Wind Energy Project
Pre-Development Phase

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Acting Director

Renewable Energy Development on Tribal Lands
FY 2003-06 Project
Dept. of Energy NREL
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Radisson Hotel
Denver Stapleton Plaza
Denver, CO
Kaw Nation Wind Energy Project
Pre-Development Phase
Briefing Outline

- Project Overview
- Goals & Objectives
- Types of Development
- Project Location

- Project Participants
- Ongoing Activities & Future Plans
- Questions
In considering Energy Resources it is relevant that the Kaw, or Kanza, utilize the gift of wind power.

The Nation’s name derived from three subdivisions:
- Tajé Zhínga: “Little Wind” or Maⁿnáhije: “Makes-a-breeze-near-the-ground”
- Ák’a Oníkashinga: “South Wind People”
- Tajé Oníkashinga: “Wind People”

The Kanza have revered the South Wind in all ceremonial activities. (Kaánze, second syllable scarcely audible)
Project Goals & Objectives

- Identify optimal low-cost, renewable energy to serve tribal members and enterprises.... while providing opportunities for sustainable economic expansion on all trust lands.
- Preserve Native American Cultural Significance
- Initiate & Facilitate Community Energy Development for Adjacent NA Governments
Goals & Objectives (continued)

Subsequent Wind Development

- Maximize Tribal Economic Benefits
  - Explore ways to employ Wind power to lower electric rates &/or offset production costs
  - Determine tribal energy requirements for services, enterprises & proposed Chilocco development
  - Determine cost/benefit potential: selling local power vs exporting to regional markets to create revenues

- Create NA Employment opportunities
  - Proposed wind development enabler will address:
    - # jobs & skills to operate & maintain proposed facilities
    - Staff current & future needs of present NA ops in Service area
    - Staff activities for future Chilocco development
  - Supporting-development jobs
Goals & Objectives (continued)

Subsequent Wind Development

- Develop Renewable Energy Sources on NA Lands while maximizing NA Cultural significance for community development
  - Preserve individual identity
  - Celebrate and renew collective identity
- Technology Transfer to tribal members, resource & enterprise management
  - Provide Kaw Nation w/training materials to assess & develop wind facilities
  - Establish skill set within tribal and intertribal memberships
  - Project success will enable enterprise expansion & realization of Tribal energy self-sufficiency to offset current energy costs (Facilities Energy Audits/Conservation)
Chilocco Indian School, OK

School History
- Est. 1884 by US Gov’t ed. W. OK tribes through 8th grade
- Original school built on 8,320 acres purchased from Cherokees
- School based on Industrial Plan
  - Half-day academic subjects
  - Half-day vocational subjects
    - Boys studied Ag pursuits
    - Girls learned domestic arts
    - School produced own food & other items needed
- 1907: Expanded to include all Indian children except Five Civ. Tribes (1-bldg to 35-bldgs)
- After 1910 admits children from Five Civ Tribes
- 1916: Education thru 10th grade
- Late 1930’s: lower Elem. Grades elim.; Jr-Sr high cont.
- After WWII: only high school
- Between 1930-1959 annual enrolled between 800-1200 students
- Closed June 1980 amid opposition from Indian parents
- Rather than transform nomadic Indians into “civilized” American farmers & citizens, actually reinforced Indian & tribal identity among students
- Trained leaders of western OK tribes for half century, creating bonds of friendship of different tribes
- Chilocco help create pan-Indian identity among Indian people in OK
- After 1980, property in transition without defined use
- 1993 to early-2002: Church of Scientology used portion of school for substance abuse & rehab center
Native American Land Losses

1775 – 1992

Source: R. David Edmunds (Cherokee), 1996, Indiana University (in Encyl. of North American Indians)
Types of Development

- Kay County, Oklahoma
  - Chillico Area development of trust lands
  - Integrated development (Inter-tribal coop)
- Guide for Major Developments
  - NA Education & Training Center
    - Wind Center of Excellence
    - Higher Ed courses
    - Other Vo-tech jobs training for region
  - Inter-Tribal Governance Projects
    - Associated inter-tribal government activities; NA School of Government (NCIC)
  - Operate Wind DEG system to power other Chillico developments (e.g.)
    - Language & Cultural Preservation Ctr
    - Native American Diabetes Ctr (5+ yrs)
    - Native American Community College at Chillico renewed campus (5+ yrs)
    - Museums and Archive Facilities
    - Elder Care Facilities
    - Ceremonial Circle for community events
Project Location
North Central Oklahoma
Project Location (continued)

Chillico, OK

Intertribal Ownership
Kaw… Ponca… Pawnee
Otoe-Missouria… Tonkawa

Adjacent Ownership
Cherokees
Chillico, OK

Project Location
(continued)
Wind Monitoring Site

Kaw Nation Wind Energy Project
Chilocco, OK

Test Site

Project Location
(continued)
Wind Monitoring Site

Chilocco 50-m Aerometer

2 = Expanded View

50 m

40 m

30 m
Kaw Nation
- General & Executive Councils
- Utilities Commission (KNUC)
- Environmental Dept (KNED)
- Cultural Cmte (Cultural Studies)

Native American Interests
- Chilocco Inter-Tribal Council
  - Ponca... Otoe Missouria...
  - Pawnee... Tonkawa...
- Cherokees
- Cultural Grps (CAA, etc.)

Power & Transm. Interests
- Western Farmers Electric
- OG&E Power Distributor
- OK Municipal Power Authority (OMPA)
- SW Power Pool (SPP)

Contractors
- Distributed Gen. Systems (Disgen)
  - Ed McCarthy (Met Studies)
  - Western EcoSystems Tech., Inc. & Northern OK College (Avian Assessment)

State Interests
- Kay County communities
- Oklahoma Wind Power Initiative (OWPI)

Federal Interests
- DOE NREL
- BIA Energy & Minerals

Moral & Advisory Support
- ICOUP (Pat Spears & Bob Gough)
- CERT

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Feasibility Phase Results

- Sufficient wind resource to obtain financing (19-months assessment as of Oct 2003 & counting - 43 months as of Oct 2005):
  - Small variations month to month, steady power
  - Class 3-4 Wind Resource at 50m
  - Grid and farm production feasible
- A preliminary Phase I Avian resource assessment showing manageable impacts,
- Cultural issue needs to preserve historically important former Indian school artifacts or facilities,
- Existing local transmission utilities and capacity sufficient to enter the development phase of project evaluation,
- Willing Utilities (OG&E and OMPA) ready to discuss wind development,
- Southwest Power Pool support in developing the project, and
- Potential green tag federal interests in the transmission area.
Chilocco Test Site Mean Monthly Wind Speed

- Oct: 13.7 mph
- Nov: 16.3 mph
- Dec: 17.7 mph
- Mean: 15.1 mph
- Dir: 148 deg – 172 deg (164 deg)
Ongoing Activities & Future Plans

- Initiating Intertribal Council Meetings to gain interests in Cultural Initiatives & Community Energy Development
- Developing coordination plan with Intertribal Council members for cultural and ethnographic studies
- Cooperating with Cherokees on correlation of tower data with SoDAR data.
- Continuing Chiloco Wind Monitoring and tower maintenance activities
- Initiated Environmental Assessment studies (Avian & Cultural)
- Finalizing Kaw Nation IRMP to be used to guide Wind Energy development options.
- Completing Pre-development Phase Grant to BIA.
? Questions ?

Your Turn

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(Thank You)