
Permitting
Legislation &
Policies
Photo by Netty Bair 11-2008


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kW to MW to GW conversion

1 kW = 0.001 MW

100kW = 0.1 MW

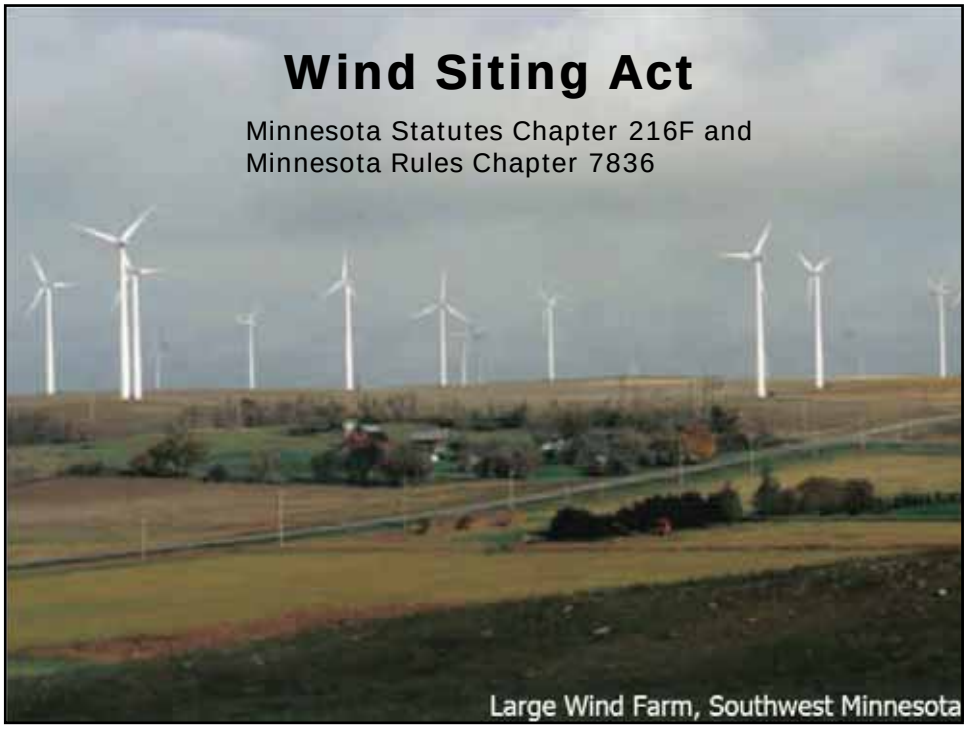
1000 Kilowatt (kW) = 1 Megawatt (MW)

1500 kW = 1.5 MW

3000 kW = 3 MW

1,000,000 kW = 1000 MW = 1 Gigawatt (GW)

Source: U.S. Department of Energy Wind Powering America Prograr



WHO REGULATES WIND?

≥5 MW = Public Utilities Commission
< 5 MW = Local government

(exceptions)

- 2007 Legislation: counties may choose to permit <25 MW – *(with conditions)*
- 2008 Legislation: Size election. Projects <25 MW may elect to be sited as a Small Wind Projects.

Photo by Netty Bair

Photo by John Biren

Why Regulate Wind Development?

Significant expanding land use

Facilitate development

Health, Safety and Welfare of Public

Public support of wind development

Setbacks primary tool for public safety and nuisance

Catastrophic Failure

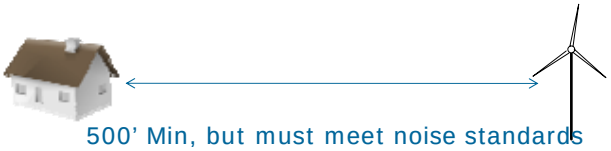
Nuisance

- Visual Impact including shadow flicker
- Bluff setbacks
- Noise

Impact on adjacent property wind resources

Photo by John Biren

PUC Wind Siting Setbacks



500’ Min, but must meet noise standards

MPCA Noise Standards
Chapter 7030

Typically 650’ or more

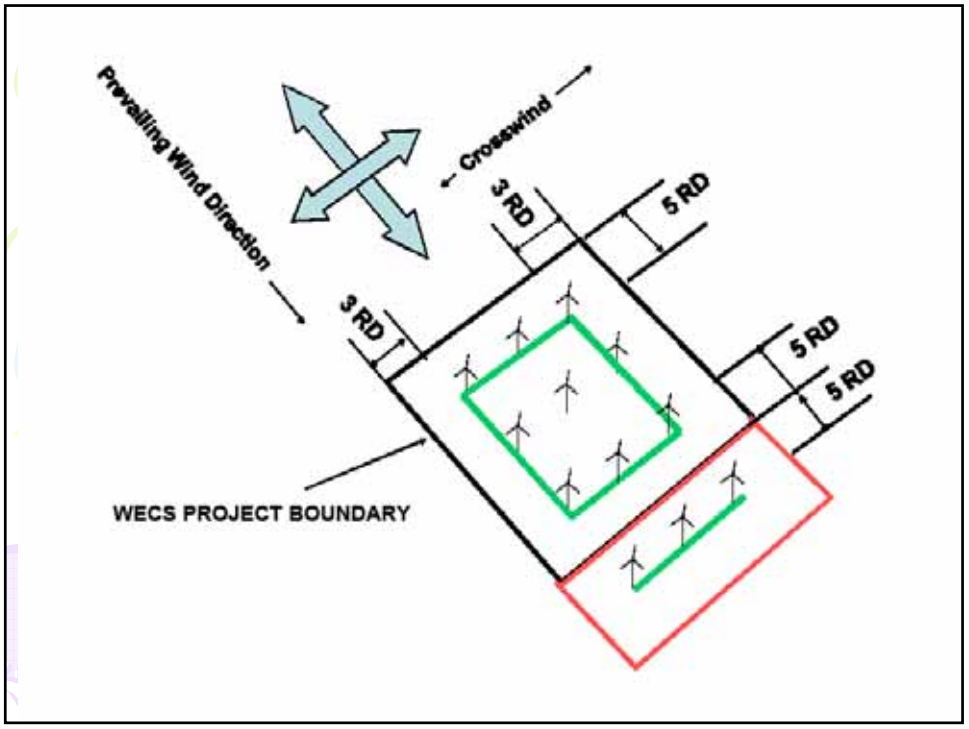
wetlands

250’ Public Road ROW

Setbacks in Redwood County, when permitted by the County

1.25 x tower & tip of blade from road ROW, structures

750’ from residence to tower



Safety Standards

Engineers Certification
Minimum ground clearance
Markings on Guy Wires
Met tower painting
E911
Setbacks

Photo by John Biren

Additional Standards include

- Drainage
- Permits: Public road, Stormwater
- Tubular towers for commercial turbines
- White, grey, or non-obtrusive color
- Lighting limited to FAA requirements.
- Conditions for crop damage & restoration
- Power lines up to 35kV – buried

Photo by Netty Bair

Disadvantages

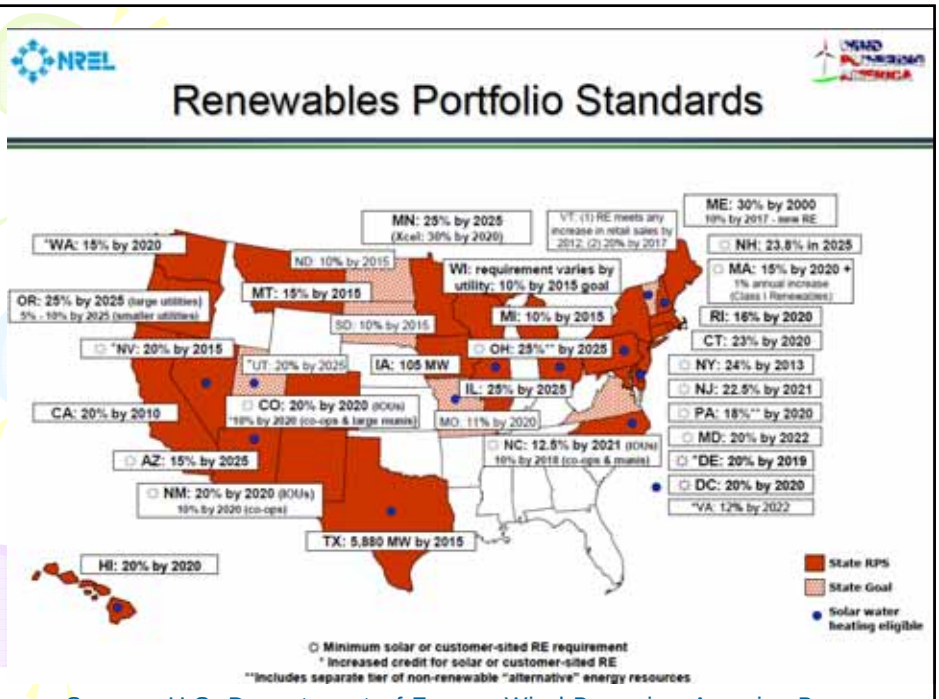
- Variable resource
- Aesthetics
- Shadow Flicker
- Noise
- Biological Resource Impacts
- Construction
- Land Use
- Radar

Photo by John Biren

Other Legislation

- 1994 NSP to add 425 MW wind by 2003
- 2007 RES (Renewable Energy Standard)
- 2008 Omnibus Environment and Natural Resources Bills (Senate File 2096), from which the REDI Program was developed

Photo by Jay Trusty



Source: U.S. Department of Energy Wind Powering America Program

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