

NPPD's Approach to Utility Scale Wind Development



John O'Connor, Renewable Energy Development Business Manager

November 9, 2010

Kearney, NE



Nebraska Public Power District

"Always there when you need us"

Presentation Take-Aways

1. NPPD is supportive of wind generation for Nebraska load and for export to other states.
2. NPPD has developed wind generation over the last decade and has plans to add wind generation over the next decade.
3. NPPD interacts with landowners, wind developers, and our customers to find ways to minimize the short and long term rate and risk impact.

Presentation Overview

- ✓ **Public Power Principles**
- ✓ NPPD's Role in Wind Development
- ✓ NPPD's Pace in Wind Development
- ✓ NPPD's Involvement with Landowners
- ✓ NPPD's Involvement with Private Developers

Public Power Principles

- Nebraskans are the owners and customers of our public power system
 - You have a voice
 - Board sets direction
 - Keep rates low
 - Keep reliability high
- How are we doing?
 - Nebraska is in the “top 10” of affordable electric rates in the nation at 7.16 cents/kWh (Source: EIA, 2009)
 - NPPD continues to meet reliability goals (generation, transmission)

Presentation Overview

- ✓ Public Power Principles
- ✓ **NPPD's Role in Wind Development**
- ✓ NPPD's Pace in Wind Development
- ✓ NPPD's Involvement with Landowners
- ✓ NPPD's Involvement with Private Developers

NPPD's Role in Wind Development

- Described as both leading and cooperative

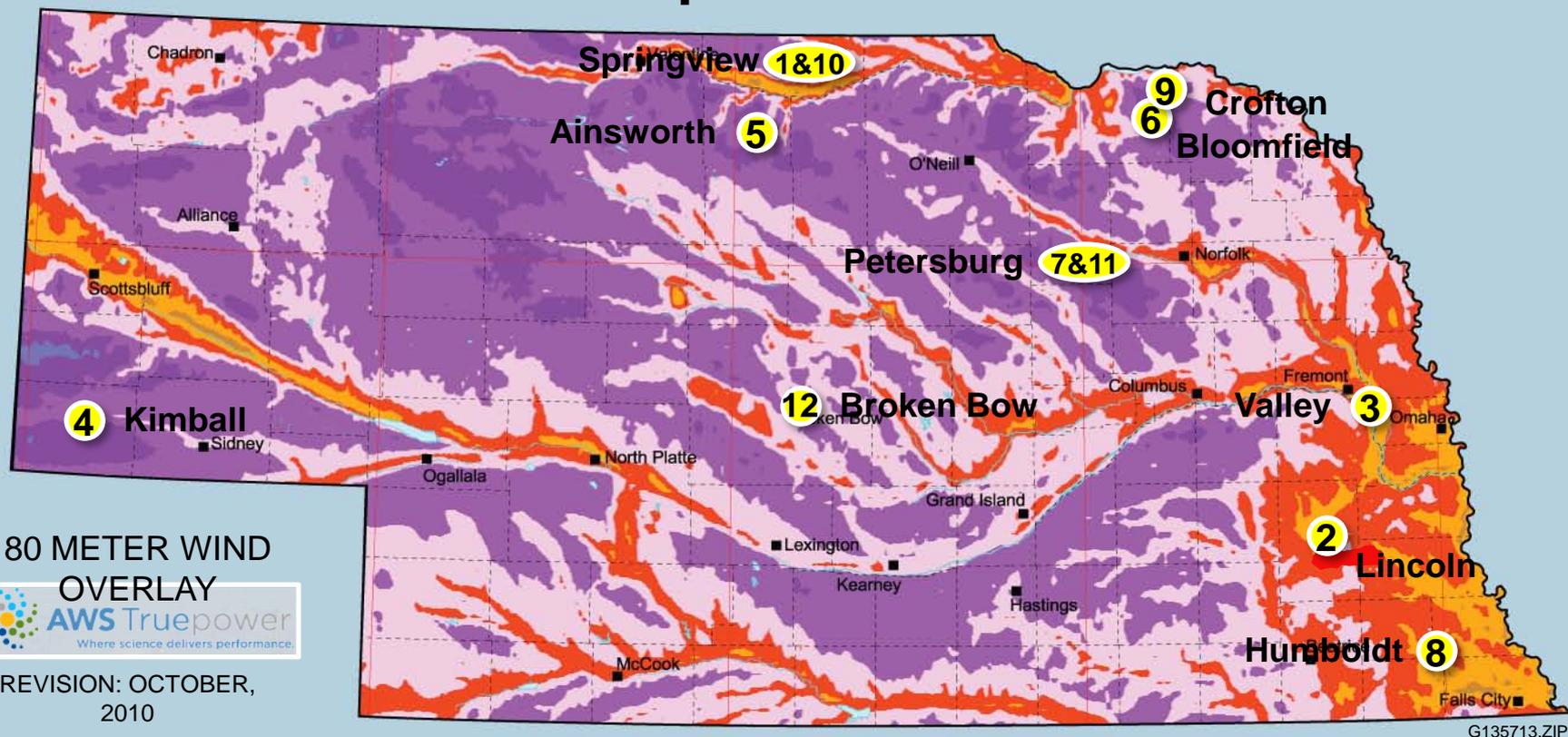
Given opportunities of wind...

- ✓ Mostly Class 4 wind and a lot of Class 5 Wind (Nebraska is ranked between 3rd and 6th for potential)
- ✓ Reduced CO₂ emissions
- ✓ Income opportunities for landowners
- ✓ Jobs created in rural Nebraska
- ✓ Potential attraction of manufacturers to the state
- ✓ Wind power can be geographically disbursed
- ✓ Very minimal amount of waste/no water

Given the challenges of wind...

- ✓ Public Power has a competitive disadvantage from federal tax credits (Private developers get 2.1 cents/kWh)
- ✓ New wind is higher priced than existing coal generation.
- ✓ Transmission designed and built for Nebraskans/not rest of the country
- ✓ Wind Farm siting concerns – Endangered species, air traffic, etc.
- ✓ Nebraska does not need more generation capacity at this time
- ✓ Non-dispatchable (not available all the time, we cannot turn wind on) and must be backed up by base load generation

Wind Development in Nebraska

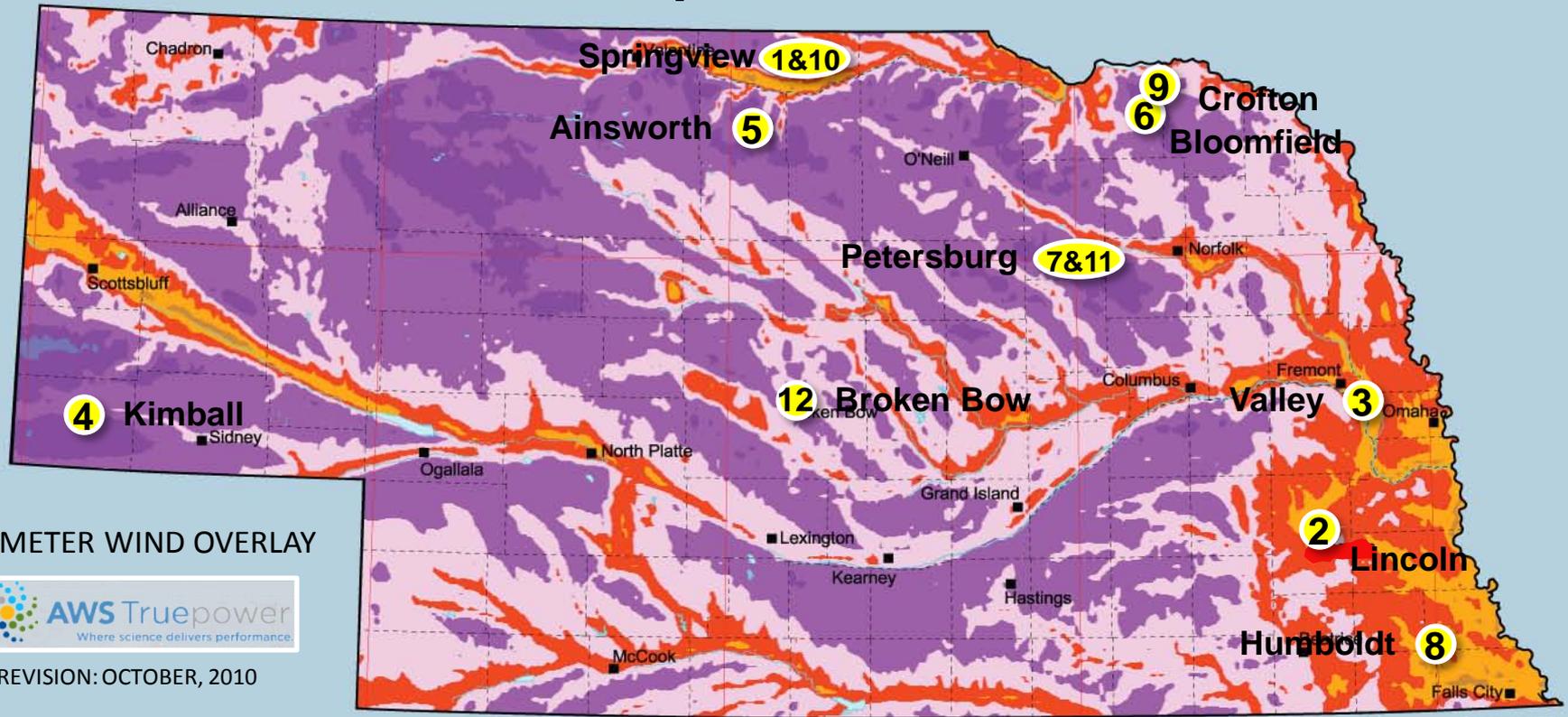


PROJECT	YEAR	MW	OWNER	PARTICIPANTS
1 Springview Wind Energy	1998	Retired	NPPD	NPPD, LES, MEAN, GI, KBR, Auburn
2 Salt Valley	1998 and 1999	1.32	LES	LES
3 Valley	2001	0.66	OPPD	OPPD, Valmont
4 Kimball	2001	10.5	MEAN	MEAN
5 Ainsworth Wind Energy	2002	60	NPPD	NPPD, OPPD, JEA, MEAN, GI
6 Elkhorn Ridge Wind, LLC	2005	80	Edison Mission	NPPD, OPPD, MEAN, LES, GI
7 Laredo Ridge Wind Farm	2009	80	Edison Mission	NPPD, (Planned Participants LES, MEAN, GI)
8 Flat Water Wind Farm, LLC	2010 (Scheduled)	60	Gestamp Wind N.A.	OPPD
9 Crofton Hills Wind Farm	2010 (Scheduled)	40	CWET, LLC	NPPD, (Planned Participants OPPD, MEAN, LES)
10 Springview II	2011 (Scheduled)	3	Blue Stem, LLC	NPPD, (OPPD, MEAN, LES, GI, KBR*)
11 TPW Petersburg, LLC	2011 (Scheduled)	40.5	Third Planet Wind	OPPD
12 Broken Bow Wind, LLC	2012 (Scheduled)	80	Edison Mission	NPPD, (Planned Participants OPPD, LES, MEAN, GI)

Total MW ~ 456

* Denotes Transmission

Wind Development in Nebraska



80 METER WIND OVERLAY



REVISION: OCTOBER, 2010

G135713.ZIP

PROJECT	YEAR	MW	OWNER	PARTICIPANTS
1 Springview Wind Energy	1998	Retired	NPPD	NPPD, LES, MEAN, GI, KBR, Auburn
2 Salt Valley	1998 and 1999	1.32	LES	LES
3 Valley	2001	0.66	OPPD	OPPD, Valmont
4 Kimball	2001	10.5	MEAN	MEAN
5 Ainsworth Wind Energy	2002	60	NPPD	NPPD, OPPD, JEA, MEAN, GI
6 Elkhorn Ridge Wind, LLC	2005	80	Edison Mission	NPPD, OPPD, MEAN, LES, GI
7 Laredo Ridge Wind Farm	2009	80	Edison Mission	NPPD, (Planned Participants LES, MEAN, GI)
8 Flat Water Wind Farm, LLC	2010 (Scheduled)	60	Gestamp Wind N.A.	OPPD
9 Crofton Hills Wind Farm	2010 (Scheduled)	40	CWET, LLC	NPPD, (Planned Participants OPPD, MEAN, LES)
10 Springview II	2011 (Scheduled)	3	Blue Stem, LLC	NPPD, (OPPD, MEAN, LES, GI, KBR*)
11 TPW Petersburg, LLC	2011 (Scheduled)	40.5	Third Planet Wind	OPPD
12 Broken Bow Wind, LLC	2012 (Scheduled)	80	Edison Mission	NPPD, (Planned Participants OPPD, LES, MEAN, GI)

Total MW ~ 456

* Denotes Transmission

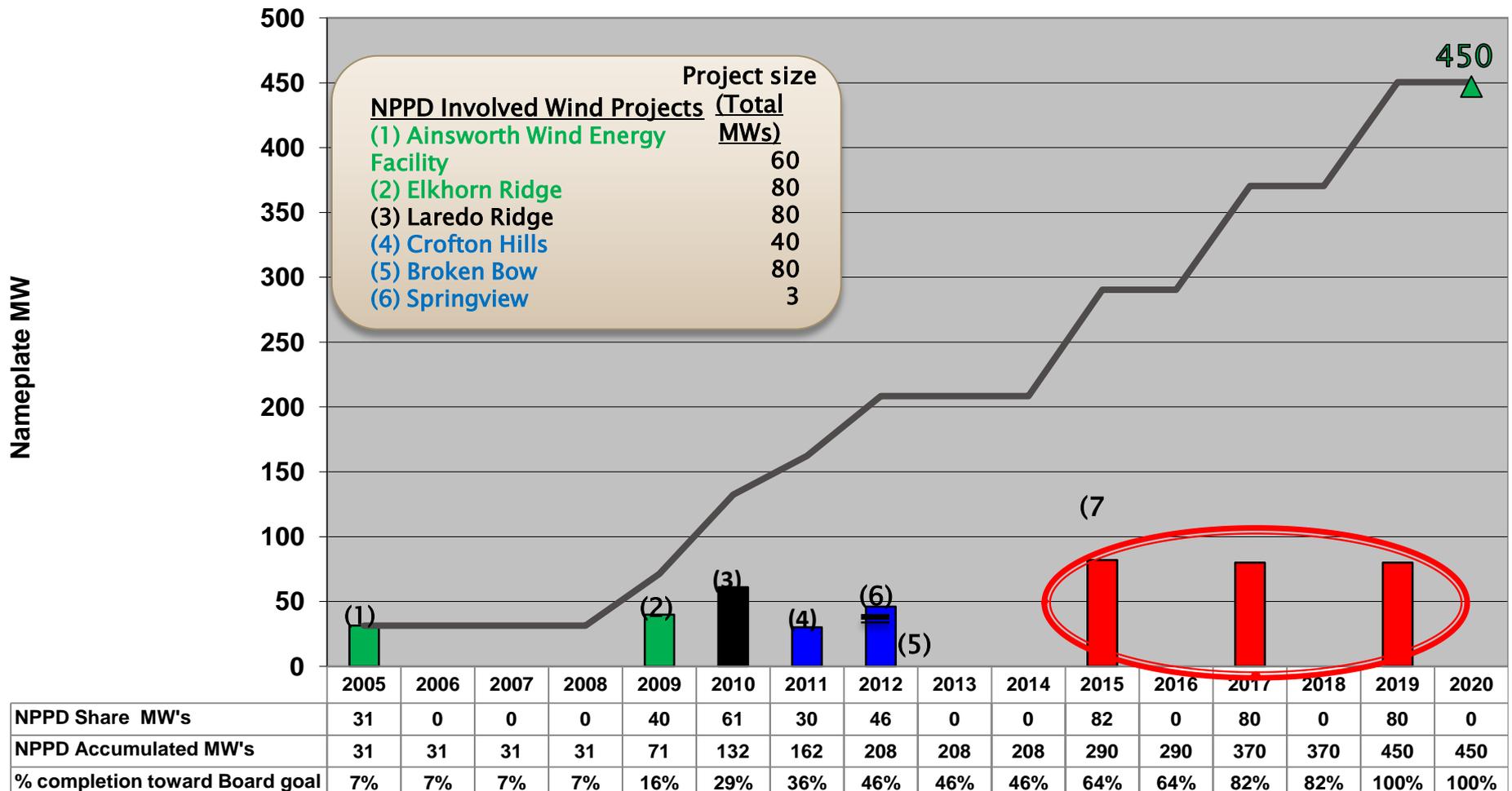
Presentation Overview

- ✓ Public Power Principles
- ✓ NPPD's Role in Wind Development
- ✓ **NPPD's Pace in Wind Development**
- ✓ NPPD's Involvement with Landowners
- ✓ NPPD's Involvement with Private Developers

NPPD's Pace in Wind Development

✓ Described as “prudent”

NEBRASKA PUBLIC POWER DISTRICT
Wind Generation Addition Plan to Meet 10% Renewable Goal by 2020



Presentation Overview

- ✓ Public Power Principles
- ✓ NPPD's Role in Wind Development
- ✓ NPPD's Pace in Wind Development
- ✓ **NPPD's Involvement with Landowners**
- ✓ NPPD's Involvement with Private Developers

NPPD's Involvement with Landowners

- Obtaining low cost renewable wind power starts with good site selection practices
 - Good wind
 - Low cost to connect wind farm to transmission system
 - Identify any environmental concerns
- When we identify sites that show promise, we meet with landowners to gauge their level of interest
- If enough landowners in the subject area are interested, we work out an arrangement where we study the wind on the landowner's property
- Since we have been studying sites for two years now, we have a feel for which sites can bring the lowest cost wind power.

Presentation Overview

- ✓ Public Power Principles
- ✓ NPPD's Role in Wind Development
- ✓ NPPD's Pace in Wind Development
- ✓ NPPD's Involvement with Landowners
- ✓ **NPPD's Involvement with Private Developers**

NPPD's Involvement with Private Developers

- Obtaining low cost renewable wind power continues with working with private developers
- NPPD issues a Request for Proposal (RFP) to developers requesting power cost bids using one of the landowner sites (a developer can use their own site too).
- NPPD selects developer based on bids and credentials and negotiates the final Power Purchase Agreement (PPA)

NPPD's Involvement with Private Developers (cont'd)

- ✓ NPPD & ratepayers benefit
 - Developer takes on financial and operation risk (pay only for power output)
 - Predictable wind pricing for 20 years
 - Diversified fuel (wind) is a hedge as other fuel costs increase
 - Can help address potential climate change legislation

Presentation Take-Aways

1. NPPD is supportive of wind generation for Nebraska load and for export to other states.
2. NPPD has developed wind generation over the last decade and has plans to add wind generation over the next decade.
3. NPPD interacts with landowners, wind developers, and our customers to find ways to minimize the short and long term rate and risk impact.

Questions?

John O'Connor
jwoconn@nppd.com
(877) 946-3632



Nebraska Public Power District

"Always there when you need us"

