Prepared by the North Dakota Legislative Council staff for the Energy Development and Transmission Committee
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DEVELOPMENT OF WIND AND OTHER NATURAL RESOURCES IN SAME LOCATION - BACKGROUND MEMORANDUM

Section 3 of House Bill No. 1449 (attached as an appendix) directs the Legislative Management to study the development of wind resources and other natural resources in the same location. The study requires a review of:

1. Laws relating to the siting and decommissioning of wind energy conversion facilities.
2. The desirability of an environmental assessment as a condition of siting.
3. The desirability of regulation to address the effects of wind energy conversion facilities on water, soil, cultural resources, and future development of other natural resources.

Section 1 of House Bill No. 1449 made mandatory the adoption of rules governing the decommissioning of commercial wind energy conversion facilities by the Public Service Commission. Previously, the adoption of rules was in the discretion of the commission. Regardless, the commission has adopted rules. The bill added as a factor that must be addressed in the rules--the present and future natural resource development. In addition, the bill required the facility owner or operator to record with the county recorder the location of any portion of underground foundation not removed during decommissioning. Section 2 of House Bill No. 1449 lowered the threshold for Public Service Commission siting jurisdiction from 100 megawatts to 60 megawatts of generation.

The legislative history reveals the main reason for the study and the change in law was because present rules require the removal of foundations, buildings, and ancillary equipment to a depth of three feet under the ground. Testimony revealed that this could leave 6,800 cubic feet of cement underground per tower. A minor concern was the wires left underground for the gathering system. Generally, this was less of concern because underground wires do not affect greatly future natural resource development. The rules require the removal of underground cables to a depth of two feet under the ground. Because these lines are not live, the lines are not able to be found under the one-call system. At a minimum, the coal industry wanted to know the location of the cement foundations. Even with the changes in the bill, the coal industry still had concerns and cited two situations of minerals not being developed because of leased wind rights.

PREVIOUS LEGISLATION AND PRESENT STATUTES

Current law relating to wind energy conversion siting is contained in North Dakota Century Code (NDCC) Chapter 49-22. Chapter 49-22 relates to the siting of any energy conversion and transmission facility that meets the criteria of the chapter. Under Section 49-22-03, to be an energy conversion facility, the plant must be designed for or capable of generating 60 megawatts (60,000 kilowatts) or more of electricity. In 2005 the threshold was increased from 50,000 kilowatts or more of electricity to 100,000 kilowatts or more of electricity. House Bill No. 1449 decreased the threshold from 100,000 kilowatts to 60 megawatts (60,000 kilowatts). Siting that is not within the jurisdiction of the Public Service Commission falls solely within the zoning jurisdiction of counties and townships. Generally, the county has zoning jurisdiction unless there is an organized township with zoning regulations. In practice, a wind energy conversion facility must follow the most stringent regulation of the political subdivision and the commission. The dual regulation is not the case in other siting situations that are not for generation.

Once the jurisdiction of the Public Service Commission is engaged under NDCC Chapter 49-22, a utility needs a certificate of site compatibility from the Public Service Commission under Section 49-22-07. The procedure to receive this certificate begins with a letter of intent from the utility to the commission followed by an application for a certificate under Section 49-22-08. The application requires information on the facility, including the environmental impact of the facility, the need for the facility, a comprehensive analysis supporting why the location is best-suited for this facility, mitigative measures for foreseen adverse impacts, and other information. Under Section 49-22-09, the commission must consider these factors when evaluating and designating sites:

1. The effect of the site on public health and welfare, natural resources, and the environment.
2. The effects of new energy conversion technologies and systems designed to minimize adverse environmental effects.
3. The potential for beneficial uses of waste energy from the proposed facility.
4. Adverse direct and indirect environmental effects which cannot be avoided.
5. Alternatives that minimize adverse impact.
6. Irreversible and irretrievable commitments of natural resources.
7. The direct and indirect economic impacts of the proposed facility.
8. Existing plans for other developments in the vicinity of the site.

9. The effect of the proposed site on scenic areas, historic sites and structures, and paleontological and archaeological sites.
10. The effects of the site which are unique because of biological wealth or because of rare or endangered species.
11. Other problems raised by governmental entities.

Under NDCC Section 49-22-05.1, the commission is required to develop criteria to be used in identifying exclusion and avoidance areas and to guide the site evaluation and designation process. Under this section, the commission has developed rules contained in North Dakota Administrative Code (NDAC) Section 69-06-08-01 relating to energy conversion facility siting. Exclusion areas must include a buffer zone of reasonable width to protect the integrity of the area. In addition, exclusion areas include:

1. National parks; memorial parks; historic sites and landmarks; natural landmarks; historic districts; monuments; wilderness areas; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; and grasslands.
2. State parks; forests; forest management land; historic sites; monuments; historical markers; archaeological sites; grasslands; wild, scenic, or recreational rivers; game refuges; game management areas; management areas; and nature preserves.
3. Political subdivision parks and recreational areas; hardwood draws; and enrolled woodlands.
4. Prime farmland or unique farmland unless the commission finds that the prime farmland and unique farmland that will be removed from use for the life of the facility is of such small acreage as to be a negligible impact on agricultural production.
5. Irrigated land.
6. Areas critical to the life stages of threatened or endangered animals or plant species.
7. Areas where animal or plant species that are unique or rare to the state would be irreversibly damaged.

Avoidance areas are geographical areas that may not be used for siting unless the applicant shows there is no reasonable alternative. Again, a buffer zone of reasonable width to protect the integrity of the area must be included. Avoidance areas include:

1. Historical resources not designated as exclusion areas.
2. Areas within city limits for the boundaries of a military installation.
3. Areas within the hundred-year floodplain.
4. Areas that are geologically unstable.
5. Woodlands and wetlands.
6. Areas of recreational significance not designated as exclusion areas.

In addition to exclusion and avoidance areas, the commission must look at the following impacts and the applicant must demonstrate that any significant adverse impact will be kept to an acceptable minimum. These impacts include:

1. The impact on agriculture.
2. The impact on governmental, health care, recreational, transportation, retail, and utility services.
3. The impact on local institutions, noise-sensitive land uses, rural residences and businesses, aquifers, human health and safety, animal health and safety, plant life, temporary and permanent housing, and temporary and permanent skilled and unskilled labor.
4. The cumulative effects of the location of the facility in relation to existing and planned facilities and other industrial development.

After notice and a public hearing, the commission may designate a site for the proposed facility. Under NDCC Section 49-22-13, the commission must hold public hearings in the county in which any site is proposed to be located. Under Section 49-22-16, the issuance of a certification of site compatibility is the sole site approval required to be obtained by the utility. However, a certificate of site compatibility does not supersede or preempt any local land use, zoning, or building rules and a site may not be designated which violates these rules. In addition, utilities subject to Chapter 49-22 must obtain state permits required to construct and operate energy conversion facilities and must follow the rules of any state agency.

In 2007 a major piece of legislation affecting the decommissioning of commercial wind energy conversion facilities was enacted--House Bill No. 1317. House Bill No. 1317 allowed the Public Service Commission to adopt rules governing the decommissioning of a commercial wind energy conversion facility. The bill provided that the rules may address:

1. The anticipated life of the project.
2. The established decommissioning cost in current dollars.
3. The method and schedule for updating the cost of decommissioning and restoration.
4. The method of ensuring that funds will be available for decommissioning and restoration.
5. The anticipated manner in which the projects will be decommissioned and the site restored.

In short, the rules cover what will be done at the end of a useful life of a wind facility and how payment for decommissioning will be obtained.

House Bill No. 1449, the bill that directed this study, added a sixth area--present and future natural resource development. In addition, the bill made adoption of the rules mandatory and required the filing of the locations of underground foundations with the county recorder.

Under the commission's present wind turbine decommissioning rules, contained in NDAC Chapter 69-09-09, a commercial wind energy conversion facility means a wind energy conversion facility of

equal to or greater than 500 kilowatts in total nameplate generating capacity. This threshold includes most wind turbines not used for private electricity generation. Under Section 69-09-09-02, the owner or operator of a commercial wind energy conversion facility is responsible for decommissioning that facility and for all costs associated with decommissioning. Under Section 69-09-09-03, the useful life of a facility is presumed to end after 24 months of no generated electricity. Under Section 69-09-09-04, the owner or operator must begin decommissioning within 8 months after the time the facility reaches the end of its useful life and be completed within 18 months. Under Section 69-09-09-05, decommissioning and site restoration includes:

1. Dismantling and removing all towers, turbine generators, transformers, and overhead cables.
2. Removing all underground cables to a depth of 24 inches.
3. Removing foundations, buildings, and ancillary equipment to a depth of three feet and removal of surface road material and restoration of the roads and turbine sites to substantially the same physical condition that existed immediately before the construction.

In general, the site must be restored and reclaimed to the same topography with top soils respread over the disturbed area to a similar depth as before the disturbance. Areas disturbed by the construction and decommission must be graded, top soiled, and reseeded. Under NDAC Section 69-09-09-06, before operating a commercial wind energy conversion facility, the owner or operator must file for commission review the estimated decommissioning cost and a comprehensive decommissioning plan. Under Section 69-09-09-08, after the 10th year of operation of a facility, the commission may order the owner or operator to secure a bond or other form of financial assurance to cover the anticipated costs of decommissioning the facility. Under Section 69-09-09-09, if an owner or operator does not complete decommissioning, the commission may complete decommissioning.

This memorandum has covered siting and decommissioning. However, the siting law includes authority to address decommissioning and special impacts could be addressed through decommissioning in the siting of a wind energy conversion facility. However, this would occur only for facilities that generate 60 megawatts or more of electricity. In any case, the baseline regulation would be the decommissioning rules.

For purposes of example, the following information was taken from two recent orders from the Public Service Commission for site compatibility for a wind energy conversion facility. Both orders were issued on August 12, 2009--PrairieWinds ND 1 project in Ward County and Rough Rider Wind I project in Dickey County.

The PrairieWinds project has each tower secured by a concrete foundation that extends approximately 8 feet below grade and spreads to a final diameter of approximately 30 feet. The Rough Rider Wind I project has each tower secured by a concrete foundation that typically extends 7 feet to 10 feet below grade and spreads to a final diameter of 40 feet to 60 feet at the base.

The orders contain findings of fact relating to wetland and wildlife and cultural resources and the developer's actions to address concerns relating to these topics. The standard commission order includes provisions related to this study. There are standardized provisions relating to decommissioning, cultural resources, habitat, and reclamation. The provisions are:

- The applicant shall promptly report to the commission the presence in the permit area of any critical habitat of threatened or endangered species that the applicant becomes aware of and that were not previously reported to the commission.
- If any cultural resource, paleontological resource, archaeological site, historical resource, or gravesite is discovered during construction of the facility, earth-disturbing activities in the immediate vicinity of the discovery must be halted. The resource must be marked, preserved, and protected from further disturbance until a professional examination can be made in consultation with the North Dakota State Historic Preservation Office. A report of such examination must be filed with the commission and clearance to proceed must be given by the State Historic Preservation Office.
- All preexisting roads and lanes used during construction must be restored to a condition that will accommodate their previous use, and areas used as temporary roads during construction must be restored to their original condition.
- Reclamation, fertilization, and reseeding is to be done by the applicant according to the Natural Resources Conservation Service recommendations for conservation reserve program, native prairie, and other noncropped lands unless otherwise specified by the landowner and approved by the commission.
- The applicant's obligation for reclamation and maintenance of the site shall continue throughout the life of the energy conversion facility.
- The applicant shall repair or replace all fences and gates removed or damaged during all phases of construction and operation of the proposed energy conversion facility.
- The applicant, as soon as possible upon the completion of the construction of each wind turbine, shall restore the area affected by the

activities to as near as is practicable to the condition as it existed prior to the beginning of construction.

- When the energy conversion facility is retired, structures and other facilities must be removed in accordance with applicable rules, and the area restored to as near as original condition as is practicable.
- Where available, at least 12 inches of topsoil over and along open cut areas, roadways, tower locations, and locations of associated facilities must be stripped and segregated from the subsoil and be replaced only after the subsoil is replaced.
- The applicant shall work with landowners and residents in the area to mitigate any increase in television and residential radio interference that results from the construction of the energy conversion facility.

2007-08 STUDY

During the 2007-08 interim, the Energy Development and Transmission Committee studied the siting and decommissioning of commercial wind farms. The study included the identification of key issues of public and industry concern; solicitation of public input from local government officials, electric utilities, wind industry, landowners, farm organizations, and other concerned interests; review of laws and policies of other jurisdiction; recommendations concerning laws or policies needed in this state to address wind farm siting and reclamation of wind farm sites; and decommissioning of wind farm sites.

The committee received updates throughout the interim from the Public Service Commission on the activities of the commission. In particular, the committee monitored the siting of new wind farms and the decommissioning rules adopted by the commission.

The committee was informed that the Public Service Commission adopted decommissioning rules. The rules are retroactive and exempt wind farms that are under 500 kilowatts. These are typically the type of towers that are privately owned. Basically, the commission has jurisdiction over the decommissioning of all commercial wind facilities. The rules provide for a financial mechanism that satisfies the commission that the decommissioning process will be completed. The rules require a decommissioning plan that will include information on the condition of the site so the site will be restored to near precondition status. The rules do not require the land to be restored to the same topography but do contain enough latitude so the site can be improved on decommissioning. The rules require cables to be buried at least 24 inches under the soil. Committee discussion expressed concern over this depth because, although the wires are not live, some farming processes go deeper than 24 inches. In addition, a wire that is 24 inches under the ground could be within 24 inches of the surface years later because of erosion. The committee was informed, however, that it is the regular practice to bury wires 24 inches in this state.

The committee reviewed the effect of wind farms on wildlife. In particular, the committee received testimony on the effect of wind farms on birds. The committee was informed that there has been a high level of decline of birds in native grasslands. A direct impact is the collision of birds with rotor blades. An indirect impact is habitat fragmentation. Roads for wind farms placed on native prairies increase predation and brood parasitism. Another indirect impact is that hunting is not allowed around wind towers and people do not engage in birding.

The committee was informed that the Northern Plains Wind Energy Forum is promoting wind power and safeguarding wildlife through voluntary guidelines. The guidelines have been drafted with involvement of the major wind power developers in this state. The committee was informed that the concern is not with these companies but with companies that may be more motivated to develop sensitive areas without a concern for wildlife. It was argued that there may need to be incentives for companies to follow the guidelines. In addition, there may need to be an incentive to not develop wind power in areas with good wind and great habitat.

SUGGESTED APPROACH

The study is the result of legislation that provided a potential solution to the study. As such, the committee may desire to monitor the effect of the legislation, including the rules adopted by the Public Service Commission.

If the rules do not provide an adequate solution, the next step is to inquire of the interested parties. This study resulted from a dispute between the coal and wind industries in the area of the state with wind facility development near coal mines. As such, the issue is limited in disputants and area. The parties involved may resolve their dispute without the need for legislation. This has been the history between the coal industry and the owners of easements and surface area in the past.

The committee may desire to be updated on the progress of any negotiation or for the reasons for legislation from the parties involved. Because coal mining is of a limited duration and the life of a wind farm is approximately 25 years, through the coordination of the activities parties could provide the highest and best use from the use of the natural resources perspective.

ATTACH:1