



Legislative Fiscal Bureau

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Joint Committee on Finance

Paper #549

Wind Energy Health Study (Public Service Commission)

[LFB 2015-17 Budget Summary: Page 378, #10]

CURRENT LAW

The Public Service Commission (PSC) is charged with regulating Wisconsin public utilities that produce, transmit, deliver, or furnish heat, light, water, or power directly or indirectly to or for the public. One of the PSC's regulatory responsibilities is the siting of power plants and transmission facilities through issuance of certificates of public convenience and necessity (CPCN). That process applies to all generating facilities with a capacity of 100 megawatts (MW) or more. A certificate of authority is required when public utilities construct smaller facilities, not meeting the 100 MW threshold.

Power plants or generating systems may be constructed and operated by individuals and businesses for private use. Those individuals or businesses are not considered public utilities so long as service is not provided to the public. Such facilities are not subject to PSC siting requirements so long as the facility's operating capacity is less than 100 MW. Instead, those facilities are subject to local government regulation, typically through the zoning process.

GOVERNOR

Increase the PSC's utility regulation appropriation by \$250,000 PR and require the PSC to allocate not more than \$250,000 in 2015-16 to study health issues related to wind energy systems, as defined under current law. Permit the study to consider the surveys made by the Wind Siting Council, but specify that the study not replicate those surveys. Direct the Commission to submit its report to the Governor and to the Chief Clerks of the Senate and the Assembly, no later than the first day of the 13th month after the effective date of the biennial budget act. To fund the study, the PSC would bill public utilities under its remainder assessment

authority.

DISCUSSION POINTS

1. With enactment of 2009 Wisconsin Act 40, the Legislature created a framework to allow limited and generally uniform local regulation of wind energy systems with an operating capacity of less than 100 MW. The Act also created the Wind Siting Council to advise the PSC on the establishment of administrative rules. The Act required the PSC to promulgate rules to "include setback requirements that provide reasonable protection from any health effects from noise and shadow flicker, associated with wind energy systems." The Wind Siting Council held 20 meetings over more than four months and submitted its report on August 9, 2010.

2. Based on the Wind Siting Council's report, the PSC promulgated an administrative rule on December 27, 2010. Although the Joint Committee on Administrative Rules temporarily suspended the rule, the rule went into effect on March 6, 2012, because a law permanently suspending the rule was not enacted. Municipalities and counties are prohibited from imposing more restrictive requirements on the installation of wind energy systems than those set forth in the PSC rules. While wind energy systems that require a CPCN are not directly subject to the rule, the Commission is required to take the rule into account as part of its CPCN process.

3. Under the Act 40 provisions, the Wind Siting Council consists of 15 individuals, appointed by the Commission for three-year terms. The Act designates "a University of Wisconsin System faculty member with expertise regarding the health impacts of wind energy systems" as one member of the Council. On March 16, 2010, Dr. Jevon McFadden, a University of Wisconsin faculty member and a physician, was appointed to a term on the Council ending on July 1, 2013. From 2009 to 2011, Dr. McFadden was a fellow with the Centers for Disease Control and Prevention and worked as an Epidemic Intelligence Service Officer, stationed at the Wisconsin Department of Health Services. After his fellowship ended, he relocated to Michigan, where he is a commissioned officer with the U.S. Public Health Service. Subsequently, the University of Wisconsin faculty member appointment to the Council has not been filled.

4. On May 17, 2010, Dr. McFadden delivered a 94-page Power Point presentation to the Council entitled, "Wind Turbines: A Brief Health Overview." The presentation included information on human health and safety concerns related to shadow flicker, noise, low frequency sound and infrasound, and sleep disturbance. The "Overview" also included information on using epidemiological methods to evaluate the relationship between cause and effect, a review of wind turbine studies focusing on noise and health, and a summary of World Health Organization guidelines relating to noise levels. The presentation included 16 pages of references.

5. Five years after the Act 40 effective date, the Wind Siting Council was required to submit a report to the Legislature on the health impacts of wind energy systems and on state and national regulatory developments regarding the siting of wind energy systems. Similar reports are required every five years thereafter. On October 31, 2014, the Wind Siting Council submitted its report to the Legislature, as required by Act 40. The report does not recommend any changes to the administrative rule or any changes to state law.

6. The report includes a review of scientific literature published between 2011 and 2013 pertinent to wind-health, so it is not duplicative of the Council's 2010 report. In the absence of a council member who is also a faculty member of the University of Wisconsin System, the literature search was conducted by PSC staff and submitted to the Council. This material was supplemented with literature identified by council members. The majority report concludes that while "there are several publications arguing that noise from wind turbines directly causes adverse health effects in humans, based on the peer-reviewed literature, it appears at this time that there is insufficient data to validate this scientific conclusion." While the report "is unable ... to conclude that wind turbines have a direct and negative effect on human health," it acknowledges that it is important for the Council to perform periodic reviews of peer-reviewed research to determine if the consensus changes.

7. Both reports of the Wind Siting Council (2010 and 2014) include minority reports which offer critiques related to the Council's health findings. In both 2010 and 2014, minority members objected to certain siting measures incorporated in the PSC's rules, and the 2014 minority report indicates that those siting measures are "inconsistent and outdated with developing research." While the Council limited its review of research to studies that are peer-reviewed, the 2014 minority report believes that the public interest would benefit from the Council's consideration of "other credible research, empirical evidence, and affidavits." The minority report recommends commissioning additional studies.

8. The health impacts of wind energy systems are likely to remain a contentious issue for some individuals. However, if the Committee feels that another study is unlikely to resolve disagreements regarding the health impacts of wind energy systems, the provision could be deleted from the budget (Alternative 3). The Wind Siting Council's next report, due in 2019, would continue to require a survey of peer-reviewed scientific research regarding the health impacts of wind energy systems.

9. The appointment of a UW System faculty member to the Council recognizes that there are no staff members at the PSC who are required to have backgrounds in public health issues. If the Committee is concerned about the Commission's inability to appoint a UW faculty member with expertise regarding the health impacts of wind energy systems, several options exist. For example, the bill could be amended to require the University of Wisconsin System President to recommend an appointment to the Council (Alternative 2.a.). Another alternative would be to amend current law to make the appointment more general by replacing the faculty member reference to instead require a member with expertise in public health who has studied the health impacts of wind energy systems (Alternative 2.b.).

ALTERNATIVES

1. Approve the Governor's recommendation to increase the PSC's utility regulation appropriation by \$250,000 PR and require the PSC to allocate not more than \$250,000 PR in 2015-16 to study health issues related to wind energy systems, as defined under current law.

2. Modify the current law provision related to the appointment to the Wind Siting

Council of a University of Wisconsin System faculty member with expertise regarding the health impacts of wind energy systems as follows:

- a. Require the President of the University of Wisconsin System to recommend a faculty member meeting the qualifications to the PSC when a vacancy in that appointment occurs; or
 - b. Delete the reference to a University of Wisconsin System faculty member and instead specify that the appointee must have expertise in public health and must have studied the health impacts of wind energy systems.
3. Delete provision.

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| ALT 3 | Change to Bill |
| PR | - \$250,000 |

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