

Cherokee Chilocco Wind

The background of the slide is a photograph of a wind farm. In the foreground, a large white wind turbine stands prominently, its three blades extending outwards. The blades have orange and white stripes at their tips. In the distance, several other similar wind turbines are visible, scattered across a green field. The sky is a clear, pale blue.

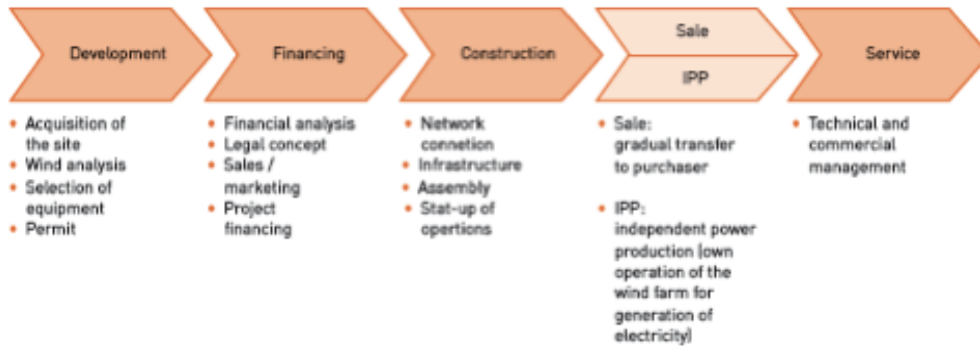
Presenter: Carol Wyatt
Cherokee Nation Businesses, Inc.

DOE Tribal Energy Program
November 15, 2011

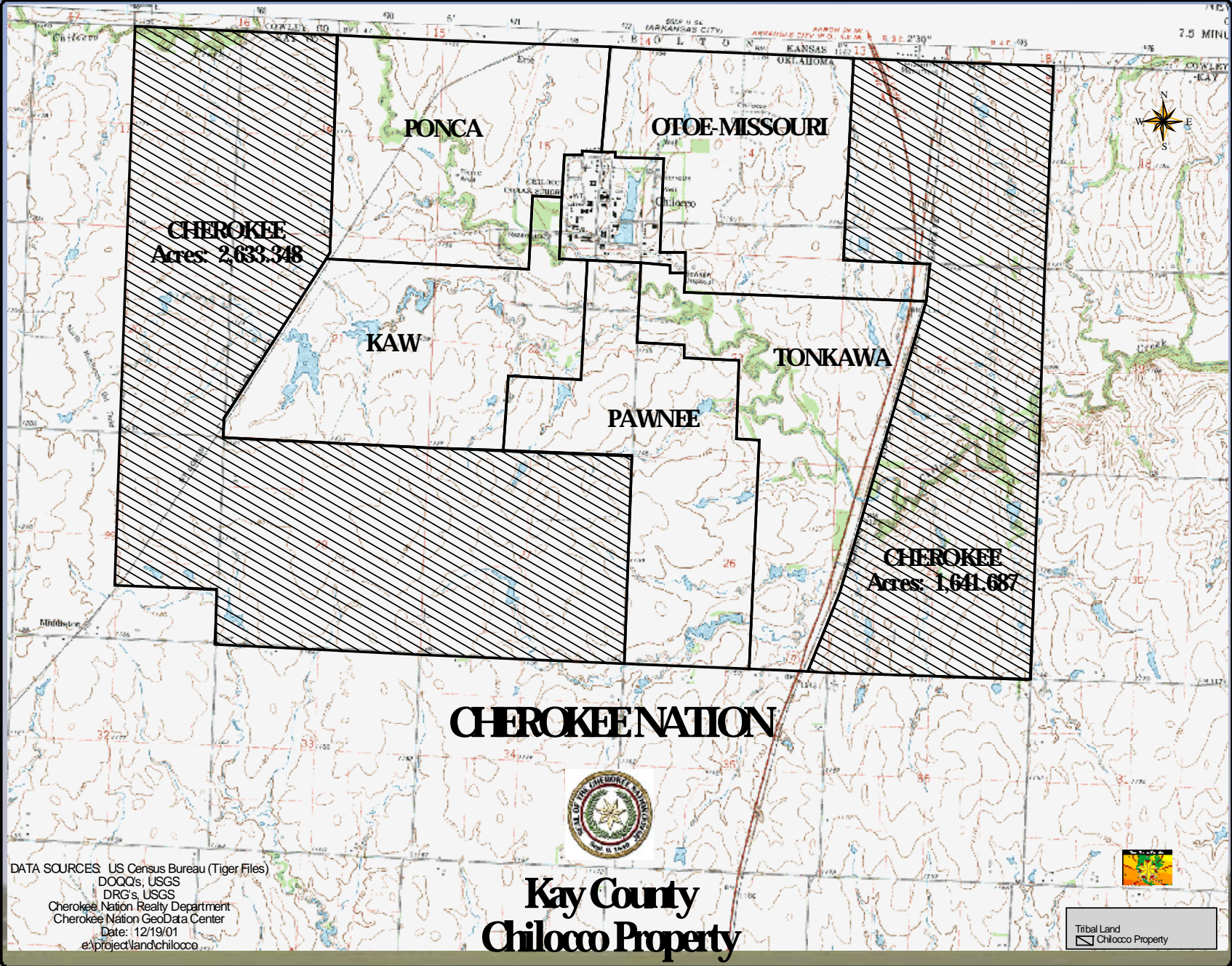
Cherokee Chilocco Wind North Central Oklahoma Location



An overview of the value chain







CHEROKEE
Acres: 2,633,348

CHEROKEE
Acres: 1,641,687

CHEROKEE NATION



Kay County Chilocco Property

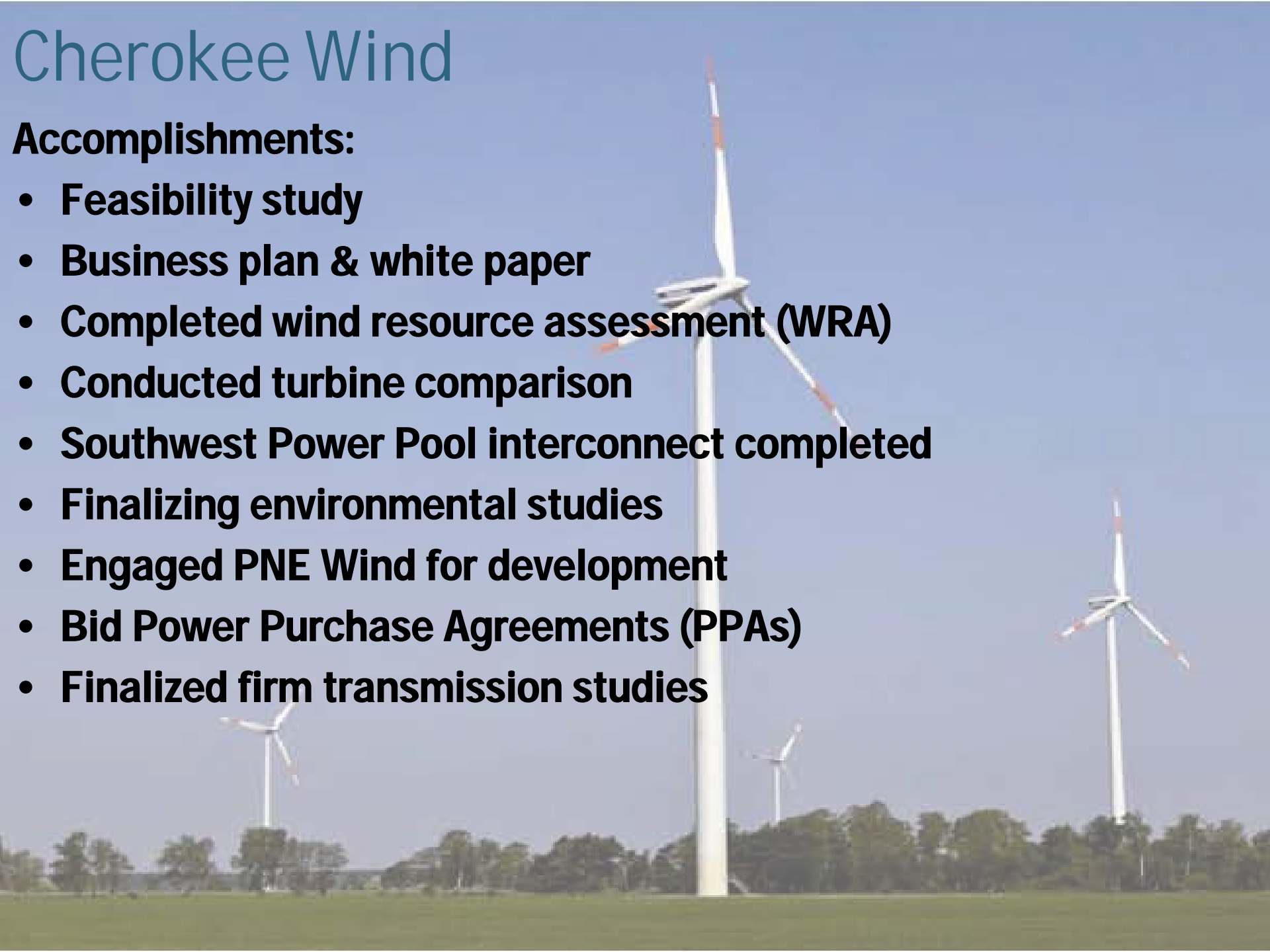
DATA SOURCES: US Census Bureau (Tiger Files)
DOQQs, USGS
DRG's, USGS
Cherokee Nation Realty Department
Cherokee Nation GeoData Center
Date: 12/19/01
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Tribal Land
Chilocco Property

Cherokee Wind

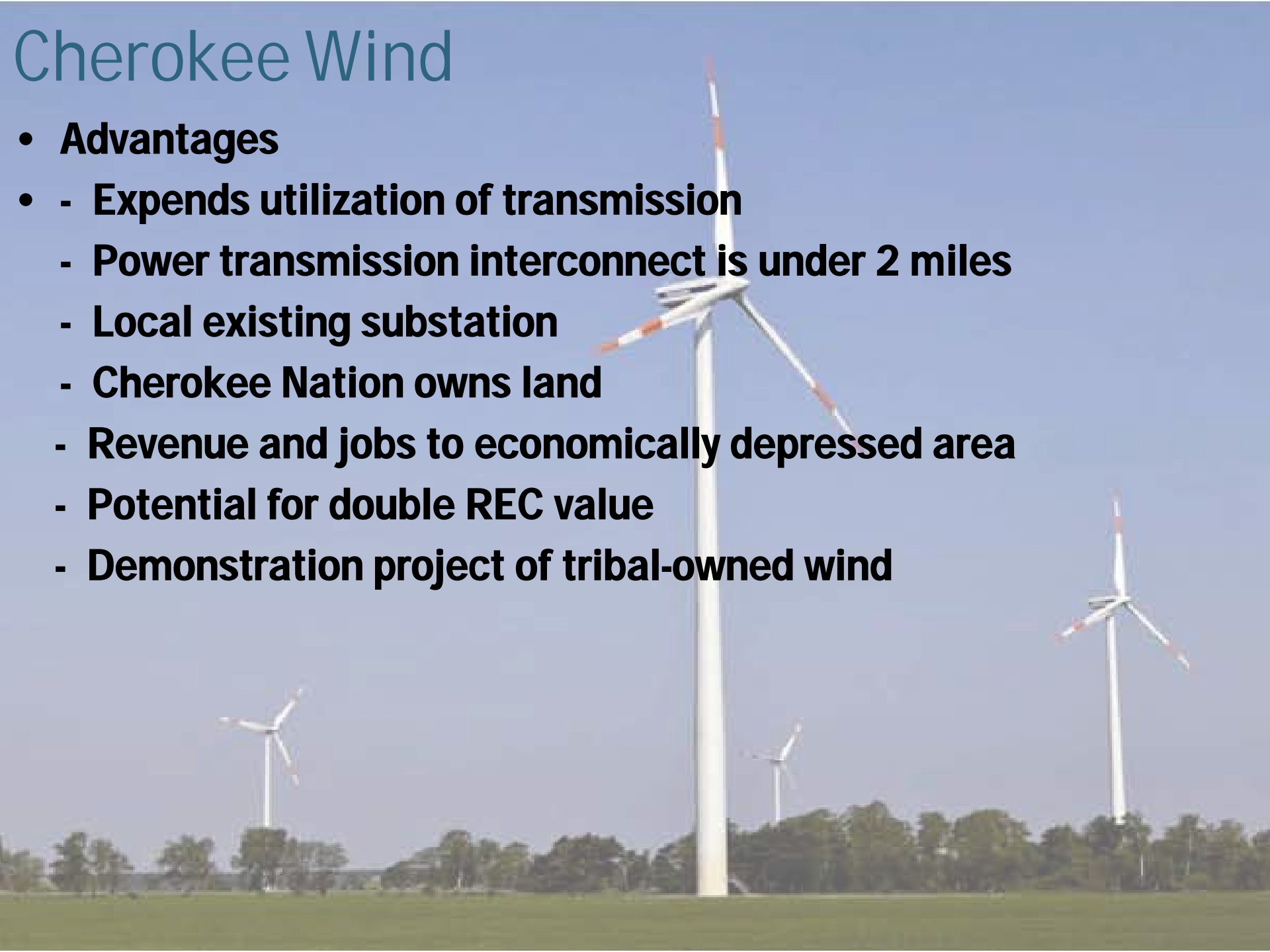
Accomplishments:

- **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**
 - **Expend 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**



Cherokee Chilocco Wind



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

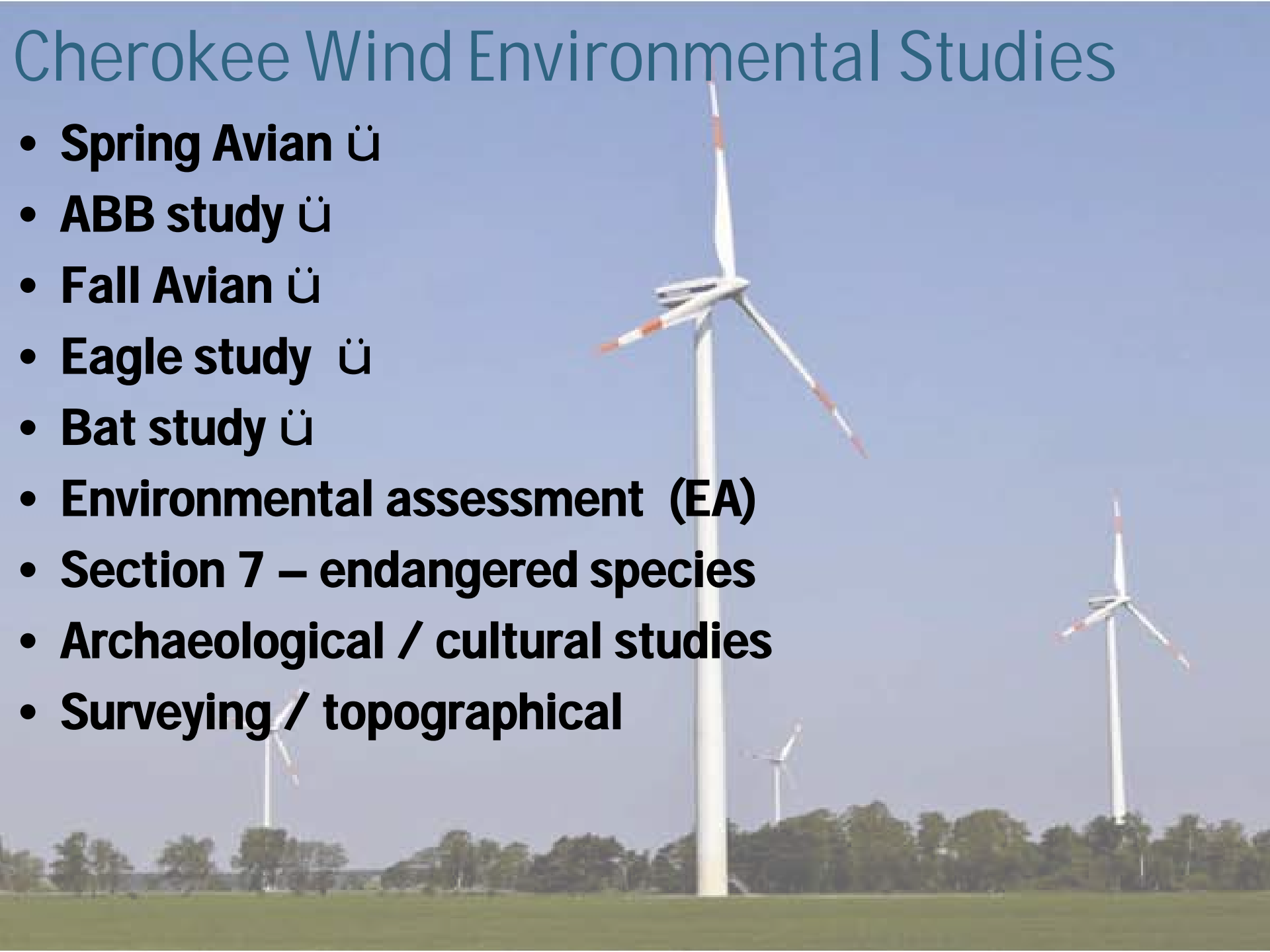
Price Competitive to Gas

Project Retains Support of State Government

Partnership with PNE Wind

Cherokee Wind Environmental Studies

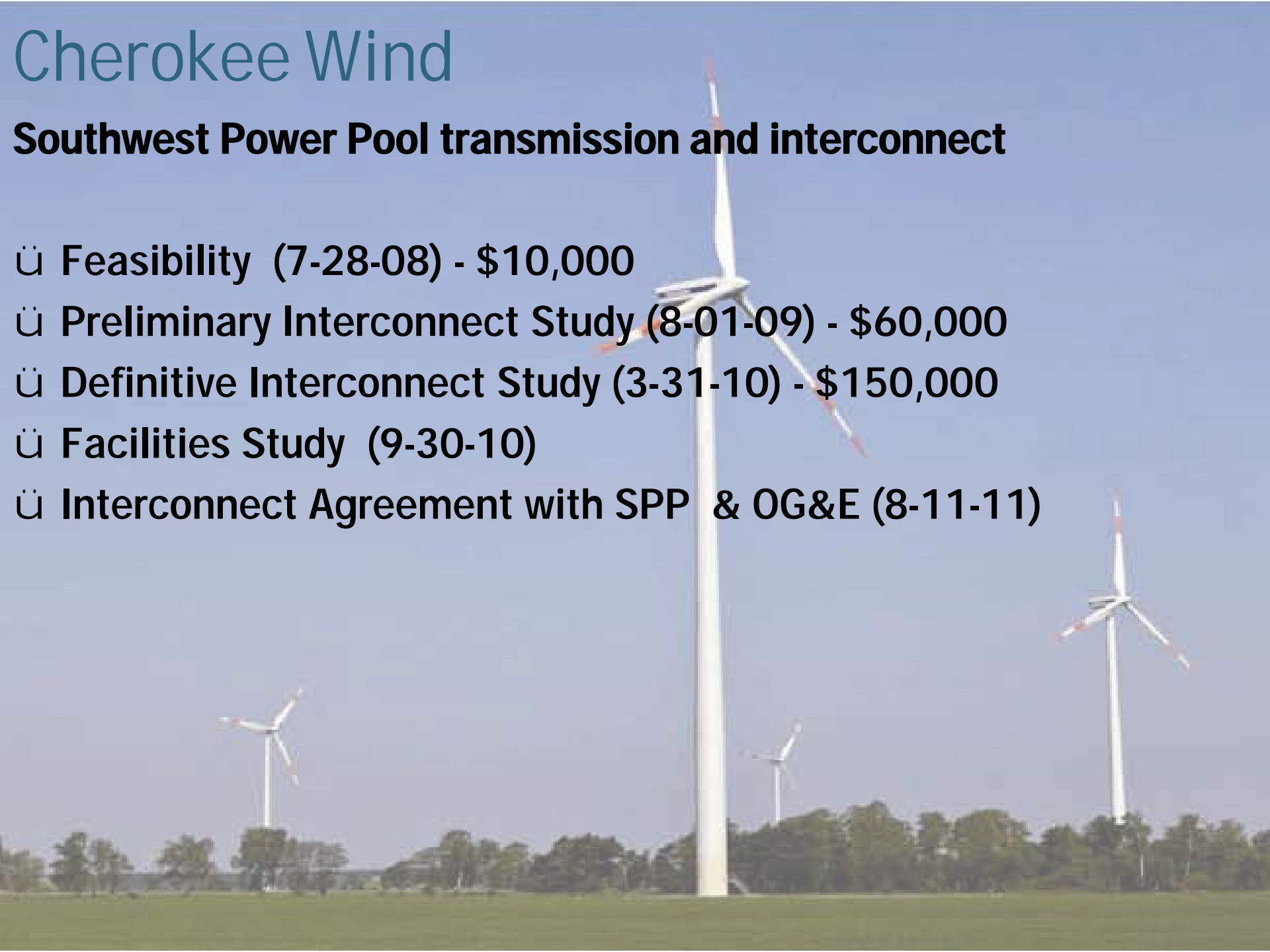
- **Spring Avian ü**
- **ABB study ü**
- **Fall Avian ü**
- **Eagle study ü**
- **Bat study ü**
- **Environmental assessment (EA)**
- **Section 7 – endangered species**
- **Archaeological / cultural studies**
- **Surveying / topographical**



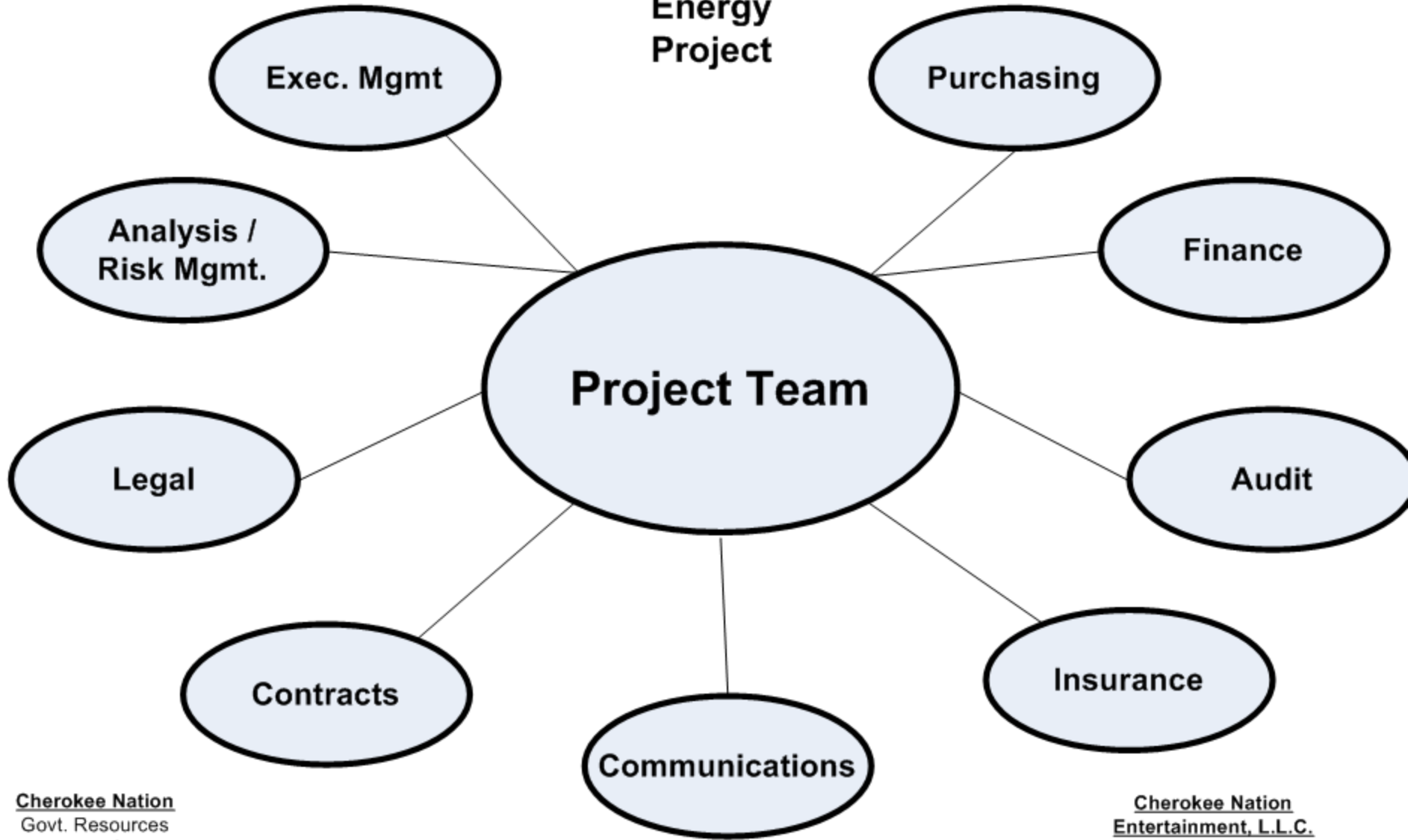
Cherokee Wind

Southwest Power Pool transmission and interconnect

- ü **Feasibility (7-28-08) - \$10,000**
- ü **Preliminary Interconnect Study (8-01-09) - \$60,000**
- ü **Definitive Interconnect Study (3-31-10) - \$150,000**
- ü **Facilities Study (9-30-10)**
- ü **Interconnect Agreement with SPP & OG&E (8-11-11)**



**Cherokee
Wind
Energy
Project**



Cherokee Nation

Govt. Resources
Real Estate Services
Natural Resources
EPA
Roads
Construction

**Cherokee Nation
Entertainment, L.L.C.**

IT
Safety
Accounts Payable
Human Resources
Education & Training

Cherokee Chilocco Wind

- **Going forward**
- **Gaining knowledge / experience**
- **Developer diligent on Power Purchase Agreement**
- **Department of Defense interested in power purchase**
- **Financing / investor options**
- **COD Q4 - 2012**



