WIND DEVELOPMENT ON THE ROSEBUD

DOE, Tribal Energy Program, Nov. 15th, 2011, Denver, Colorado
20 communities with an elected council person representing each community, they serve 3 year terms, along with the Tribal Chairman, Vice Chair, Secretary and Treasurer.
Tribal and/or Trust Acreage Within the Five County Rosebud Sioux Reservation

Todd County = 530,242 tribal trust acres of a total 889,725 acres
Mellette County = 296,536 tribal trust acres of a total 838,402 acres
Tripp County = 67,632 tribal trust acres of a total 1,034,503 acres
Gregory County = 23,570 tribal trust acres of a total 522,454 acres
Lyman County = 2,224 tribal trust acres of a total 143,921 acres
Wind Power Classification

<table>
<thead>
<tr>
<th>Wind Power Class</th>
<th>Resource Potential</th>
<th>Wind Power Density at 50 m W/m²</th>
<th>Wind Speed at 50 m m/s</th>
<th>Wind Speed at 50 m mph</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Fair</td>
<td>300 - 400</td>
<td>6.4 - 7.0</td>
<td>14.3 - 15.7</td>
</tr>
<tr>
<td>4</td>
<td>Good</td>
<td>400 - 500</td>
<td>7.0 - 7.5</td>
<td>15.7 - 16.8</td>
</tr>
<tr>
<td>5</td>
<td>Excellent</td>
<td>500 - 600</td>
<td>7.5 - 8.0</td>
<td>16.8 - 17.9</td>
</tr>
<tr>
<td>6</td>
<td>Outstanding</td>
<td>600 - 800</td>
<td>8.0 - 8.8</td>
<td>17.9 - 19.7</td>
</tr>
<tr>
<td>7</td>
<td>Superb</td>
<td>800 - 1600</td>
<td>8.8 - 11.1</td>
<td>19.7 - 24.8</td>
</tr>
</tbody>
</table>

*Wind speeds are based on a Weibull k value of 2.0*
Met tower installed in 1999

Akicita Cikala 750 Kw turbine, commissioned March 2003

Proposed Owl Feather War Bonnet Wind Farm, 30Mw

Proposed North Antelope Highlands Wind Farm, 190Mw

Met towers installed in 2001

Met towers installed in 2003

Met tower installed in 2009

Met tower installed in 1999
Akicita Cikala (Little Soldier)

750 Kilowatt generator
Neg Micon
Commissioned in March of 2003
Cost was $1.1 million
$508,750.00 DOE Grant
$566,000.00 RUS Loan
Ears $2,500 to $4,000.00 monthly
Owl Feather War Bonnet Wind Farm

2003 Dept. of Energy Grant
DOE Funding $448,551.00
DISGEN Cost share/ in-kind $78,750.00
RST/ TUC Cost share/ in-kind $27,272.00

http://apps1.eere.energy.gov/tribalenergy/pdfs/rosebud03final.pdf
30 Mw
Owl Feather War Bonnet Wind Farm

Developer is Distributed Generation Inc. LLC
Dale Osborn, Pres. Project is shovel ready.

Issues are:
RFP’s Power Purchase Agreements are far and few between due to poor economy and competition from natural gas
Major load areas are far from wind farm site imposing Wheeling and Tariff fees impeding project economics.
RFP was issued in Fall of 2007.

Rosebud Sioux Tribe and Citizens Wind entered into an MOA December of 2008 for a 5 year period of development.

Citizens has exclusive wind rights over all Tribal lands for a period of 2.5 years, in the remaining 2.5 years they must have in the ground at least one operating wind farm. All data gathered will be shared.

The RST and Citizens Wind are considered partners in the development phase, initially the RST had a 20% interest with Citizens having an 80% interest as they bring the development knowledge and money to the table, and we bring our land and wind to the projects.

DOE award of 1.5 Million in 2010 to assist in the development costs garnered the tribe a 33/67 split in development fees.

We intend to charge $100,000.00 per Mw in development fees to the future owner of the wind farm/s. For every Mw developed RST will receive $33,000 per Mw immediately after financial closing.
Rosebud Sioux Tribe and Citizens Wind
North Antelope Highlands Wind Farm 190 Mw

Basic Agreement:
Partnership in development with 33% share in the development fees, worth $33,000.00 per Mw.
Passive land owner royalty fee, 3.5% of Gross Revenue Stream
$15 million in construction dollar spending for about 1 year and $500,000.00 in O&M salaries coming from project not revenue dollars.
If we build to the 190 Mw, RST will receive up to $25 million in first 5 years due to sale and use taxes, development fees and revenue stream and over the length of 20 years approx. $50 million total.
North Antelope Highlands Wind Farm

RST Met tower installed Fall of 2003

Citizens Wind installs 2 Met towers in Feb 2009

WAPA 115 kv, and Cherry Todd Substation
North Antelope Highlands Wind Farm

Issues:

Preliminary Systems Impact Study indicates high degree of constraints on the Grid, and to build over 135 Mw on the existing WAPA 115 kv will cost over $10 million to upgrade.

Any project in the state of SD over 99 Mw is subject to State PUC permitting.

BIA has had the lease agreement under review for this project since Nov. 2010, 12 months.
Throughout the spring, summer and fall of 2009, Avian field studies were conducted on the site and are complete.

Citizens developed a site layout on turbine locates with 127 turbine locates to date. At this time we plan on using GE 1.5 Mw.

Fauna and Flora field studies are complete.

Bat surveys are complete.

Cultural studies, Class I and III are to be conducted spring of 2012.

Submit Environmental Assessment to Lead Agency BIA, June 2012.


FONSI awarded fall of 2012.

Capacity to respond to any RFP available in summer 2012.

Consultation with US Fish and Wildlife to begin this winter, Eagle nest on site.
• Develop a reservation wide distributed generation system, to lessen our dependence on the larger grid to become self sustainable.

• Tribe to start our own tribal utility company, purchasing the existing distribution system from the local cooperative.

• Support our people by upgrading the efficiency of their houses, retrofitting their heating and cooling systems with renewable energy devices such as small wind turbines and photovoltaic panels through grant/loans.

• Support start up funding for small private/tribally owned companies developing residential and community scale renewable energy devices, with the intent to expand outward beyond the reservation boundaries to much larger markets creating jobs and industries.
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