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Fourth Annual Nebraska Wind Power 2011

State & Federal Environmental & Wildlife Considerations for Wind Projects & the Permitting Process

Transmission-Related Environmental Issues

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Overview

- •Environmental issues relating to:
 - Site selection for transmission lines and towers
 - Routing of transmission lines
 - Constructing transmission lines and towers





Site Selection and Routing Issues

- Wind-related transmission likely to run from rural to urban areas.
- New transmission lines may be needed to transmit electricity from wind projects to demand centers.





Key Environmental Site Selection & Routing Concerns

- Site and route transmission lines and towers to avoid or minimize impact to:
 - Wetlands
 - Lakes, rivers, and creeks
 - Protected species (plants and animals) & their habitats
 - Migratory birds
 - Bats





Important Environmental Laws for Site Selection and Routing

- Endangered Species Act of 1973
- Migratory Bird Treaty Act of 1918
- Bald and Golden Eagle Protection Act
- Clean Water Act
- Nebraska Nongame and Endangered Species Conservation Act
- Local ordinances





Construction Phase

- Construction phase includes:
 - Site and right of way clearing and preparation
 - Transportation of materials
 - Installation
 - Cleanup / post-construction activities





Environmental Issues – Construction Phase

- Storm water runoff
- Surface water and wetlands
- Bird habitat
- Endangered species
- Permitting





Storm Water Runoff

- Installing transmission towers can disturb soil and terrain.
- Possibility that disturbed soil will run into lakes, wetlands, and rivers.
- •Must comply with storm water runoff regulations.
- Permitting required from the Nebraska Department of Environmental Quality.
- •Mitigation efforts required.





Surface Waters and Wetlands

- Construction of temporary crossings causing erosion and damage to banks.
- •Machinery can damage wetland vegetation and soil.
- Construction can disturb sediments, harming aquatic wildlife.
- Mitigation efforts and Clean Water Act compliance
 - Construct during colder months
 - Use alternative construction equipment (helicopters)
 - Minimize water and wetland crossings





Bird Habitat and Endangered Species

- Clearing path for transmission lines and towers can potentially disrupt endangered species habitat.
- •Plan construction around mating and nesting seasons to minimize impacts.
- •Other steps required to minimize impact construction activities have on endangered species and their habitats.





Post-Construction Activities

- Restore vegetation where possible.
- Restore ground habitat to "natural" conditions.
- •Remove temporary water crossings, repair banks, and implement erosion control plans.
- Place markers on towers and transmission lines to make them more visible to birds.





Questions?

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