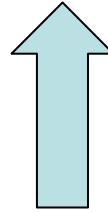


Minnesota Energy Facility Permitting



Large Wind Energy Conversion Systems



Large Electric Power Generating Plants

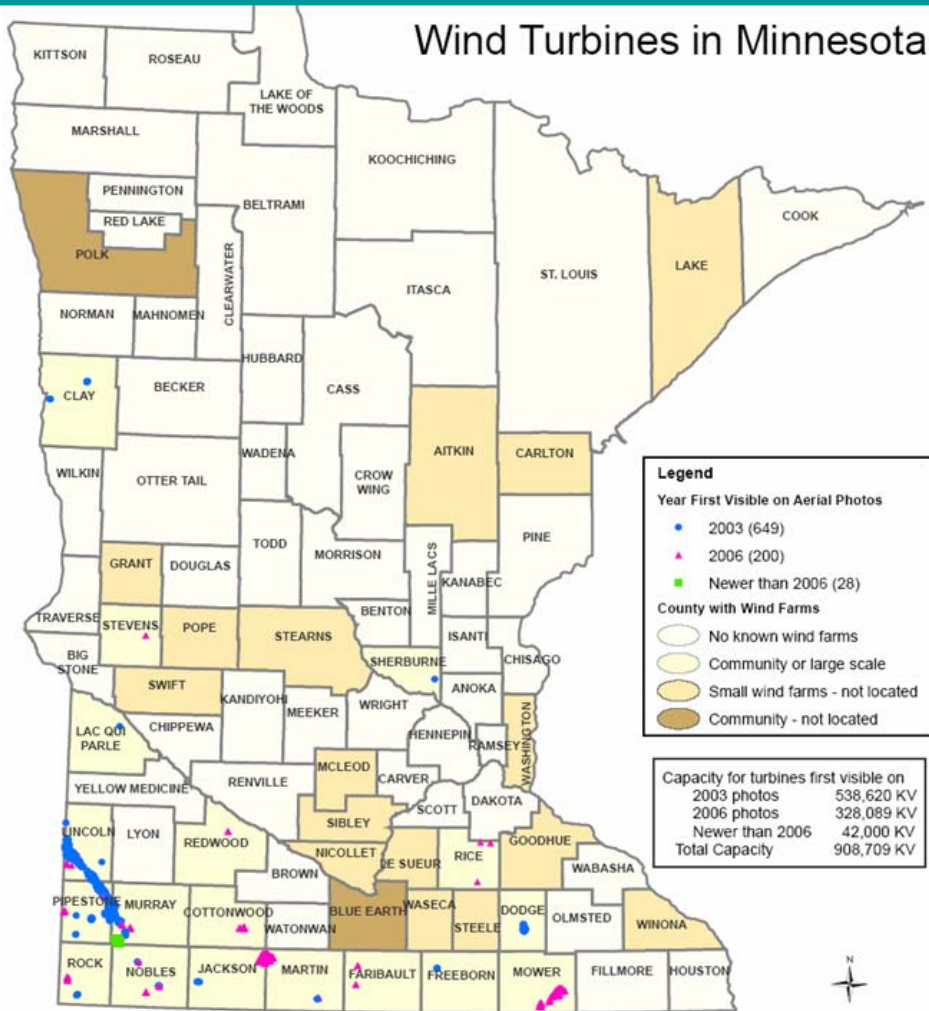


High Voltage Transmission Lines



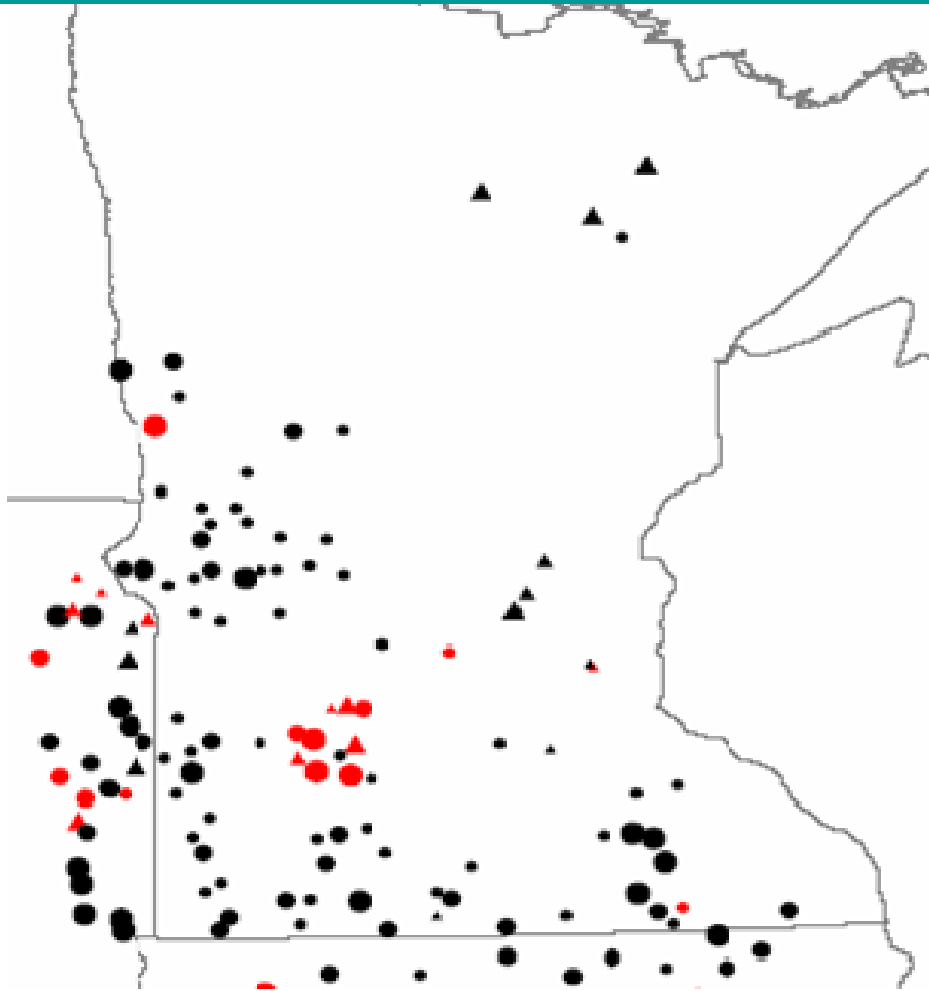
Pipelines

Wind Development In Minnesota



- 1,299 MW in Minnesota.
- Wide diversity of project sizes from <1 MW to 200 MW.
- Concentrated in southern Minnesota.
- Geographic expansion beginning.

Future Wind Development



- 2007 Renewable Energy Standard.
- 25% electricity RE by 2025, 30% by 2020 for Xcel Energy totaling approx 4,000 – 6,000 MW of wind.
- Currently over 29,000 MW of new wind energy requests on the transmission grid in MN.
- Trend toward geographic expansion and larger projects.
- Circles = Wind in MISO Queue.

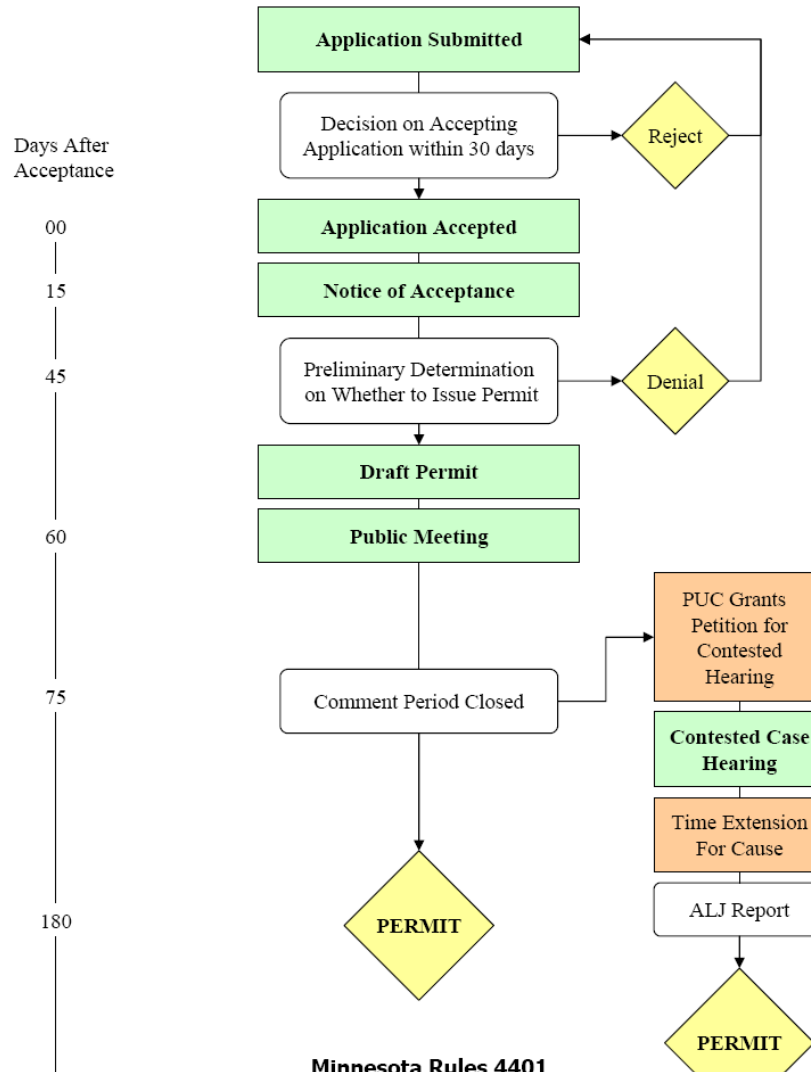
Result: Permitting Initiative

- 2006 DOC work group on permitting issue.
- Need for consistent definitions, minimum standards, processes and permitting statewide.
- Delegation program provides county governments option to permit wind projects < 25 MW.
- Technical assistance provided.

Wind Siting Act

- Minnesota Statutes Chapter 216F and Minnesota Rules Chapter 7836
- Current site permitting jurisdiction:
 - Local government may permit projects less than 5 MW in combined nameplate capacity.
 - PUC may permit projects with 5 MW or more in combined nameplate capacity.
 - In January 2008, new law allows counties to assume permitting jurisdiction for wind projects less than 25 MW in combined nameplate capacity.

Permitting Process for Large Wind Energy Conversion Systems



Minnesota Rules 4401
PUC Energy Facility
Permitting

PUC Wind Permitting Process

- Provides consistent process and standards statewide.
- Up to 6 month process.
- Alternate form of Environmental Review - EIS, EA, or EAW not required.
- Public notice, participation, comments.
- Site permits issued for up to 30 years and may be amended over time.

2007 Amendments

1. Clarified project size definition.
2. Provides county option to assume larger greater jurisdiction for wind permitting. Requires PUC to issue minimum permitting setbacks and standards applicable to all wind facilities.

2007 Amendments

1. Project size:

- Established project sized determination procedure.
- Determination required for wind site permits < 25 MW.

2. Delegation to counties:

- General permit standards for wind < 25 MW.
- Consider historic setback and permitting standards.
- Standards apply to projects < 25 MW, variance allowed.
- Counties may be more restrictive by ordinance.
- Technical assistance.

PUC General Permit Setbacks

Issue	PUC General Permit Setback Minimums
Wind Access Buffer (setback from lands not in permittee's control)	3 RD (760 – 985 ft) on east-west axis 5 RD (1280 – 1640 ft) on north-south (78 – 100 m rotor diameter WTGs)
Homes	500 feet + distance to meet state noise standard.
Noise Standard	750 – 1500 ft typically required to meet state noise standard. (Minnesota Rules Chapter 7030).
Public Roads	250 ft from edge of public road ROW.
Wetlands	No turbines in wetlands and no setback. DOC and DNR to report on future wetlands issues.

Additional Standards

- Identify, avoid and repair drain tile damage.
- Public road permits required and repair construction related damages.
- NPDES storm water permit for construction projects.
- Utility scale, monopole design turbines, not prototypes. Off white or white in color.
- Lighting and safety marking limited to FAA requirements.
- Conditions for crop damage and restoration.
- Preconstruction emergency plan.
- Tower identification and “as-built” GIS data submitted to PUC.
- TV signal strength study (baseline) and preconstruction microwave beam path analysis.
- Decommissioning plan.
- PUC option to request post construction noise analysis.

Next Steps

- Notices mailed late September, 2007.
- Comments received from counties, developers and other interested parties on:
 - Historic PUC siting standards and setbacks
 - Need for changes to existing or proposing new requirements.
 - Revisions or clarifications to standards.
 - Procedural comments, questions, clarifications.
 - Types of technical assistance counties would like DOC to provide on ongoing basis.
- Comment period through October 31, 2007.
- DOC reviewed comments and made standards recommendations to PUC in late early December 2007.
- PUC to issued general standards order in January 2008.
- Counties may request to assume permitting January 15, 2008.

For More Information

Minnesota Department of Commerce Energy Facilities Permitting

Adam Sokolski

651-296-2096

adam.sokolski@state.mn.us

Deborah Pile

651-297-2375

deborah.pile@state.mn.us

<http://energyfacilities.puc.state.mn.us/>