

Wind Energy Public Value:

Because it creates no air or water pollution, wind energy is one of the most eco-friendly forms of energy production available to us today. Wind fuel is free and infinitely renewable, and it is one of the most viable and sustainable alternative energy solutions being developed. Adding significant wind generation capacity has the potential to decrease energy cost in the long run lowering electricity bills, and increasing energy security.

UNL Extension's wind energy education programs helps landowners understand wind development contracts so economic benefits can be maximized. Direct benefits to rural communities include new jobs, land lease payments, and increased tax revenues which all have further indirect economic effects.



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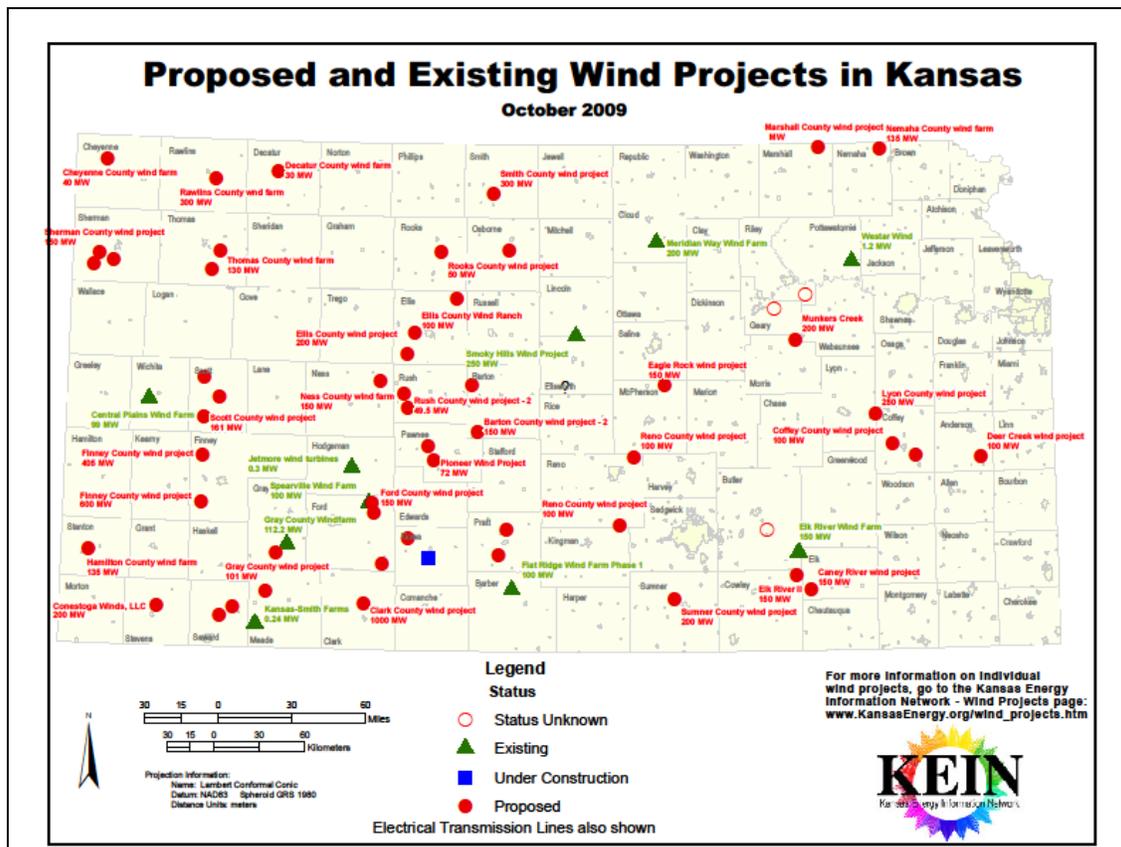
Wind Easement/Lease Contracts

- Wind Energy is a new frontier in NE
- There are huge land grabs occurring in Nebraska and the Midwest region for landowners to sign wind rights contracts

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The air above my land now has value is initially exciting for a landowner to hear. Old technology vs new in the picture! Landowners are signing wind rights options up to 10 years in Nebraska or wind lease contracts if developed, that would extend for 25 to 40 years.

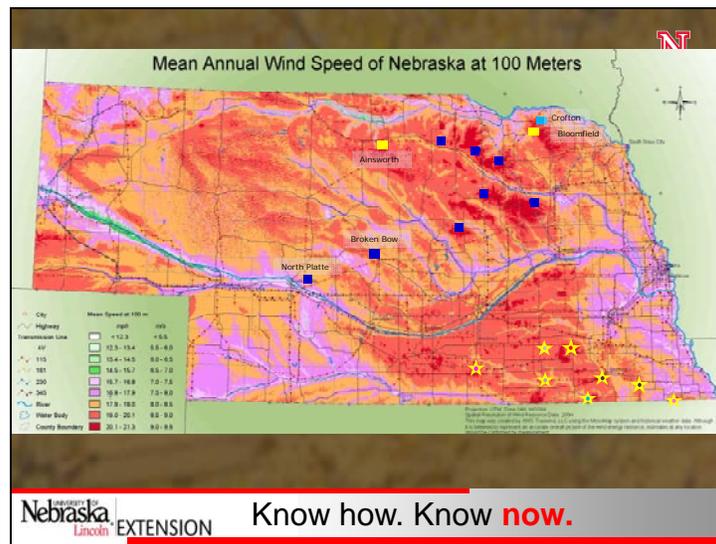


Developments in Kansas are more numerous compared to Nebraska with Wind Energy Development. Nebraska is a public power state, has some of the cheapest power in the nation and public power cannot take advantage of any state or federal wind tax credits. New legislation in Nebraska is allowing public power to partner with private developers called C-Bed projects.

The landowner with one of the largest developments in Kansas indicated he did not seek legal advice in signing a long term wind lease with a large developer. He invited his neighbors over and they signed the agreement. He said he was happy and lucky that it was a good company.

Extension's advice is landowners must seek a good wind attorney and go over the long term implications of the long term lease. Compensation is not the number one issue to look at.

Slide 4



NPPD in Nebraska is further researching 7 of 10 locations that have been determined to be of high interest to help meet the 10% renewable energy initiative by 2020. This includes sites near the communities of Verdigre, Elgin, Emerick, Brunswick, Broken Bow, Greeley, and North Platte. NPPD has erected met towers to study the wind resource near Verdigre, Elgin, Emerick and Brunswick, with two towers being erected near Broken Bow and Greeley. Measuring wind resource for at least a year or more is needed to have a wind farm developed, but also it is necessary to study the transmission effect of wind farms which as of April 1, 2009 is with the Southwest power pool. Environmental impacts and local, state and federal permits must be pursued.

Yellow stars indicate areas in Southeast Nebraska where private developers are asking landowners to sign contracts for wind rights as of November 2009. It is not comprehensive but reflects areas where this author has learned of wind related landowner meetings or offers.

The project near Humboldt, Nebraska has a project construction date of June 2010 with the power purchase agreement to OPPD in a C-Bed project. The developer was JW Prairie Wind Power LLC offices in Lawrence, KS.

Mention of a developer is not an endorsement but rather for illustration purposes. It is not uncommon for a wind developer to earn \$10,000 to \$15,000 per megawatt installed if a project is brought to financial closure.

Slide 5

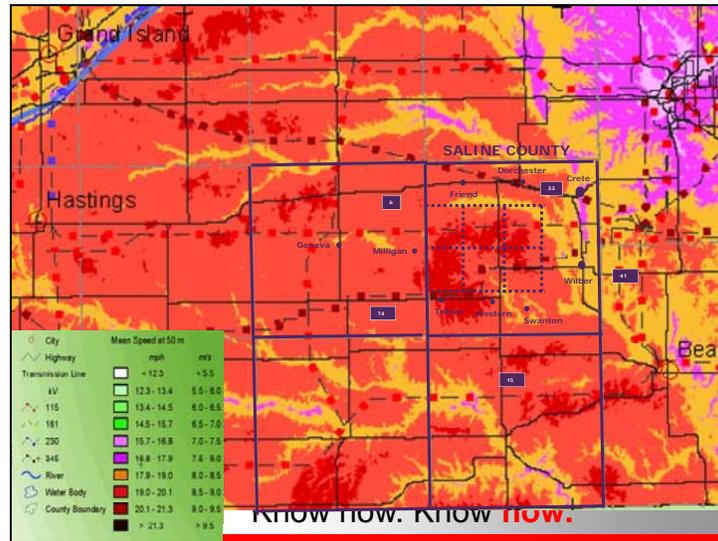
	"Current" NPPD Land Options Agreement	Proposed NPPD "Lite" Land Options Agreement
Length of Contract	10 years	10 years
Land Owner Agreements	Engage consultant to acquire agreements on behalf of NPPD	Landowners work together with NPPD's help
Payment to Land Owner	Years 1-5 \$3 / acre or \$1000 / parcel Years 6-10 \$5 / acre or \$1667 / parcel	Years 1-3 \$0 Years 4-5 \$3/acre or \$1000/parcel Years 6-10 \$5/acre or \$1667/parcel
MET Tower / Site	NPPD purchases and installs Met Tower	NPPD purchases and installs Met Tower

NPPD has offered wind option leases in Nebraska. Approximately 400 wind option leases have been signed by landowners in Nebraska with NPPD. NPPD indicates by doing this landowners:

- Keeps landowner options open.
 - C-BED or Private Project
 - NPPD Project
- Landowners are not bound to a long-term agreement at this time. Long-term agreement will be developed to incorporate current industry practices at time agreement is generated for the benefit of landowner (payment and terms and conditions) rather than generating speculated terms at this time.
- Landowners have time to organize and prepare for negotiations with developer.
- Increases probability of successful project.
 - Multiple developers can bid on project site

After NPPD selects a developer through a competitive bid process, NPPD will bring successful developer and landowners together. NPPD's goal is to ensure landowners are treated fairly while working to get the lowest cost renewable energy for our customers.

Slide 6



Projection: UTM, Zone 14N, WGS84

Spatial Resolution of Wind Resource Data: 200m

This map was created by AWS Truewind, LLC using the MesoMap system and historical weather data. Although it is believed to represent an accurate overall picture of the wind energy resource, estimates at any location should be confirmed by measurement.

Problems may arise because of errors in the meteorological and geophysical data used in creating the maps or because of limitations on the computer models. TrueWind Solutions accepts no liability for the accuracy of the maps.

The transmission line information was obtained by AWS Truewind from the Platts POWERmap Transmission Line Layer. TrueWind Solutions does not warrant the accuracy of the transmission line information.

Source: POWERmap, powermap.platts.com

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Wind power is a measure of the energy available in the wind. It is a function of the cube (third power) of the wind speed. If the wind speed is doubled, power in the wind increases by a factor of eight. This relationship means that small differences in wind speed lead to large differences in power which is related to wind energy profitability.

Saline County has a large area of projected wind resource (deep red color) between a 345KV transmission line and an 115KV line that originates at the Sheldon Coal Plant near Hallam. This is a 225MW plant. The projected transmission ability is 400MW for wind energy. The developer RES-America's transmission study with the SPP is due February 10, 2010. They have signed wind rights with approximately 63 landowners and 18,000 acres. A large block of land remains available for wind development with high landowner interest. A few "dark red" areas show up in Thayer, Jefferson and Gage counties. A C-bed wind farm proposal is occurring in Thayer County.

Slide 7



250 landowners in Saline County listen to wind attorney, Bradley Haight, from Denver Colorado at Saline Center Lodge February 2009. When landowners work together as a group with legal counsel, chances of a wind project increase. Individually projected project odds are 10 to 15%.

After landowners in Saline County were approached by two out-of-state companies in July of 2008, they asked Extension for further education. I partnered with UNL Educator, John Hay, and area landowners and assisted in the development, election and organization of the Saline County Wind Association in November and serve as a liaison.

A bus tour to the Horizon 200 megawatt wind farm in Concordia, KS reached 85 landowners. By laying out the pro's and con's at the educational meetings it became evident there was a large majority of landowner acceptance of a potential wind farm project. Landowners joined the Saline County Wind Association and hired an attorney by pooling their money with a small membership fee. There are 273 members representing 66,000 acres in the Saline County Wind Association. The main message was landowners must work together. It is important to note local landowners selected a developer, hired an attorney and read contract terms, not Extension.

IMPACTS:

Just a \$1.00 per acre increase with a utility scale negotiated wind contract on 20,000 acres is \$200,000 in additional income to landowners in 10 years during an option phase. Enhancing the gross revenue definition, increasing wind turbine royalties \$500 per name plate capacity and adding a consumer price index escalation clause in utility scale wind contracts is worth 10 million dollars over the life of the contract to area landowners. Redefining gross revenue clauses increase landowner revenues as carbon credits increase in value. There are numerous other benefits to landowner negotiations including landowner indemnification, hunting and decommissioning issues.

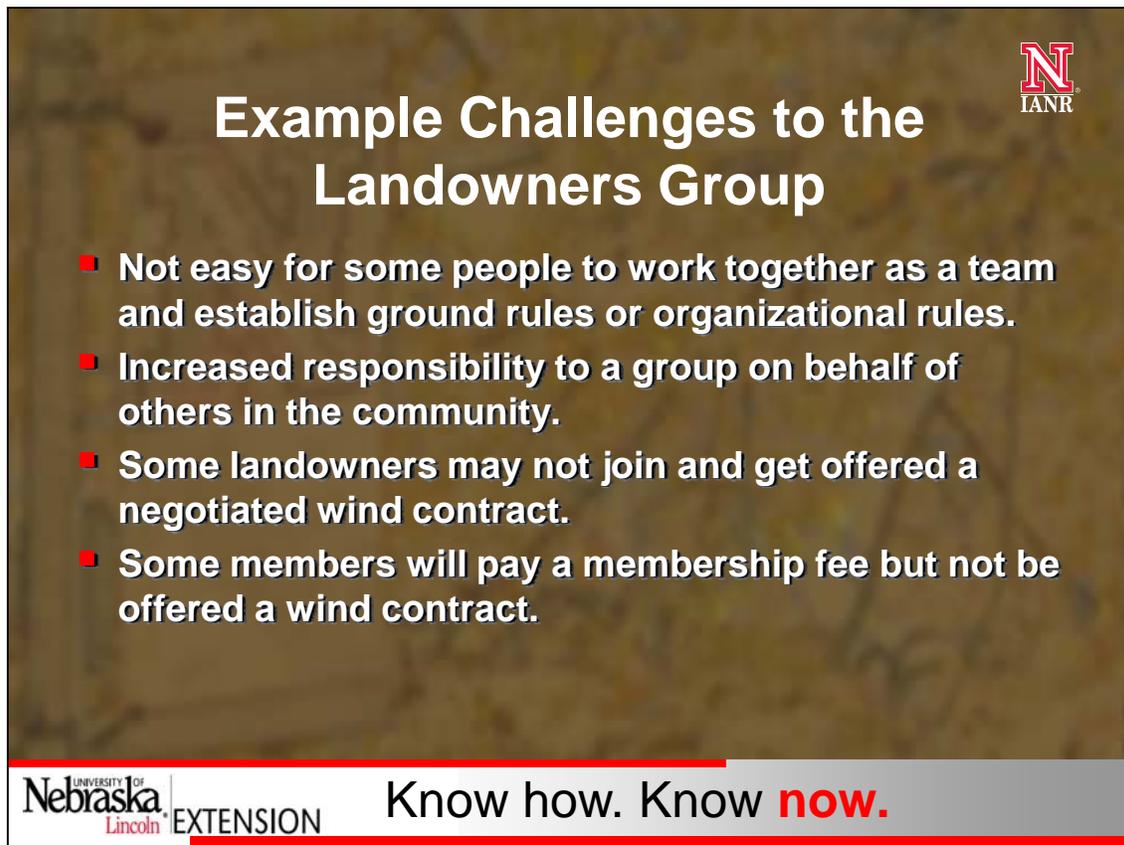
Example Pro's to Forming a Landowners Group

- As landowner education increases, working together increases and project chances increase.
- Landowners pool money for collective bargaining and legal counsel can be hired.
- Landowners are not “picked off” one at a time.
- Long list of contract issues that are negotiated including landowner indemnification issues, easement, crop damage, insurance, decommissioning issues and bond, liability cap, project milestones, project revenue structure, gross revenue definition, hunting issues, favored nations clause, confidentiality and community payment definitions (to name a few).
- Less “Checkerboarding”

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The Value of forming a landowners group for wind energy projects. For more information go the Extension website in Saline County at:

<http://saline.unl.edu/windturbinedevelopment>



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Example Challenges to the Landowners Group

- Not easy for some people to work together as a team and establish ground rules or organizational rules.
- Increased responsibility to a group on behalf of others in the community.
- Some landowners may not join and get offered a negotiated wind contract.
- Some members will pay a membership fee but not be offered a wind contract.

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Sometimes you just have to admit there will always be “free loaders” in society and you can’t do anything about that. The Saline County Wind Association will continue to look at proposals outside of the Phase I target area.



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Example Benefits of Landowner Groups to Developers

- **Creates large block of land that enhances the ability of a project.**
- **Negotiation and signing process is easier and more economical.**

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Developers need to utilize landowner groups because certain steps can be easier.

Wind Development Community Payment Concept

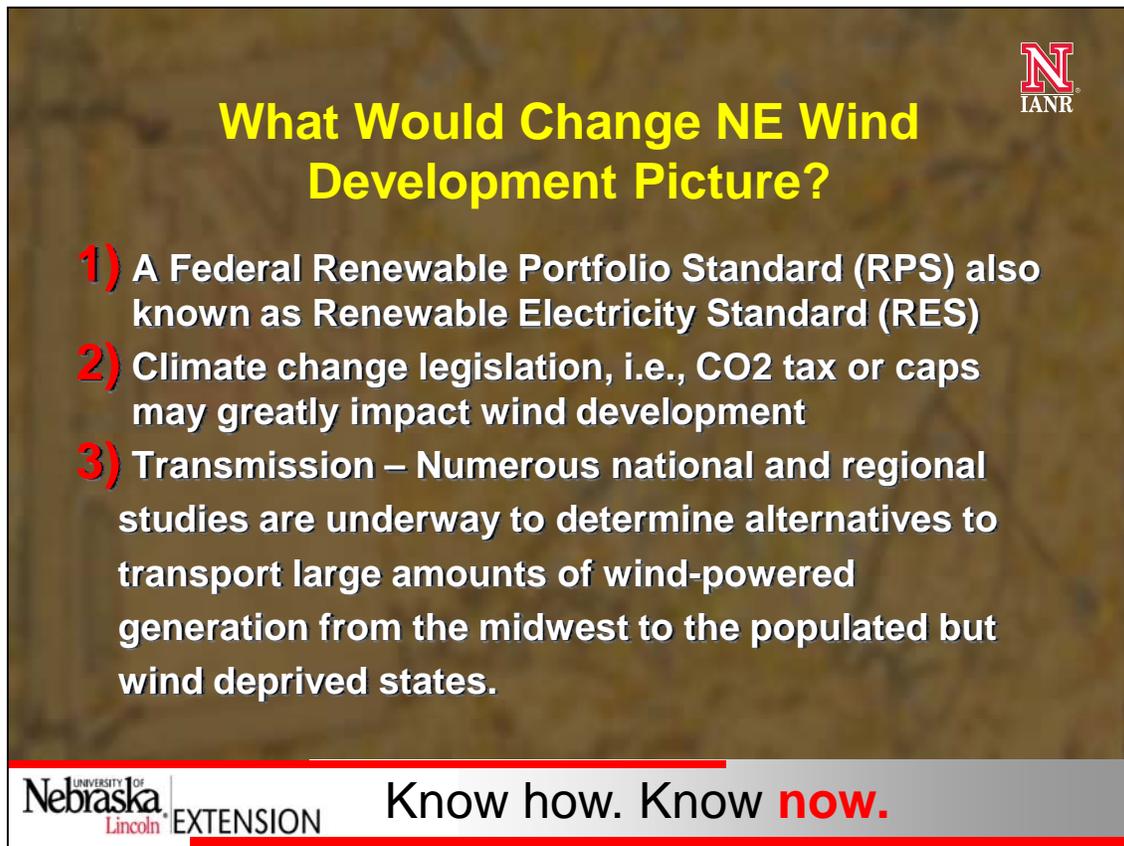
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Engineers will site commercial size wind turbines to be as efficient as possible. They need to avoid turbulence between each other and developers have in house setback standards. There are local zoning setbacks to consider also. Developers want to avoid future lawsuits on shadow flicker and noise near residences.

In this photo landowners who own the yellow colored tracts signed wind contracts. The landowners with the blue tracts did not sign on. Upper left corner, all 4 yellow parcels are eligible for a community payment on a per acre basis because on the parcel where the turbine was sited, a 700 yard zone impacts three other properties. This structure is negotiable with developers including what percentage of the farm energy profit goes to a per acre community payment.

In the middle turbine layout, one parcel in the community payment zone did not sign a contract, thus no yearly payment to that person. In the lower right, is the example where a landowner had wind rights signed, the line did not cross the property line, so no community payment there.

For property owners where turbines are sited, there is an annual turbine payment AND community payment each year as long as the commercial wind farm is operational.

The slide features a dark, textured background. In the top right corner, there is a logo consisting of a red 'N' above the letters 'IANR'. The main title is centered in yellow text. Below the title, there is a list of three items, each starting with a red number. At the bottom of the slide, there is a red horizontal bar containing the University of Nebraska Lincoln Extension logo and the slogan 'Know how. Know now.'

What Would Change NE Wind Development Picture?

- 1) A Federal Renewable Portfolio Standard (RPS) also known as Renewable Electricity Standard (RES)**
- 2) Climate change legislation, i.e., CO2 tax or caps may greatly impact wind development**
- 3) Transmission – Numerous national and regional studies are underway to determine alternatives to transport large amounts of wind-powered generation from the midwest to the populated but wind deprived states.**

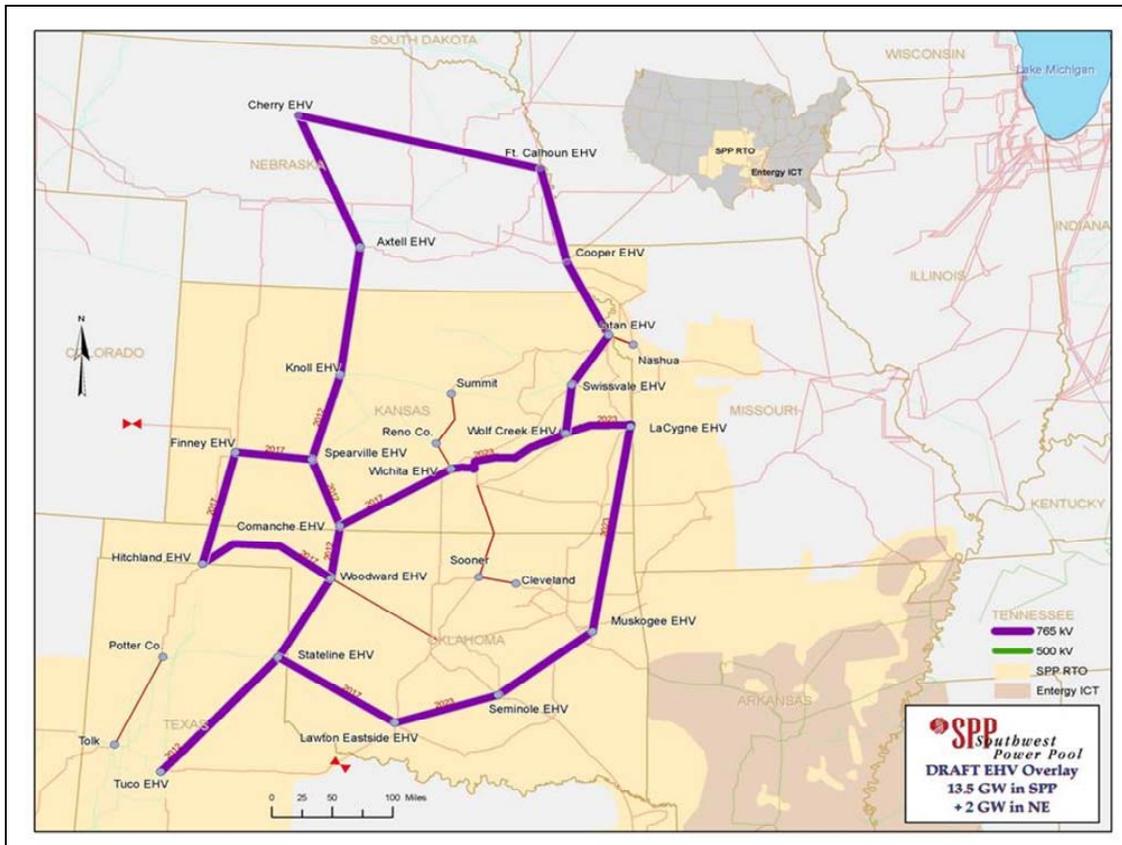
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Funding for Extra High Voltage (EHV) grid transmission is huge by utility standards \$100 Billion + \$30 Billion, but relatively small by bailout or stimulus standards.

Private vs. Government Funding - Private funding may be difficult as credit is tight. Investors will require a profit resulting delayed availability and expensive cost adders to renewable energy delivered from the midwest. (Quote from Dave Rich, NPPD)

Slide 13



Example of transmission line expansion plans in the Midwest.



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LB 568 – Establishes parameters for wind energy easements and contracts between wind developers and landowners.

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LB568 gives landowners *some* base protection from a badly written wind lease but is no way any substitute for good legal counsel. Never sign a wind lease contract without strong legal counsel and understanding the consequences.

Three wind energy bills were passed in the 2009 NE legislature. LB568, 561 and LB436.



LB 568 Summary

- NE wind agreements shall not exceed 40 years.
- Wind agreements will terminate if development of a wind energy system does not occur in 10 years. Parties can mutually extend the development term.
- Certain items in a wind lease is to be recorded with the register of deeds of the county.
- A landowner must explicitly reserve or waive these rights in a wind lease: mineral exploration and development, hunting and fishing rights, and water rights.

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LB568 limits the duration of wind agreements to 40 years. Contracts will terminate if development has not started within 10 years, although parties can mutually agree to extend their arrangements.

The bill requires that leases include descriptions of intended developments for a property and plans for decommissioning wind turbines. In addition, the bill mandates that wind rights not be separated from the land from which the wind benefits are derived.



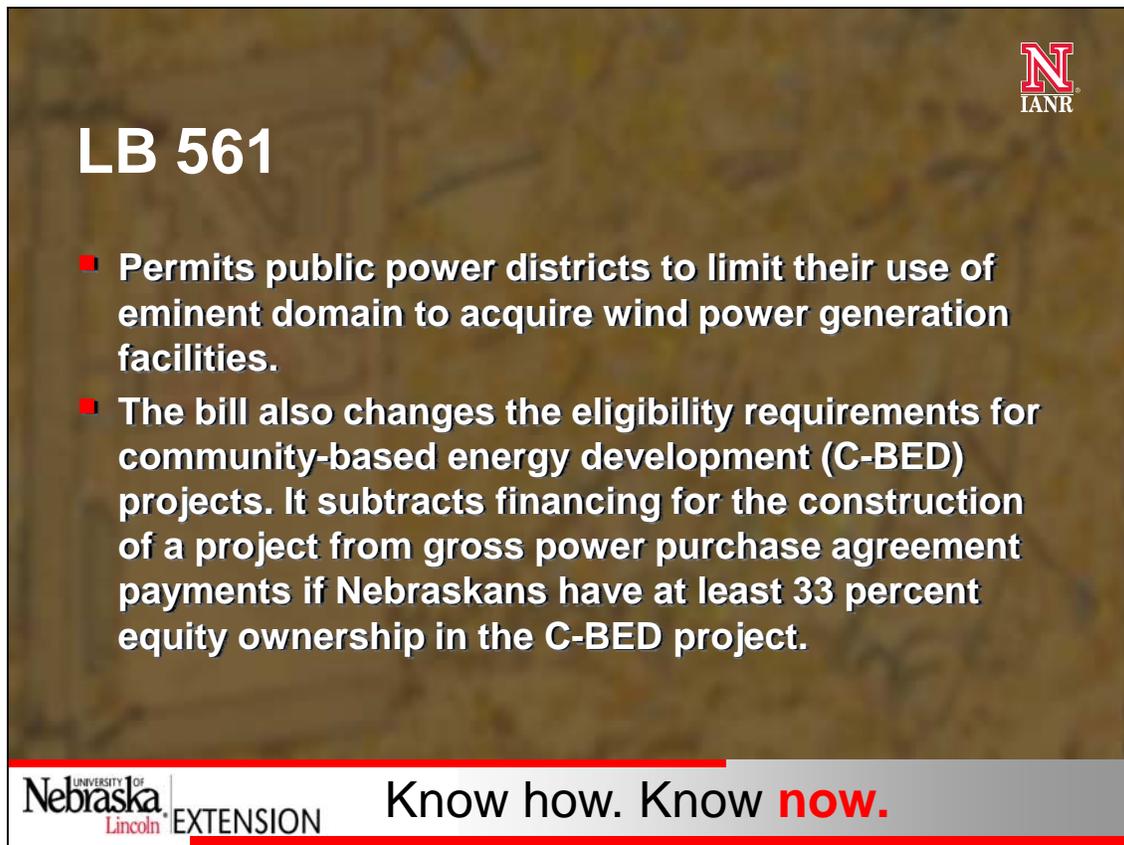
LB 568 Summary (cont.)

- The lease is to provide the amount of time needed for turbine removal after a lease termination, and provide for reclamation measures.
- Decommissioning security is defined and must be posted or given prior to construction by the wind developer
- The landowner may terminate a lease if a developer fails to meet its obligations, after a 60-day notice to remedy is provided.



LB 568 Summary (cont.)

- No interest in any resource located on a tract of land and associated with the production or potential production of wind generated energy on the tract of land may be severed from the surface estate.

The slide features a dark brown background with a subtle pattern of wind turbines. In the top right corner, there is a red logo consisting of a stylized 'N' above the letters 'IANR'. The title 'LB 561' is displayed in large white font. Below the title, two bullet points are listed in white text. At the bottom of the slide, there is a grey banner with the University of Nebraska Lincoln Extension logo on the left and the slogan 'Know how. Know now.' on the right, where 'now' is in red. The entire slide content is framed by a thin red border.

LB 561

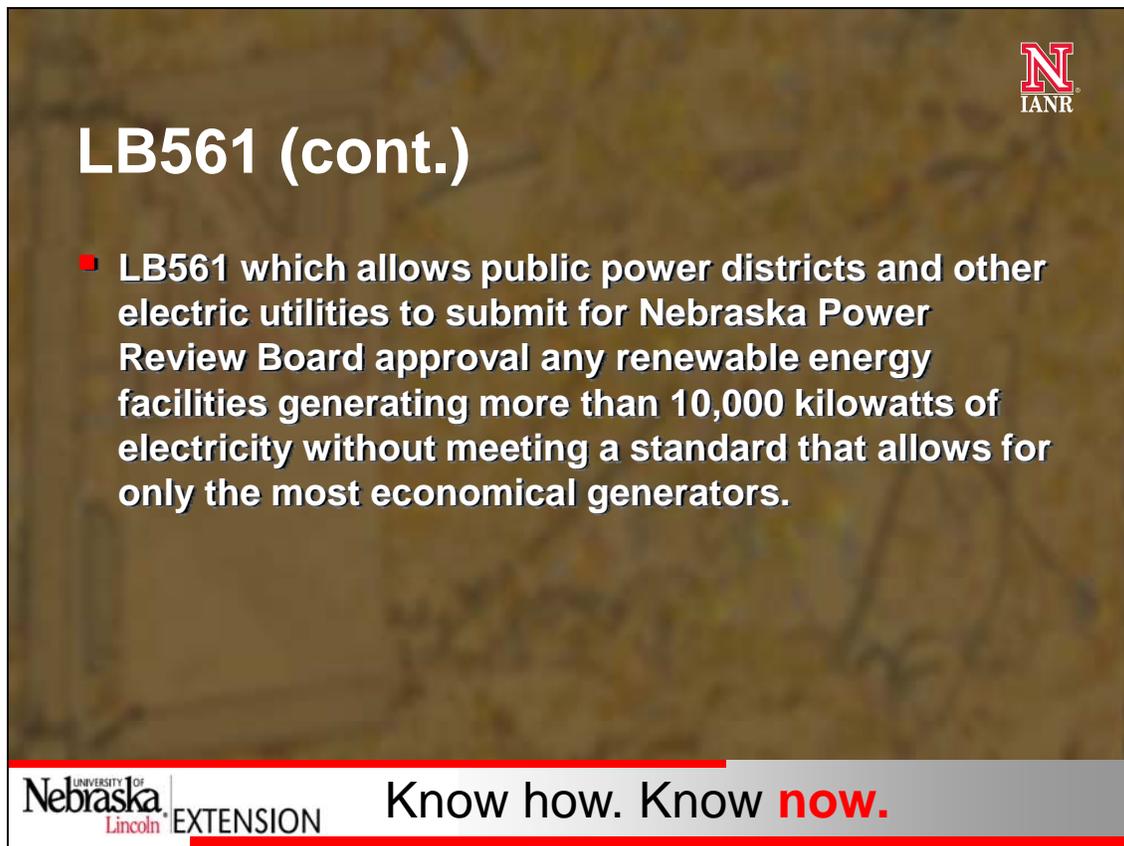
- **Permits public power districts to limit their use of eminent domain to acquire wind power generation facilities.**
- **The bill also changes the eligibility requirements for community-based energy development (C-BED) projects. It subtracts financing for the construction of a project from gross power purchase agreement payments if Nebraskans have at least 33 percent equity ownership in the C-BED project.**

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LB561, introduced by Omaha Sen. Steve Lathrop, permits public power districts to limit their use of eminent domain to acquire wind power generation facilities.

The bill also changes the eligibility requirements for community-based energy development (C-BED) projects. It subtracts financing for the construction of a project from gross power purchase agreement payments if Nebraskans have at least 33 percent equity ownership in the C-BED project.

LB561 includes provisions of LB471, introduced by Sen. Tony Fulton, which allows public power districts and other electric utilities to submit for Nebraska Power Review Board approval any renewable energy facilities generating more than 10,000 kilowatts of electricity without meeting a standard that allows for only the most economical generators.



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LB561 (cont.)

- **LB561 which allows public power districts and other electric utilities to submit for Nebraska Power Review Board approval any renewable energy facilities generating more than 10,000 kilowatts of electricity without meeting a standard that allows for only the most economical generators.**

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This bill will stream line the permitting process of wind farms in Nebraska.

The slide features a dark brown background with a faint, abstract pattern. In the top right corner, there is a red logo consisting of a stylized 'N' above the letters 'IANR'. The main title 'LB 436' is displayed in large, white, sans-serif font. Below the title, a single bullet point in white text states: '■ LB436 implements a statewide net metering policy to provide credits to consumers for electricity generated via renewable energy.' At the bottom of the slide, there is a grey horizontal bar with a red border. On the left side of this bar, the text 'UNIVERSITY OF Nebraska Lincoln' is written in a smaller font, with 'EXTENSION' in a larger font below it. To the right of this, the slogan 'Know how. Know now.' is written in a bold, sans-serif font, with 'now.' in red.

Net metering was another form of renewable energy addressed this session. Introduced by Malcolm Sen. Ken Haar, LB436 implements a statewide net metering policy to provide credits to consumers for electricity generated via renewable energy.

LB436 implements a statewide net metering policy to provide credits to consumers for electricity generated via renewable energy.

The bill credits consumers at a retail rate for the electricity they consume from public utilities and consumers will be compensated by utilities at a wholesale rate for additional electricity generated. Utilities will not be required to accommodate additional customer-generators after total capacity of all customer-generators meets or exceeds 1 percent of customer peak demand for that year.



My bottom line advice to any wind association, landowner group or steering committee

In many ways negotiating a wind rights option contract (if you can) makes a lot of sense because real value of a project cannot be calculated until you have a measure of the wind data, transmission ability and power purchase agreement and any interconnect issues. So instead of negotiating a 40-60 page document with multiple complicated issues up front, consider an options only contract (2 to 3 pages). By doing that you are still aligning yourself with a developer that you are promising to negotiate later in good faith if pieces fall into place. However, if things go bad, you can carve out exit strategies. Seek advice from a good wind attorney that has experience, it's worth it and can pay for itself in one year.



Questions?

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Extension is a Division of the Institute of Agriculture and Natural Resources at the University of Nebraska–Lincoln cooperating with the Counties and the United States Department of Agriculture.

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In July 2008 private wind developers asked to negotiate with a group. Extension is an organization that can be good at helping people to organize and learn how to make informed decisions.

Other resource personnel in Nebraska include:

1. John Hay, Biological Systems Engineering, Asst Extension Educator,
(402)472-0408 jhay2@unl.edu
2. Dave Rich, NPPD ddrich@nppd.com
3. NE Wind Working Group/ John Hansen, NE Farmers Union
<http://www.neo.ne.gov/renew/wind-working-group/nwwg.htm>
<http://www.nebraskafarmersunion.org/> john@nebraskafarmersunion.org
4. Saline County Wind Association
--Dave Vavra, Chair dmvavra@abswebb.net
--Darrel Hayek, Vice Chair dlhayek@live.com
--Doug Horak, Treasurer horak5@diodecom.net
5. Rich Lombardi, AWEA, American Wind Energy Association rlombardi@acgusa.net