Cherokee Chilocco Wind

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DOE Tribal Energy Program
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Cherokee Chillico Wind
North Central Oklahoma Location

An overview of the value chain

- **Development**
  - Acquisition of the site
  - Wind analysis
  - Selection of equipment
  - Permit

- **Financing**
  - Financial analysis
  - Legal concept
  - Sales / marketing
  - Project financing

- **Construction**
  - Network connection
  - Infrastructure
  - Assembly
  - Start-up of operations

- **Sale**
  - Sale: gradual transfer to purchaser
  - IPP: independent power production (own operation of the wind farm for generation of electricity)

- **Service**
  - Technical and commercial management
Creek Wind

Accomplishments:
• Feasibility study
• Business plan & white paper
• Completed wind resource assessment (WRA)
• Conducted turbine comparison
• Southwest Power Pool interconnect completed
• Finalizing environmental studies
• Engaged PNE Wind for development
• Bid Power Purchase Agreements (PPAs)
• Finalized firm transmission studies
Cherokee Wind

- Advantages
  - Expends utilization of transmission
  - Power transmission interconnect is under 2 miles
  - Local existing substation
  - Cherokee Nation owns land
  - Revenue and jobs to economically depressed area
  - Potential for double REC value
  - Demonstration project of tribal-owned wind
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**Disadvantages / Hurdles**

- Tribes don’t qualify for tax credits
- Marginal wind speed
- No power purchase agreement
- Highly competitive natural gas market
- Oklahoma lacks a renewable portfolio standard
- Inexperience in managing renewable energy

**Resolutions**

- Tax Equity Partner on SPV
- Redesigned Layout Maximizing Power Output
- Currently Bidding
- Price Competitive to Gas
- Project Retains Support of State Government
- Partnership with PNE Wind
Cherokee Wind Environmental Studies

- Spring Avian
- ABB study
- Fall Avian
- Eagle study
- Bat study
- Environmental assessment (EA)
- Section 7 – endangered species
- Archaeological / cultural studies
- Surveying / topographical
Cherokee Wind

Southwest Power Pool transmission and interconnect

- Feasibility (7-28-08) - $10,000
- Preliminary Interconnect Study (8-01-09) - $60,000
- Definitive Interconnect Study (3-31-10) - $150,000
- Facilities Study (9-30-10)
- Interconnect Agreement with SPP & OG&E (8-11-11)
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- Going forward
- Gaining knowledge / experience
- Developer diligent on Power Purchase Agreement
- Department of Defense interested in power purchase
- Financing / investor options
- COD Q4 - 2012