

# **Wind Farm Siting and Landowner Compensation: The Need for State Policy**

Energy Development & Transmission  
Committee

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North Central Research Extension Center  
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# Wind Energy Development without Rules

- Commercial development ahead of regulation in ND
- State regulatory protections such as those in oil and gas development not yet extended to wind energy
- Dickey and Barnes County examples of further conflict to come:
  - Landowners and developers vulnerable to loss of wind rights
  - Local officials fail to defend those rights for fear of losing economic development
  - Animosity between neighbors and between landowners

# The Risk

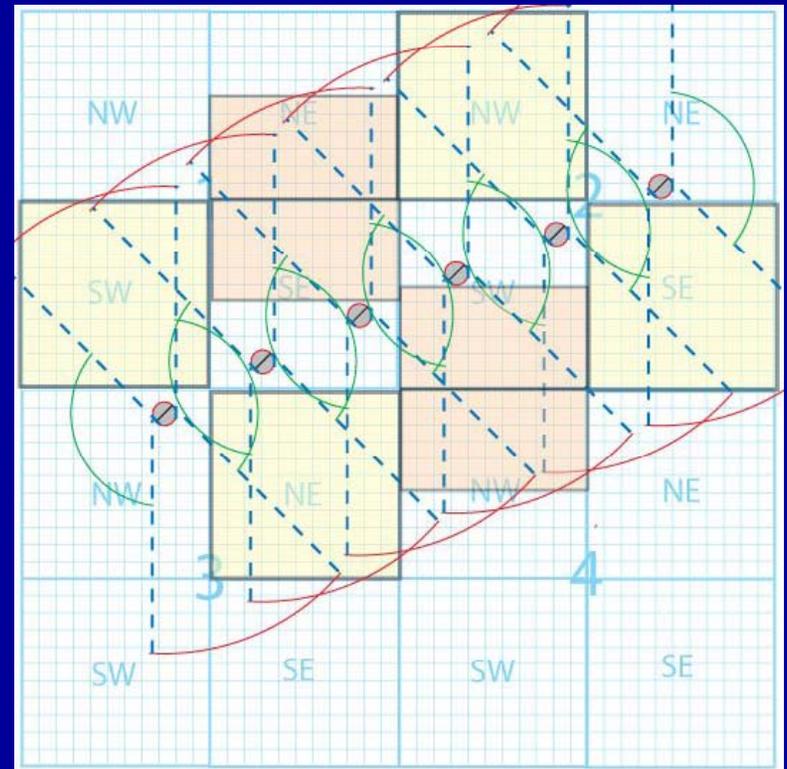
- North Dakota leads in wind energy potential and the industry enjoys broad public support
- However, poor planning of wind development has caused conflict and gridlock all over the U.S. and Europe
- North Dakota's failure to protect wind rights risks a backlash and litigation that could slow development of a robust new industry

# Wind Rights Issue: Wind Wakes

- Large commercial turbines create “wind wakes” or turbulence
  - Impact greatest in direction of prevailing winds
- Wind wakes extend downwind up to 8-11 times turbine rotor diameter
  - Example: General Electric 1.5 MW SL
    - Rotor diameter: 77 meters or 252.62 feet
    - Common land-based commercial turbine in the U.S. today
    - Wind wake of 2,000-2,750 feet

# Wind is Like Oil & Gas: A Shared Resource

- Wind turbines, like oil and gas wells, draw on a resource shared, in many cases, by multiple owners.
- Unless the mineral rights have been sold, a surface owner retains rights from the sky to the center of the earth, including the wind that passes over his/her land.
- Yet, most wind developers compensate only the landowner on which the turbine rests, leaving neighboring affected owners of the wind resource without compensation.



Source: Graphic courtesy of Joe Richardson

# North Dakota recognizes and regulates correlative rights

- Non-participating owners of a shared resource must be taken into account when development of that resource occurs.
- The state of North Dakota regulates the establishment of spacing units for oil and gas pools, and NDCC section 38-08 requires that all resource owners within an established unit receive royalty compensation on a formula basis when development affects their resource.
- The Governor, Attorney General and Agriculture Commissioner oversee this common and accepted approach to regulation.

# ND Century Code also recognizes private property right to wind

SB 2239, 59<sup>th</sup> Legislative Assembly, 2005:

- “the term wind easement means a right . . . executed by or on behalf of an owner of land or airspace for the purpose of ensuring adequate exposure of a wind power system to the winds”
- “A property owner may grant a wind easement in the same manner and with the same effect as the conveyance of an interest in real property.”

# Policy/procedures not in place to protect that right

- Counties and Townships
  - No established planning process for wind farms
  - No specific siting guidelines or ordinances that reflect economic realities of wind energy
    - Zoning requirements established for safety and other traditional concerns are not relevant or helpful
  - Exception: Spring Valley Township, Dickey County in 2005 and handful of other townships that followed suit

# Policy vacuum at state level

- No uniform setback requirements to protect adjacent property owners and developers
- Little oversight of development activities with regards to landowner interests, except for 5-year restriction on lease options (SB 2239, 2005)
- HB 1283 (2005) limited Public Service Commission siting authority to wind farms of 100 MW or larger (was 50 MW)
- Local citizens now lack any recourse short of litigation for wind farms under 100 MW
- Need for additional policy for 100 MW + projects to provide the ND PSC with guidance on setback and wind rights issues.

# Minnesota Experience in Wind Farm Planning and Siting

- Minnesota home to significant wind development
  - Top five ranking in U.S. with thousands of MWs more planned
- Wind farm permitting responsibility of state Department of Commerce
- State permits provide for wind farm perimeter setbacks (5 rotor diameter for prevailing winds; 3 RD for non-prevailing)
- MN regulations work well
  - Wind development is booming in MN
  - The top developers operating in ND have built and permitted wind farms through the MN process

# Local Experience: Spring Valley Township, Dickey County

- Dickey County first to see two contiguous wind farm projects proposed in North Dakota
  - Spring Valley and Grand Valley Townships
  - Developers: FPL and enXco
- FPL's proposed turbine sites located in close proximity to adjoining landowners
  - Nearly all within 500 feet of adjoining properties; many between 150-350 feet
  - In contrast, FPL would have allowed at least 2,000 feet between their own turbines along axis of prevailing winds

# First Wind Zoning Ordinance in ND

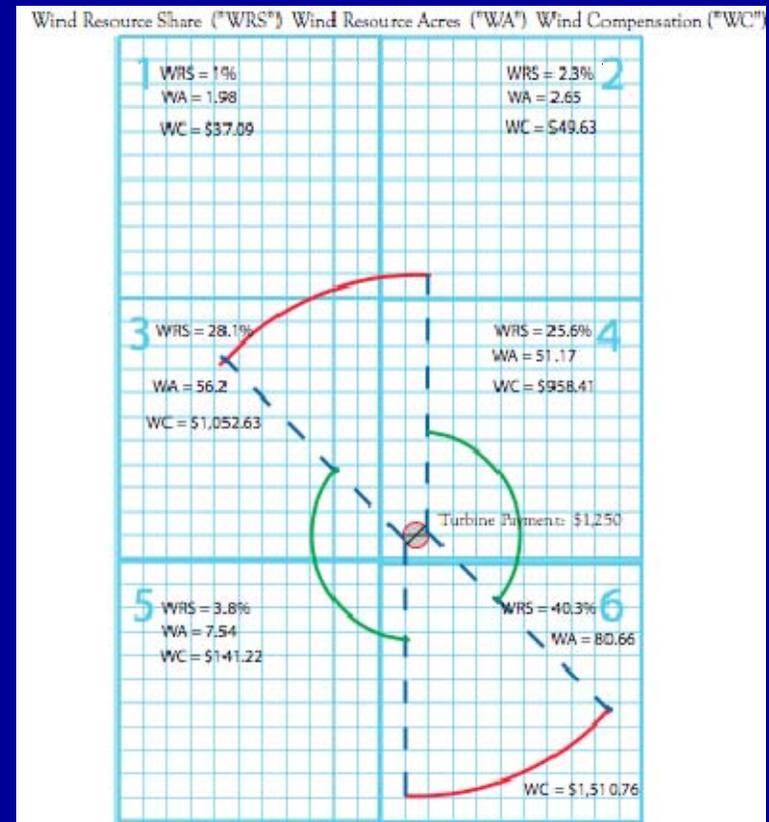
- Landowners faced loss of future wind development on their land without compensation or consultation
- Dickey County Commission denied landowners' request to establish zoning ordinance
- Township zoning only recourse, except for costly and divisive litigation
- Spring Valley Township with 32 residents became first unit of government in ND to develop wind zoning ordinance

# Spring Valley Setback Requirements

- Wind farm boundary
  - Not less than five times rotor diameter from perimeter
- Exception in ordinance :
  - *“A Variance may be granted if an authorized representative or agent of the Permittee and those affected parties on Adjoining Properties with associated wind rights sign a formal and legally-binding agreement expressing all parties’ support for a Variance that waives or reduces the setback requirement.”*
  - Variance included to create an incentive for cooperation and to avoid blocking development of prime locations

# Wind Resource-Based Compensation for Cooperative Development

- Spring Valley residents proposed a compensation formula to allow for uninterrupted development within setback areas
  - 25% of turbine payment to landowner hosting turbine
  - Remainder allocated in proportion to percentage of wind wake affecting each landowner's property
- Spring Valley landowners now working with Global Winds to develop special contract for a "wind footprint" approach to compensating all landowners equitably



Source: Courtesy of Joe Richardson

# FPL Works Effectively with Setbacks Where Required

- MN PUC order granting site permit for FPL's 98.9 MW High Prairie Wind Farm I near Austin, MN:
  - Wind turbine towers shall not be placed less than 5 rotor diameters from the perimeter of the site on the north-south axis [prevailing winds] and 2 rotor diameters on the east-west axis [non-prevailing] where the Permittee [FPL] does not hold the wind rights, without approval of the PUC. Permittee acknowledges that properties within the project boundaries for which Permittee does not hold the wind rights will not be foreclosed from installing wind turbine generators on such properties at a later date.
- MN PUC Docket PT-6528/WS-06-91

# Commonsense Ground Rules will not Stop Development

- Contrary to frequent claims made in the media, Spring Valley Township zoning did not stop the wind farm.
- The MN PUC never approved the project's power purchase agreement, and Ottertail formally withdrew its request before the PUC stating regulatory reasons in MN that had nothing to do with ND or zoning.
- Spring Valley landowners continue to work with two major national developers on wind farm projects.

## Legislature Can Safeguard Future Wind Development: Options to Consider

- Establish statutory requirement for wind farm perimeter setbacks of 5 rotor diameter for prevailing and 3 rotor diameter for non-prevailing winds
  - Apply to all wind projects of any scale, regardless whether regulated by the ND PSC or by local governments
  - Allow for flexible application with waiver when all parties holding wind rights agree

# Restore PSC Siting Authority

- Restore PSC siting authority from 100 MW to original 50 MW threshold
  - Citizens affected by large wind farms deserve recourse to a state authority to address their concerns

# Another Option to Think About

- Consider adopting shared income formula for wind turbine compensation to avoid conflicts and expand public and landowner support for wind energy
  - More “winners” with everyone treated equitably
  - State specifies the formula; marketplace competition determines overall compensation level on a per turbine or Megawatt basis
  - Would not alter net cost of doing business for developers or utilities purchasing the power

# Thank You

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