Minnesota State Permitting Process

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HDR Engineering, Inc.
HDR Wind Experience

- HDR has been involved with wind power since 1992.
- HDR’s integrated wind services lead the nation with experience in all phases of wind power development.
- HDR has delivered services for over 70 projects with potential generation of over 7,000 MW.
HDR Wind Services

- **Environmental**
  - Fatal flaw studies
  - GIS analysis for siting
  - Permitting
  - Agency coordination
  - Public involvement
  - Preconstruction surveys
  - Due Diligence

- **Engineering**
  - Feasibility studies
  - Road and drainage design
  - Foundation design
  - Electrical design
  - Owners engineer
  - Construction observation
  - Due Diligence
What started Wind Permitting in Minnesota?

Prairie Island Mandate (1994)
Xcel Energy was obligated per state policy and the Public Utilities Commission (PUC) to have 425 MW of wind power under contract by the end of 2003.

Wind Siting Act (1995)
The siting of Large Wind Energy Conversion Systems is to be made in an orderly manner compatible with environmental preservation, sustainable development, and the efficient use of resources (Minn. Stat. §216F.03).
Two current levels of wind permitting:

Local government may regulate projects less than 5 MW in combined nameplate capacity (Small Wind Energy Conversion Systems)

PUC regulates projects with 5 MW or more in combined nameplate capacity (Large Wind Energy Conversion Systems = LWECS)

http://energyfacilities.puc.state.mn.us/
PUC Wind Permitting

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

Permitting Process for Large Wind Energy Conversion Systems

- Application Submitted
  - Decision on Accepting Application within 30 days
    - Reject
  - Application Accepted
    - Notice of Acceptance
  - Preliminary Determination on Whether to Issue Permit
    - Denial
    - Draft Permit
  - Public Meeting
    - Comment Period Closed
      - PUC Grants Petition for Contested Hearing
        - Contested Case Hearing
        - Time Extension For Cause
        - ALJ Report
  - PERMIT

Minnesota Rules 4401
PUC Energy Facility Permitting
Typical LWECS Site Permitting Steps

1) Resource assessment and analysis
2) Prepare draft site permit application
3) DOC coordination
4) Submit application to PUC
5) PUC meeting – application and draft permit acceptance, DOC staff identified
6) Public notice – publish notice and send application to agencies and landowners in project area
7) Public meeting on project – DOC & Applicant
8) DOC addresses comments and prepares finding of facts, final permit (or contested)
9) PUC meeting – issue/deny permit
10) Permit conditions include preconstruction surveys for wetlands, cultural resources, biological resources, etc.
Proposed change in wind permitting:

Delegation of permitting to counties for projects under 25 MW.
Must consider existing and historic PUC standards.
Counties may be more restrictive by ordinance.

Status of change:

DOC requested comments through October 31, 2007.
DOC will review comments and make standards recommendations to PUC in late November 2007.
PUC to issue general standards order in January 2008
2007 Amendments

Clarify Project Size Definition
- Established project sized determination procedure
- Determination required for wind site permits < 25 MW

Establish County Delegation Program
- 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 to counties
# Historic PUC Setback Requirements

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<th>Issue</th>
<th>Historic PUC Setback</th>
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| Wind Access Buffer         | 3 RD (760 – 985 ft) on east-west axis  
5 RD (1280 – 1640 ft) on north-south  
(RD = rotor diameter = 78 – 100 m) |
| 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                                                 |
| Public Conservation Lands  | No setback required historically                                                     |
| Wetlands                   | No turbines in wetlands                                                             |
Additional Permitting Requirements

• Microwave beam path analysis
• TV signal strength study (baseline)
• Drain tile (repair construction related damages)
• Public road permits (repair construction related damages)
• NPDES storm water permit for construction projects
• Turbine type: Utility scale, monopole design turbines, no prototypes, off white or white in color.
• Lighting and safety marking limited to FAA requirements
• Conditions for crop damage and restoration
• Emergency plan
• Tower identification
• “As-built” GIS data submitted to PUC
• Decommissioning plan
• PUC option to request post construction noise analysis
Preconstruction Surveys

Delineation of wetlands and waters of the U.S.

Phase I survey for cultural resources (MN SHPO generally recommends archaeological survey)

Biological resources including native prairie

Microwave beam paths

TV interference study (baseline)

Noise modeling
Other Permits

Wetland and Water Impacts
   Section 404 (COE), WCA (SWCD), PWI (DNR)
   License to cross public waters (DNR)

Turbine Location and Lighting
   Proposed Construction or Alteration (FAA)

Sediment Control
   NPDES storm water permit for construction projects

Transportation and Road Permits
   State, County, Township – oversize/overweight, driveway access, utility crossing

Etc.
   Additional permitting maybe be required for the interconnection, O&M building, and other project components.
Agency Coordination

• MN Department of Commerce (DOC)
• MN Department of Natural Resources (DNR)
• MN State Historic Preservation Office (SHPO)
• US Fish and Wildlife Service (FWS)
• US Federal Aviation Administration (FAA)
• US Army Corps of Engineers (COE)
• US Farm Service Agency (FSA) and Natural Resource Conservation Service (NRCS)
• County Soil and Water Conservation District (SWCD)