



Renewable Energy & Transmission in Kansas

October 12, 2010



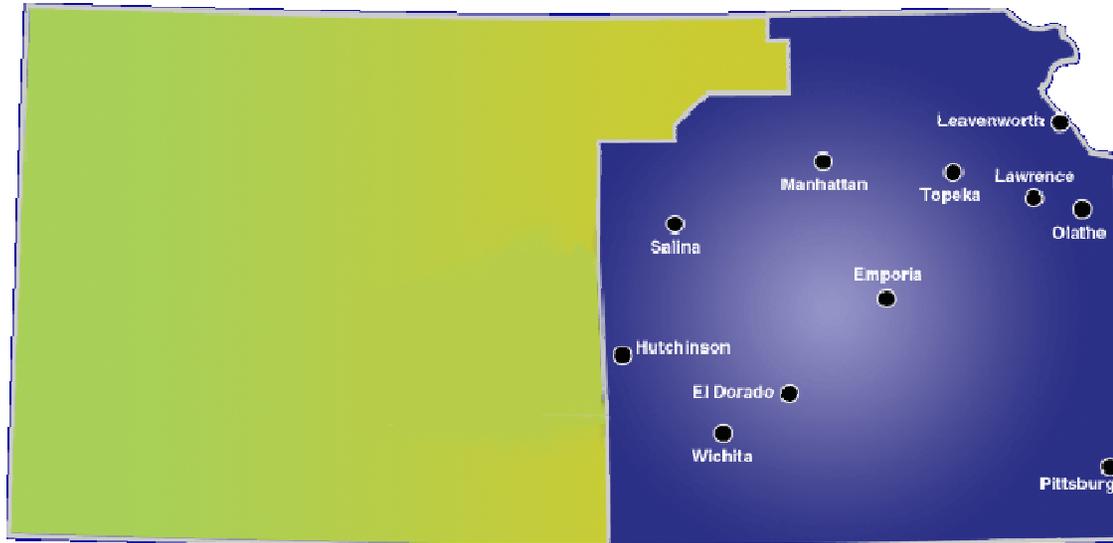


Outline

- Westar Energy Overview
- Uncertainties
- Renewable RFP Overview
- RFP Responses
- Transmission Overview
- Kansas EHV Transmission Projects



Kansas' Largest Electric Provider

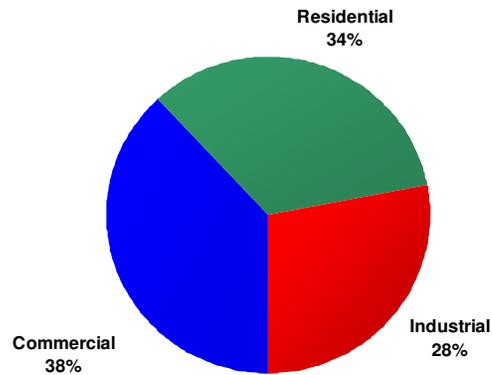


- Committed to being a pure-play, vertically integrated utility
 - Rate regulated based on cost of service
- Key operational facts
 - About 7,100 MW of available generation
 - 6,200 miles of transmission
 - 687,000 customers

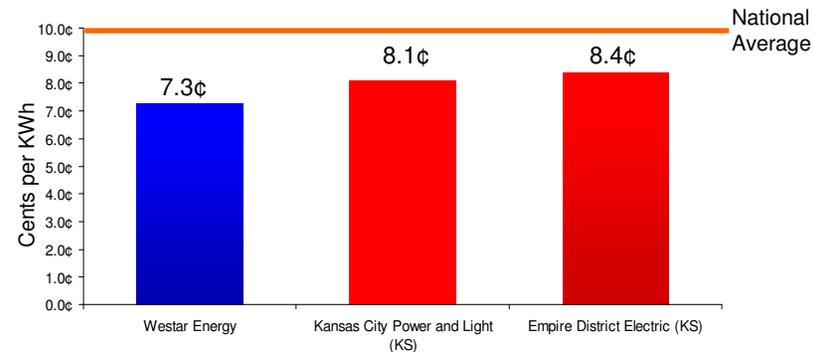


In Our Favor

Diverse Retail Sales



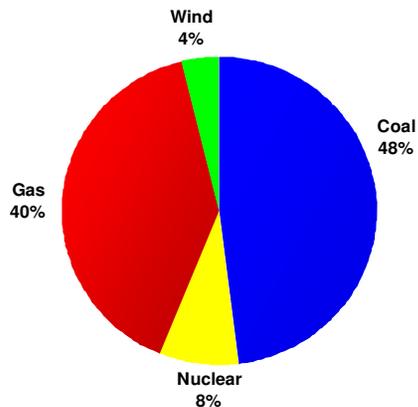
Low Rates



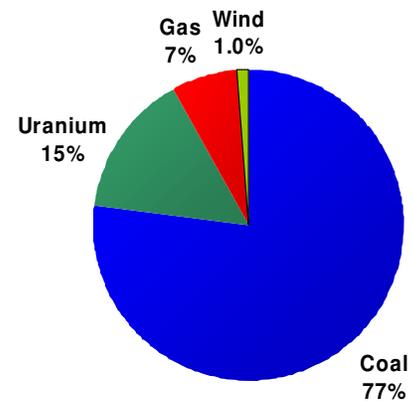
Source: Edison Electric Institute 01/01/2010

High Quality, Diverse Generating Fleet

Generation Capacity



Sources of Energy



Strategic Approach

- Embrace uncertainty rather than assume it away
 - Avoid falling prey to thinking we can predict the future
- Place a high value on flexibility
 - Create and preserve options and off ramps
 - e.g., CapEx plans with built-in flexibility—both to timing and approach
 - Avoid over committing to any single supply strategy
- Seek collaborative and constructive approaches to regulation
 - More predictability--less volatility
 - Ultimately lower prices for customers

Uncertainties create new realities



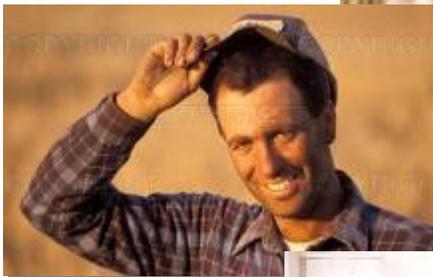
Carbon Cap & Trade



Public attitudes on traditional coal

Soaring construction costs

Future environmental regulations



Fuel costs

Transmission Constraints

Nuclear disposal



Water quality and quantity

Long-term performance of wind power



Global Economic Crisis

Frozen capital markets

Renewable RFP Overview

- Issued July 23, 2010
- Add up to 200 MW's of renewable resources with COD of Sept., 2012
- Preference for projects on a scale of
 - ≥ 50 MW if wind
 - Biomass ≥ 25 MW
 - Landfill Gas or Solar ≥ 5 MW
- Projects located in the State of Kansas
 - Prefer close proximity to Westar service area
 - SPP transmission owner's system



Renewable RFP Overview (Cont.)

- Responses were to be for a minimum 20 year Power Purchase Agreement
- Responses could include:
 - Ironwood Wind Development Site
 - Developer controlled site
 - Other renewables



Considerations



- Kansas Siting Guidelines
- Environmental concerns raised by responsible parties
- Use of Kansas suppliers, manufacturers, & contractors.
- Plans for developing local supply
- Transmission & Interconnection
- Transmission Delivery Risk

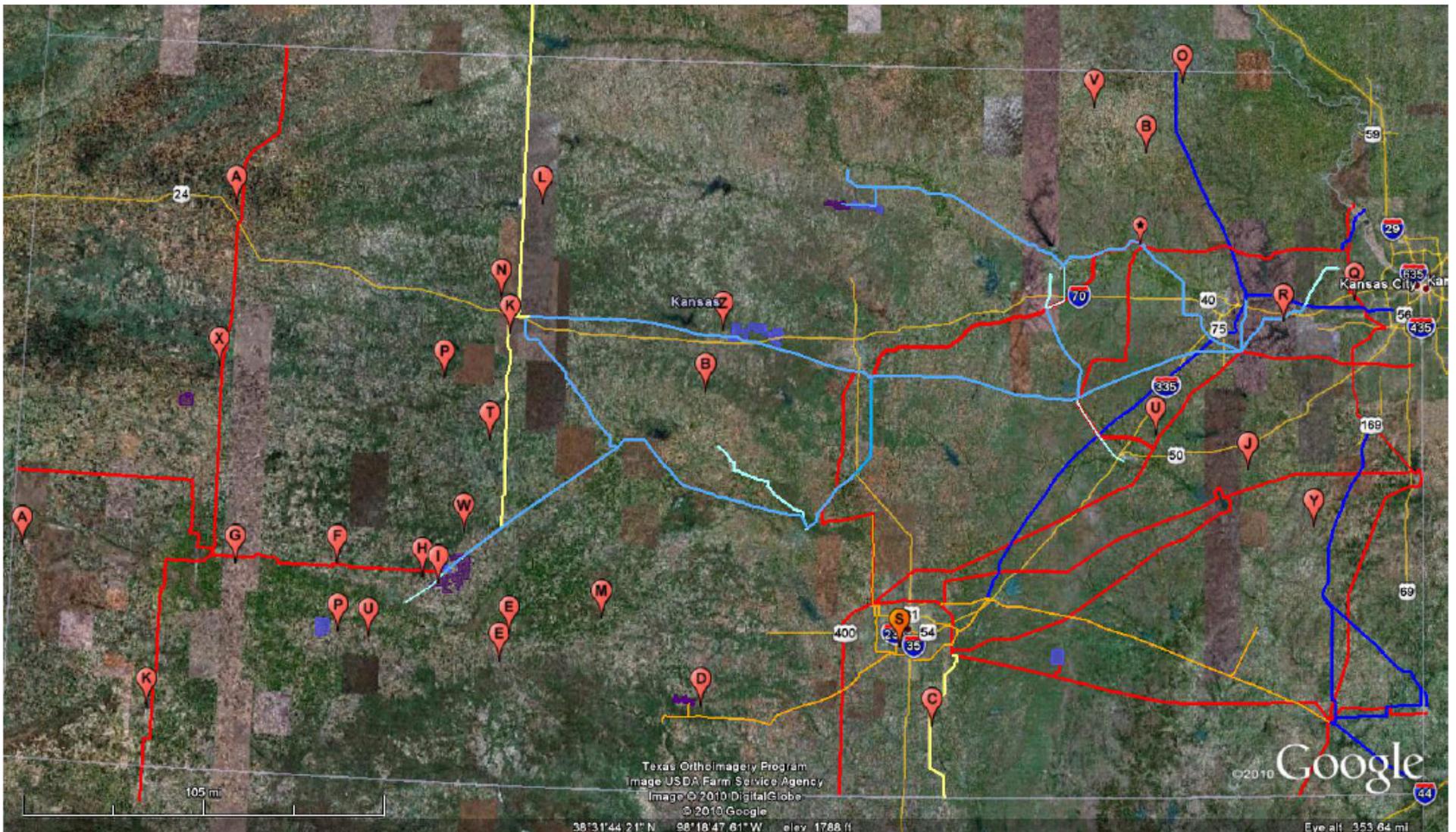




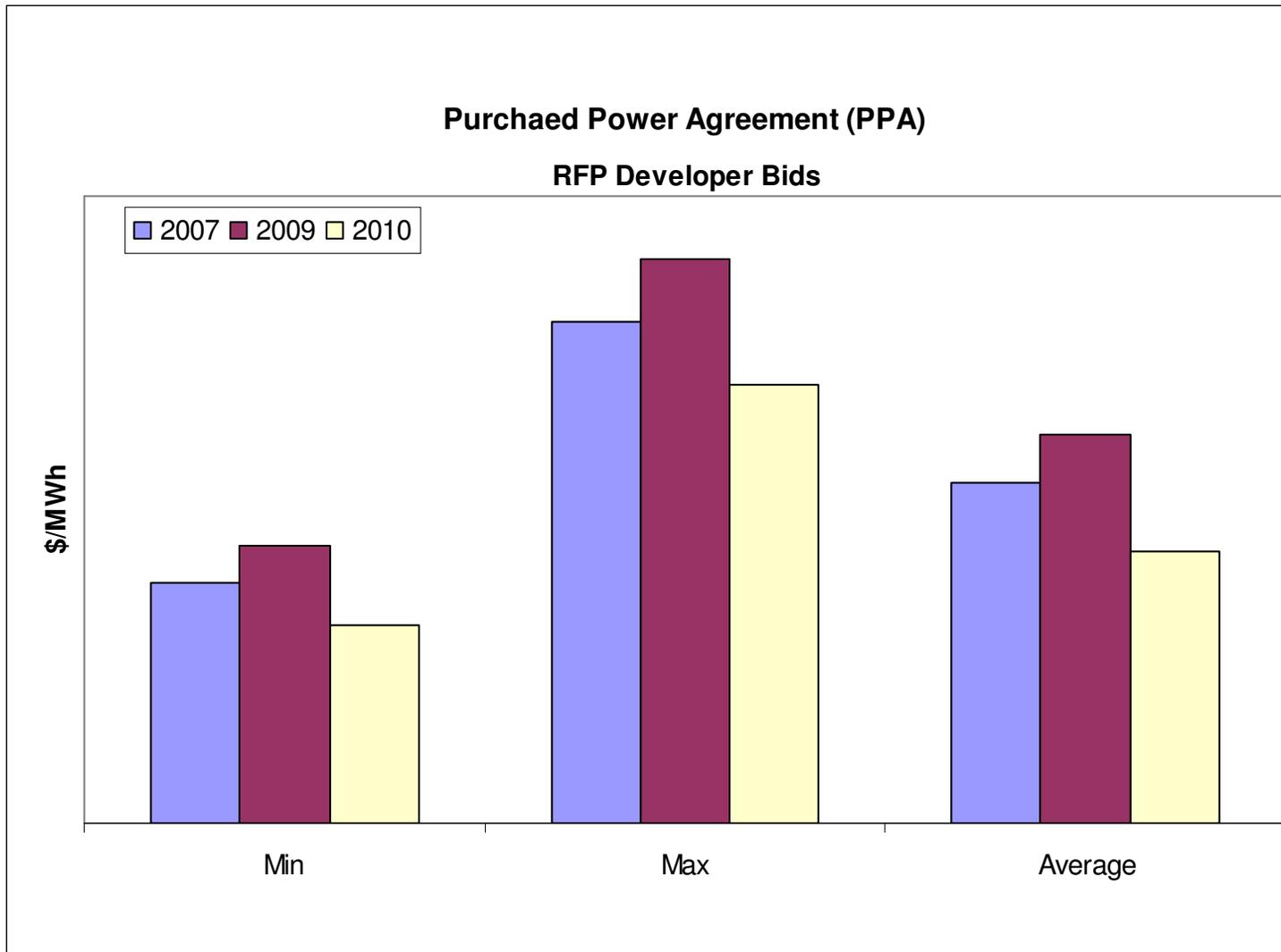
RFP Responses

- Over 50 responses
- Over 30 different developers
- 93% wind projects
- Diversified across Kansas

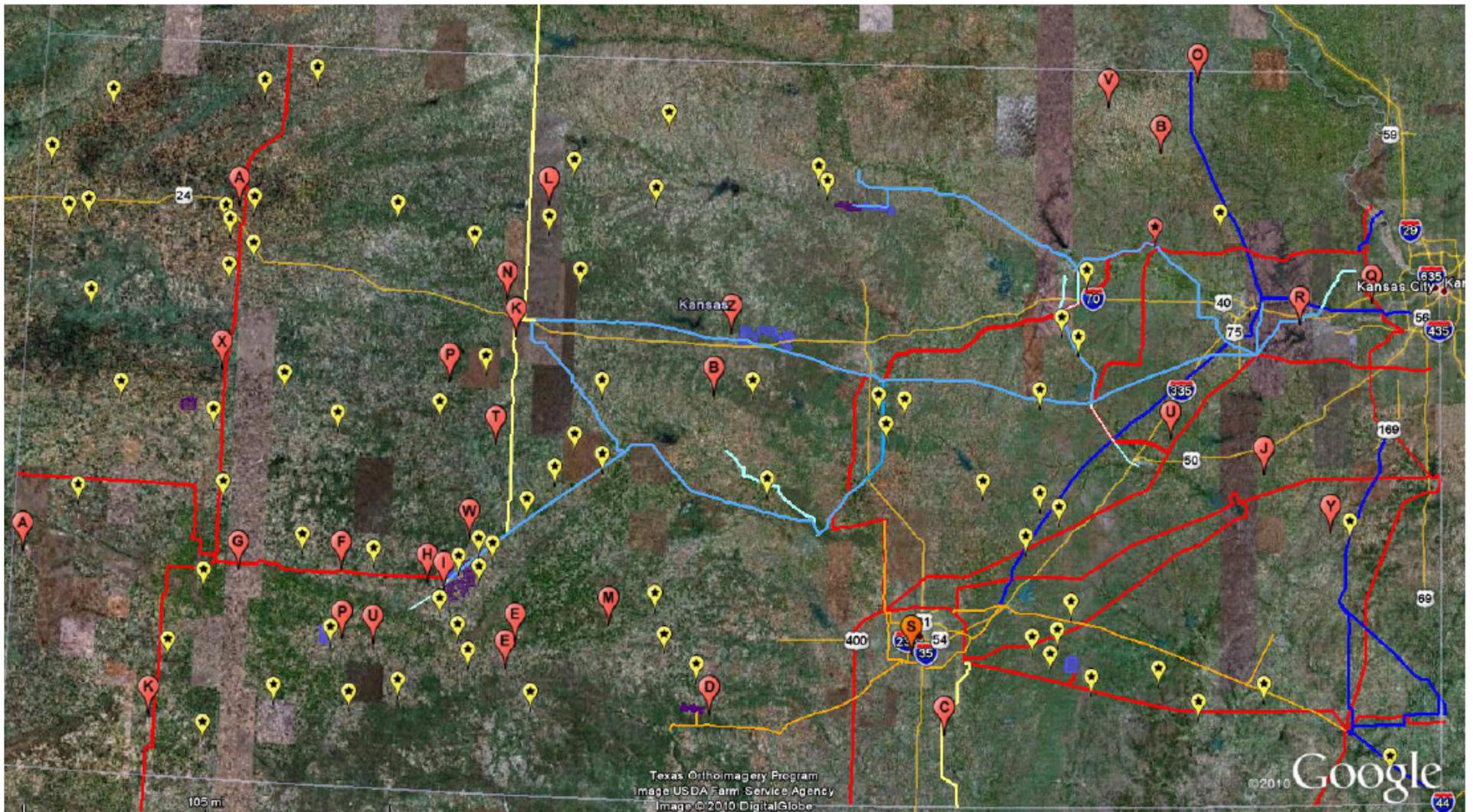
Proposed Projects

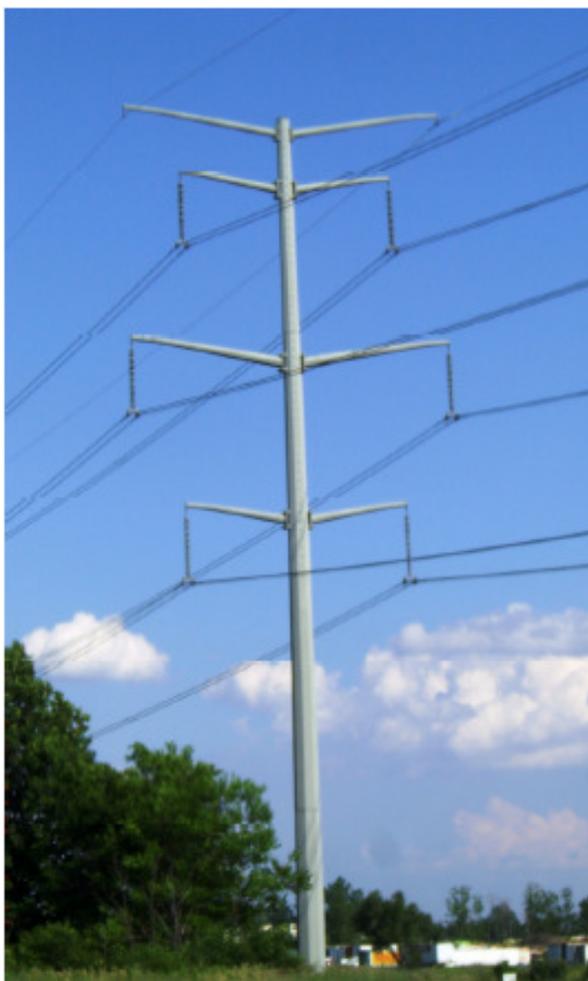


RFP Price Comparison



Kansas Wind Sites





Transmission & Wind

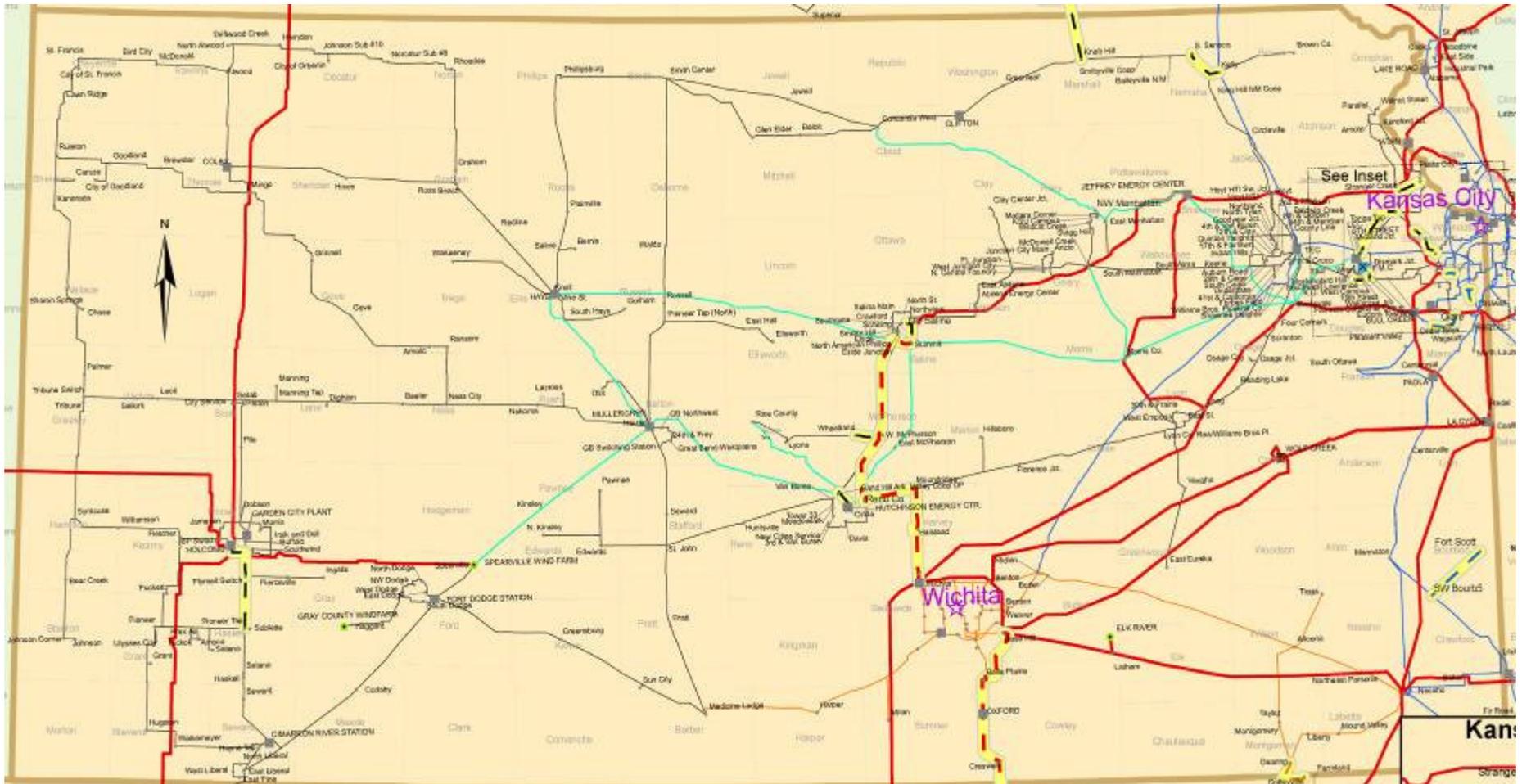


Transmission

- Very few new major transmission lines built in the last 20 – 30 years across the U.S.
- Increased electric demand over that time period has led to the need for new sources of generation
- More than 30 States have renewable energy standards requiring additional generating plants to be built
- Thus far, transmission projects have been slow to get approved and built



Kansas Transmission Lines



Transmission

- Transmission line siting has been a problem nationally
 - Not in my Back Yard (NIMBY) issues
 - Visual and ecological concerns
- Allocation of costs to benefitting parties has been slow to get resolved
 - Should cost causer pay? Or
 - Should cost be charged based upon who will benefit from the new line
- Federal incentives have helped break some of the deadlock on these projects



SPP Regional Cost Allocation Tariff

Regional “highway/byway” tariff allocations

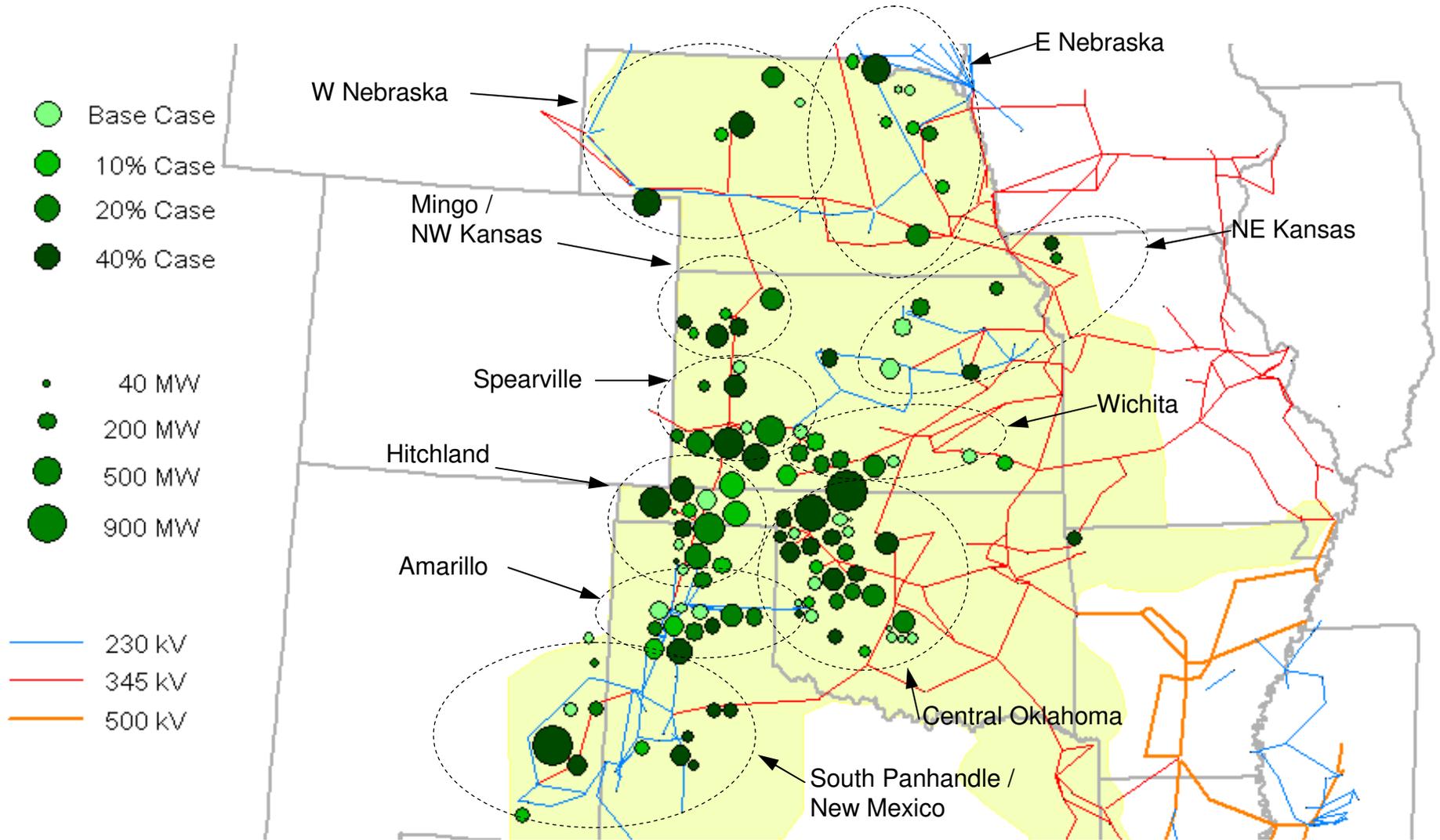
- >300 kV 100% regional
- 100 to 300 kV 1/3 to region and 2/3 to zone
- <100 kV 100% to zone

Tariff was approved this summer by FERC

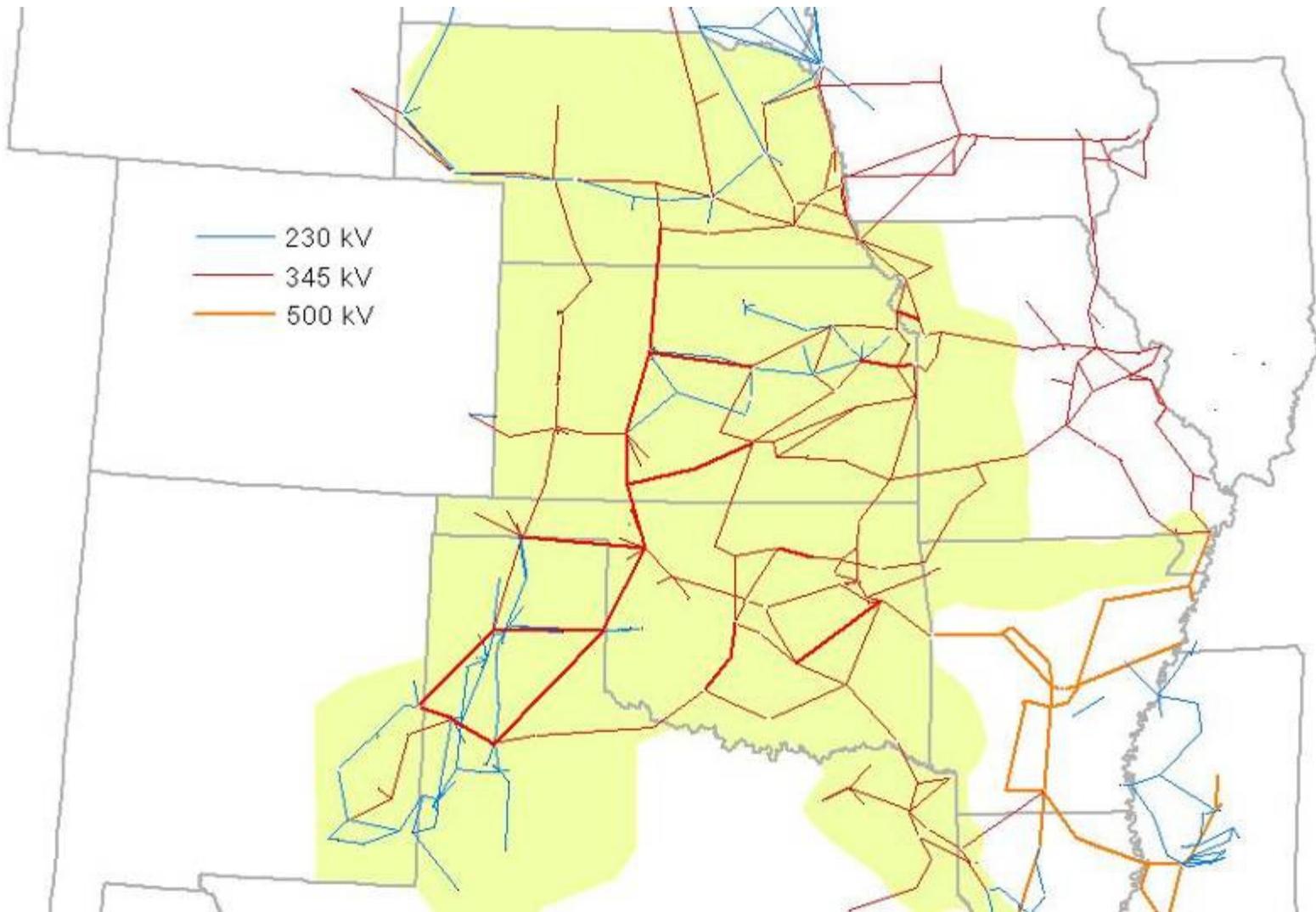
Removes significant impediment to regional transmission development



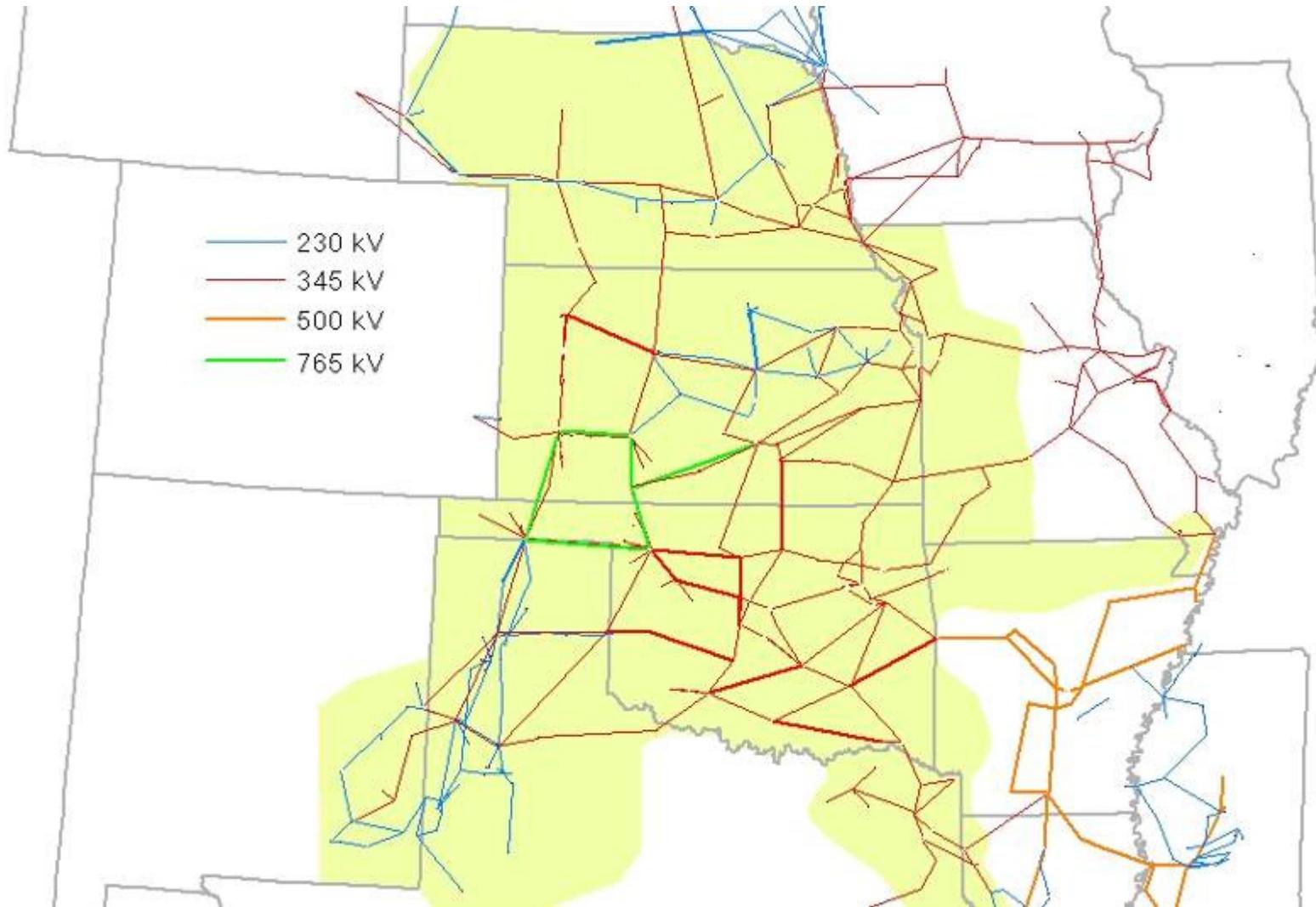
SPP Wind Integration Task Force Wind Study



Total Transmission for 10% Case

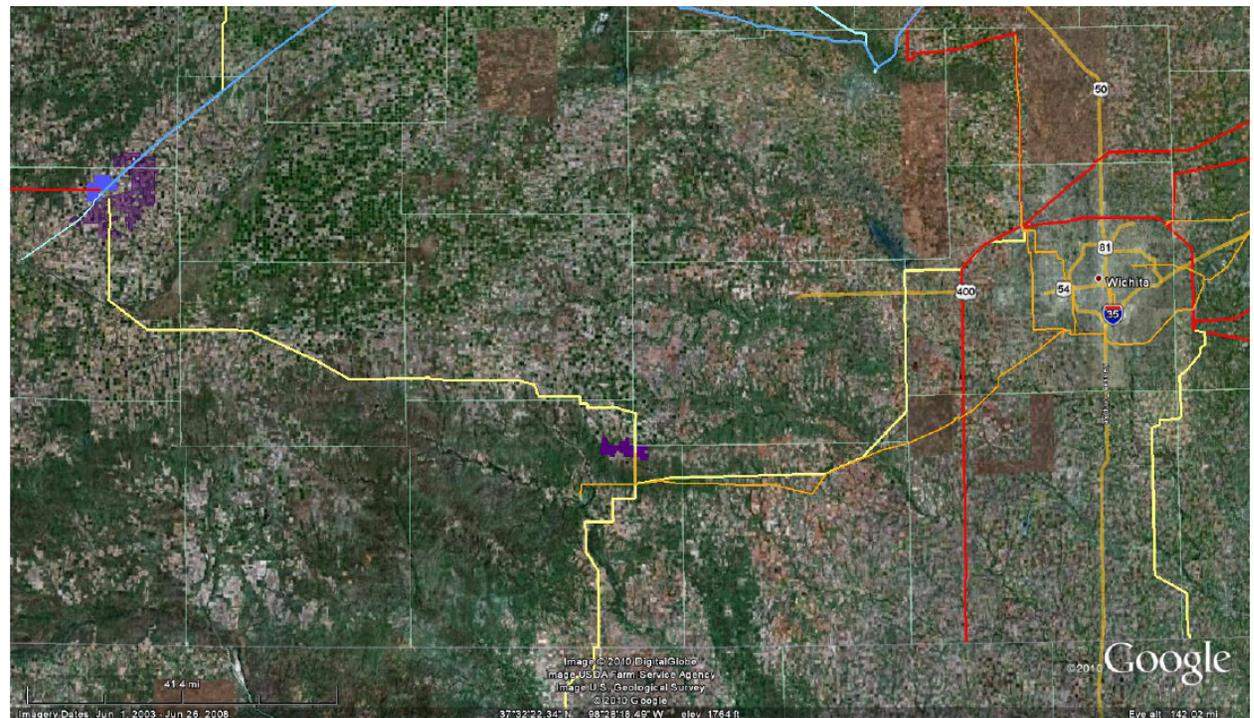


Transmission Required for 20% Case



Kansas V-Plan

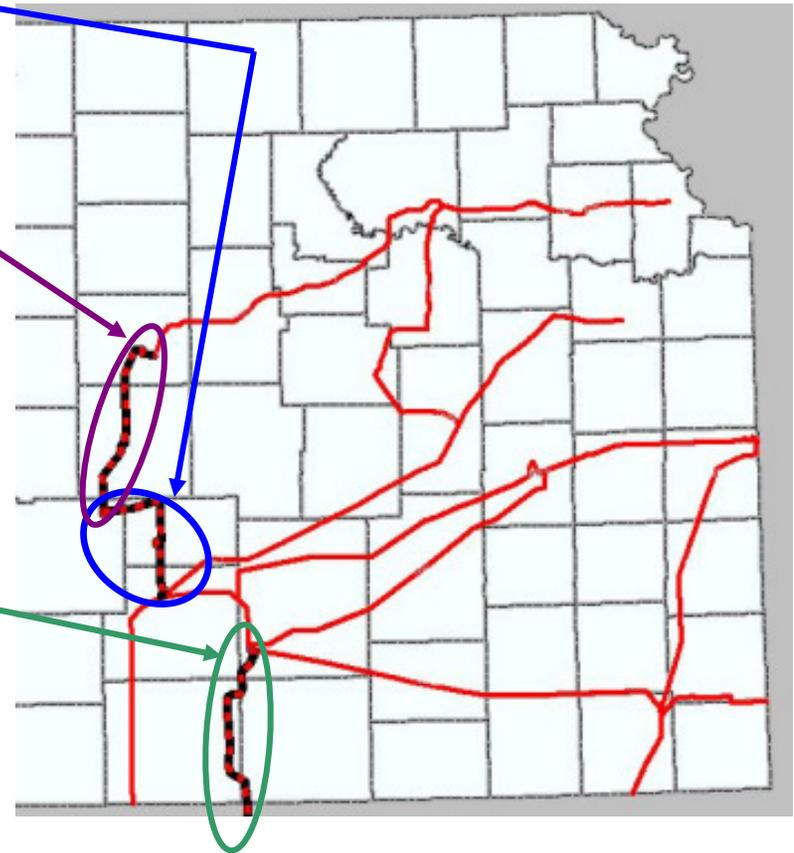
» A pathway for the expansion of renewable generation.



345kV Westar System Additions

Wichita – Salina

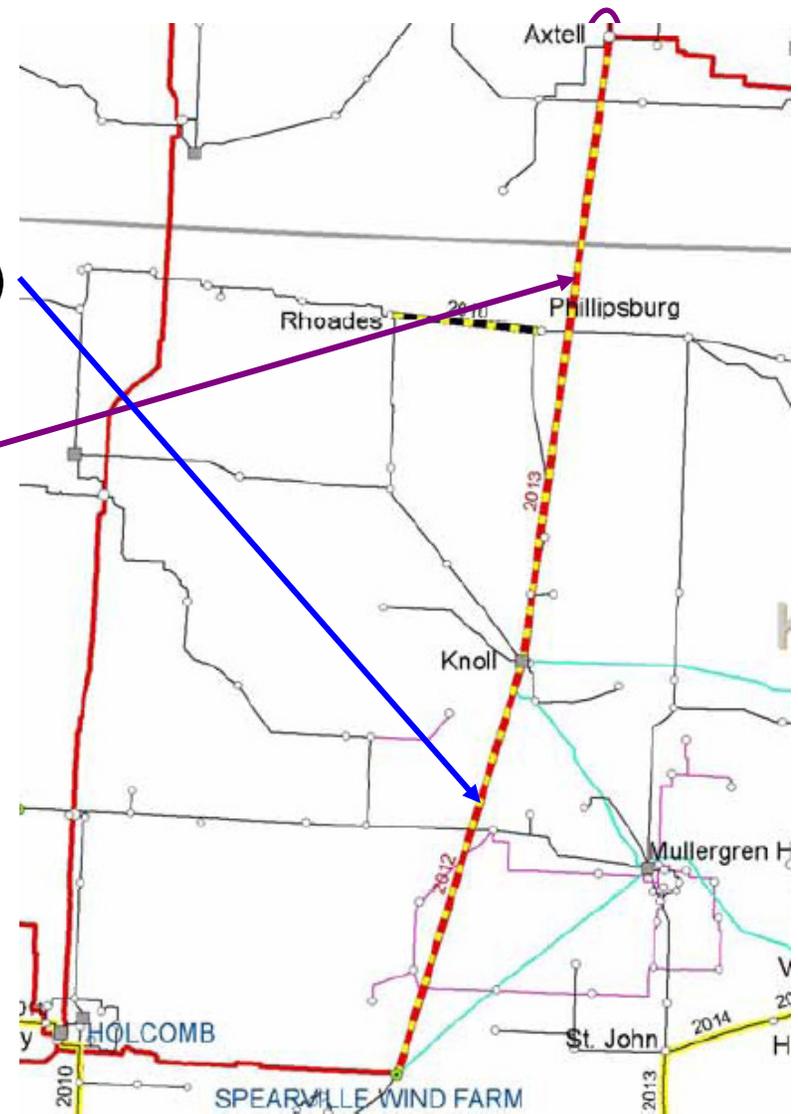
- ✓ Segment 1 Wichita-Hutchinson
 - Completed December, 2008
 - Investment ~\$150 million
- ✓ Segment 2 Hutchinson-Salina
 - Completed August, 2010
 - Investment ~\$150 million
- Rose Hill – Oklahoma
 - ☐ ROW clearing underway
 - Target completion mid year 2012
 - Investment ~\$100 million



345kV ITC System Additions

Spearville to Axtell, NE

- ❑ Segment 1 Spearville - Post Rock (Hays)
 - Planned Completion June, 2012
- ❑ Segment 2 Post Rock – Axtell, NE
 - Planned Completion December, 2012



Conclusion

- Uncertain environment – changing need, regulation, opinion
- Flexible planning
- Responsibility to customers, investors
- Environmental stewardship





Questions?



Thank You!