJECT IMPACT – REDUCE CARBON FOOTPRINT,
BECOME MORE ENERGY INDEPENDENT IN
ACCORDANCE WITH THE TRIBE’S LONG-TERM
GOALS AND VISION AND GAIN VALUABLE
EDUCATIONAL BENEFITS FOR EVERY LEVEL OF
SCHOOLS ON RESERVATION.**

**PROJECT GOALS - TO DEPLOY CLEAN ENERGY AT A
COMMUNITY SCALE ON INDIAN LAND.**

COMMUNITY SOLAR PV INSTALLATION



KEY TAKEAWAY – THE STRUCTURE OF THE DEAL IS TO MAXIMIZE DOE GRANT FUNDS TO DEPLOY MORE SOLAR PV THROUGH UTILIZATION OF INTEGRATING GRANT FUNDS AND PRIVATE TAX FINANCING TO MAKE RENEWABLE ENERGY MORE COST EFFECTIVE FOR THE SRST..

ELECTRIC OFFSET – PROJECT WILL HAVE A 42.6% CLEAN ENERGY OFFSET OF ELECTRICAL CONSUMPTION ON SITTING BULL COLLEGE FACILITIES INCLUDING THE SITTING BULL SCIENCE BUILDING, FAMILY SUPPORT BUILDING, ENTREPRENEUR BUILDING, AND TRANSIT BUILDING.

COMMUNITY SOLAR PV INSTALLATION



Power Purchase Agreement:

After Solar PV System is operational, the savings from the energy generated will be paid in a Power Purchase Agreement (PPA) until the balance of the system is paid for.

At the end of the PPA term the ownership of the system can “flip” to the Tribe.

OCETI SAKOWIN POWER PROJECT



- **7 COUNCIL FIRES**
- **STANDING ROCK SIOUX TRIBE, CHEYENNE RIVER SIOUX TRIBE, CROW CREEK SIOUX TRIBE, ROSEBUD SIOUX TRIBE, OGLALA SIOUX TRIBE, FLANDREAU SANTEE SIOUX TRIBE, SISSETON WAPEHTON SIOUX TRIBE, YANKTON SIOUX TRIBE**
- **TRIBES WILL COMBINE THEIR EFFORTS & RESOURCES TO BUILD A UTILITY SCALE 1GW+ WIND POWER GENERATION & TRANSMISSION SYSTEM THAT WILL SELL POWER TO OUT OF STATE BUYERS**

OCETI SAKOWIN POWER PROJECT



**PROJECT WILL BE BUILT BY \$2 - \$3 BILLION IN FUNDING
RAISED BY THE ISSUANCE OF POWER REVENUE BONDS
ISSUED BY THE OSPP**

**TRIBES WILL MAINTAIN OWNERSHIP & CONTROL OVER
THE PROJECT**

**FINANCING COSTS WILL BE GREATLY REDUCED & THUS
NOT DEPENDENT ON THE EXTENSION OF THE WIND
PRODUCTION TAX CREDIT**

FUTURE PLANS



- **DIVERSIFY OUR SOURCES:**
 - COMPUTER DATA CENTER
 - OSPP
- **ENVIRONMENTAL ASSESSMENT ON SITE 5 (SHERWOOD HILL)**
 - AVIAN ISSUES
- **ARCHAEOLOGICAL MICRO – SURVEY (\$\$ PROBLEM)**

LESSONS LEARNED



- **FRUSTRATION – DEVELOPMENT IN INDIAN COUNTRY...**
 - SURROUNDING WIND FARMS
 - LOCAL BIA FIELD OFFICE (LACK OF ENERGY EXPERIENCE)
- **RENEWABLE ENERGY & ENERGY DEVELOPMENT OFFICE**
- **CREATION OF ENERGY & MINERAL MANAGER**
 - STRATEGIC PLANNING
- **ADMINISTRATIVE DIRECTIVES:**
 - OIL & GAS PREPARATION WORKING GROUP
 - NEW GRANT COMMITTEE (CFO, ADMINISTRATION, CONTRACTING...)
 - ENERGY LEADERSHIP

LESSONS LEARNED



#NODAPL

ANY QUESTIONS/COMMENTS?



***“LET US PUT OUR MINDS
TOGETHER TO SEE
WHAT WE CAN BUILD
FOR OUR CHILDREN.”***

TATANKA IYOTAKE

HUNKPAPA LAKOTA

SITTING BULL

