

EXCERPTS
AWEA Wind Energy Siting Handbook
February 2008

Chapter 1 Introduction

The studies required in the permitting process should be **science-based and tailored to the specific site**. Each wind developer has a responsibility to further the reputation of the industry by providing appropriate and sound oversight of the regulatory process. (1-3)

Chapter 3 Critical Environmental Issues

In addition to guiding a developer's decision-making process, the documentation prepared during the critical environmental issues analysis is often reviewed by potential investors as they evaluate the feasibility and risks associated with a proposed project and how much capital may be required. (3-1)

3.1 Fatal Flaws/Major Considerations

- Required permits, licenses and regulatory approvals
- Threatened or Endangered Species or Habitat
- Avian and Bat Species or Habitat
- Wetlands and Protected Areas
- Location of known archeological and historical resources
- **Community facilities and services**
- **Land development constraints**
 - Noise
 - Setback Requirements**
 - Floodplain issues
 - Height restrictions
 - Zoning Constraints**
- Telecommunication interference
- Aviation considerations

- Visual/Aesthetic Considerations

– **To the extent possible, at the early stage, visually sensitive areas, such as designated scenic vistas, parks, and residences may be identified.** (3-3)

3.2 A Constraints Map graphically depicts environmental and land use constraints that **limit the desirable area** for development of a site. (3-4)

The map may include additional constraints that can create development challenges. For example, constraint maps often indicate parcels that cannot be developed, such as conservation easements, and **residences close to the site**. (3-5)

Chapter 4-2 State Regulatory Framework

In Ohio, siting authority is vested in the Ohio Power Siting Board for wind projects with generating capacity greater than 50 MW or an electric transmission line greater than 125 kV. (4-33)

Chapter 4-3 Although some state siting boards are authorized to supersede local processes, most if not all, **state siting boards must first demonstrate that construction and operation of the proposed wind project would be consistent with local ordinances and that there is no reasonable objection to the development of the project. Many state (and federal) agencies are uncomfortable with or prohibited from issuing their own approvals for a wind farm before controversies with local officials are resolved.** Thus it is essential for developers to work cooperatively with local officials and make a good-faith effort to obtain all necessary approvals. (4-42)

Chapter 4-3 At a minimum, a wind energy developer should ask the following questions regarding local approvals:

- ✓ **Is there a Comprehensive Plan or Master Plan for land use in the area? Does it include information regarding wind energy projects, renewable energy, or sustainability?** (4-43)

Chapter 4-3 Pre-Application Process and Preliminary Design

...This process of cooperative consultation may involve modifying or creating a **comprehensive plan** that provides for wind energy, revising zoning regulations, or identifying the universe of potential wind energy facility sites within the municipality. (4-44)

Chapter 5-3 Visual/Aesthetics

Some state and local regulations may require turbine **setbacks** from adjacent property lines that are based, at least in part, on aesthetic considerations. (5-29)

Conversely, a case of pronounced visual contrast in relatively near views experienced by a large number of viewers would indicate the potential for widespread local concern over project visual impacts. (5-31)

Chapter 5.4 Shadow Flicker

A wind turbine's shadow flicker impact area does not generally extend beyond 2 kilometers and **high-impact durations (≥ 200 hours per year) are generally located within approximately 300 meters of the turbine.** ...The potential for shadow flicker has been raised as a visual issue by close neighbors of wind farm projects. (5-33)

Chapter 5.5 Sound

Most states and localities establish **noise limits at property boundaries** based on specific sound pressure levels measured in decibels. (5-35)

The **relative increase in sound** from the project may be as important, or more important, than the absolute sound levels of the project itself. (5-36)

Many communities have specific noise limits at property boundaries in the nuisance provisions of their local ordinances. (5-38)

Chapter 5.6 Cultural and Historical Resources

- Review histories of the local areas in the vicinity of the project to identify significant events, famous individuals or groups, special technological achievement, etc. which may suggest the potential for associated cultural resources of significance. (5-40)
- Develop a site sensitivity model using appropriate region-specific variables to assess the potential for various sub-areas within the project area to contain cultural resources that may be **potentially eligible** as historic properties. (5-41)

Chapter 5.7 Socioeconomics

In addition, local residents may express concern over the unknown impact to local property values as a result of proposed wind power projects, while other residents may be concerned about tourism. (5-42)

5.7.1.2 Property Values

Variables that can **affect property values in the vicinity of a wind farm include proximity to the wind farm**, size of the wind farm, and type of community, such as farming communities or communities that are based on scenic natural assets such as **ridgelines**, shorelines, and unique/sensitive habitats. (5-45)

Nevertheless, concerns regarding property **values should not be underestimated or dismissed**. (5-45)

5.8.1 Ice Shedding

It has also been observed that the rotor ice can break off, and if the rotor is moving, can be cast some distance. (5-47)

5.8.2 Blade Drop/Throw

Many permitting agencies have also established minimum required setbacks from residences, public roads, and adjacent property lines to provide safety buffers from potential blade throw. In instances where no required setbacks have been established, developers may consider voluntarily incorporating such setbacks into the siting and design phase. (5-48)