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April 21, 2010

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Reneé J. Jenkins,
Docketing Division
Ohio Power Siting Board
180 East Broad Street
Columbus, Ohio 43215

PUCO

2010 APR 21 AM 10:32

RECEIVED-DOCKETING DIV

RE: In the Matter of the Application by Hardin Wind Energy, LLC, for a Certificate of Environmental Compatibility and Public Need for the Hardin Wind Farm;
Case No. 09-479-EL-BGN

Dear Ms. Jenkins:

Enclosed on behalf of Mid-Ohio Energy Cooperative, Inc. are an original and nine (9) copies of the Application of Mid-Ohio Energy Cooperative, Inc. for Rehearing, to be filed in connection with the above-referenced matter.

Thank you for your assistance. If you have any questions, please do not hesitate to call.

Very truly yours,



Carolyn S. Flahive

Enclosures

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RECEIVED-DOCKETING DIV

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BEFORE

THE OHIO POWER SITING BOARD

PUCO

In the Matter of the Application by Hardin)
Wind Energy, LLC, for a Certificate of) Case No. 09-479-EL-BGN
Environmental Compatibility and Public Need)
for the Hardin Wind Farm)

APPLICATION OF MID-OHIO ENERGY COOPERATIVE, INC. FOR REHEARING

Pursuant to Rev. Code § 4903.10 and Ohio Admin.Code 4906-7-17(D), Mid-Ohio Energy Cooperative, Inc. ("Mid-Ohio") hereby seeks rehearing of the Opinion, Order, and Certificate issued by the Ohio Power Siting Board ("Board") in this proceeding on March 22, 2010. Mid-Ohio seeks rehearing with respect to the following matter:

The Order approved and adopted the Stipulation filed in this proceeding, and issued a Certificate to Hardin Wind Energy, LLC ("Hardin"), subject to numerous conditions, one of which should be modified to require Hardin to conduct an in-depth vertical Fresnel-Zone analysis to determine whether any turbines will cause microwave interference with Mid-Ohio's licensed and/or unlicensed communications systems. If the results of such an analysis indicate Hardin's turbines would cause interference with Mid-Ohio's data transmissions, the Board should require Hardin to shift the locations of, or eliminate, the obstructing turbines. Failure to modify the Certificate's conditions to require Hardin to eliminate such interference would be unreasonable and unlawful.

A Memorandum in Support of this Application is supplied herewith.

Respectfully submitted,

MID-OHIO ENERGY COOPERATIVE, INC.

By: 

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MEMORANDUM IN SUPPORT

A. PROCEDURAL BACKGROUND

Mid-Ohio Energy Cooperative, Inc. ("Mid-Ohio") seeks rehearing of the Opinion, Order, and Certificate issued by the Ohio Power Siting Board ("Board") in this proceeding on March 22, 2010 ("Order"). The Board determined that Hardin Wind Energy LLC ("Hardin") had satisfied all of the criteria established in accordance with Revised Code Chapter 4906 for the construction, operation, and maintenance of Hardin's wind facility, subject to the conditions set forth in the Stipulation filed by the parties on January 12, 2010.¹

With regard to the nature of the probable environmental impact of Hardin's wind facility, the Staff Report filed December 21, 2009 noted Hardin had identified eight microwave paths in the vicinity of the project area.² Based on a calculated worst-case scenario and subsequent analysis, it was determined that turbines 38 and 180 would have the potential to interfere with microwave transmission.³ In the Stipulation, Hardin agreed to shift the location of, or eliminate turbines 38 and 180 if the results of an in-depth vertical Fresnel-Zone analysis indicate such interference would occur.⁴ Hardin's Certificate is subject, in part, to that important condition. Mid-Ohio seeks comparable treatment with respect to potential interference with its communications systems.

Mid-Ohio has contemporaneously filed a Motion for Leave to File an Application for Rehearing. Mid-Ohio does not object to the Hardin wind project; Mid-Ohio seeks only to ensure that the data transmitted between its control center and substations, which are critical for electric grid reliability, as well as for public safety, will not be adversely affected by the location and

¹ Order at 36.

² Staff Report at 17.

³ Id.

⁴ Stipulation at 10, condition (47).

operation of Hardin's turbines. Mid-Ohio seeks rehearing of the Order solely for the purpose of requiring Hardin to a) shift or eliminate the four turbines acknowledged by Hardin on March 19, 2010 as having the potential to obstruct Mid-Ohio's microwave paths,⁵ b) avoid interference with Mid-Ohio's 900 Mhz omni-directional non-licensed sites used to control its down line distribution equipment, and c) work with Mid-Ohio to determine whether Hardin's turbines will cause any additional interference with Mid-Ohio's communications systems, in ways that have not yet been identified, and make any necessary revisions to the turbine layout to avoid such interference. Mid-Ohio's licensed path should have been identified on Hardin's initial microwave report, but was not.⁶

B. FACTUAL BACKGROUND

Mid-Ohio is a member-owned distribution electric utility serving over 8,900 meters in portions of ten Ohio counties, including Hardin County. Mid-Ohio estimates 90% of Hardin's wind project will be situated within Mid-Ohio's certified territory. Mid-Ohio relies on a combination of licensed and unlicensed radio systems to transmit communications between its central control room located in Kenton, Ohio and critical points along the distribution system, including 13 distribution substations. Mid-Ohio's accompanying Motion for Leave to file an Application for Rehearing, incorporated by reference herein, fully explains the dialogue that has taken place between Mid-Ohio and Hardin relative to Mid-Ohio's concerns about interference with its microwave paths.

⁵ On March 19, 2010, Hardin provided Mid-Ohio with a copy of Comsearch's Wind Power GeoPlanner Mid-Ohio Energy Microwave Report (hereinafter "Mid-Ohio Microwave Report"), which Mid-Ohio has not attached hereto because it is identified as "Proprietary." Moreover, Hardin requested that Mid-Ohio not share the report with other parties due to its confidentiality.

⁶ See, Wind Power GeoPlanner™ Licensed Microwave Report, publicly filed in conjunction with Hardin's responses to Staff's data requests on November 20, 2009 (hereinafter "Licensed Microwave Report").

C. THE BOARD SHOULD MODIFY THE ORDER AND CERTIFICATE TO REQUIRE HARDIN TO SHIFT OR ELIMINATE ANY TURBINES THAT WOULD CAUSE INTERFERENCE WITH MID-OHIO'S MICROWAVE PATHS.

- 1. Obstruction of Mid-Ohio's microwave paths would adversely affect electric grid reliability and public safety.**

Mid-Ohio currently operates a point-to-point system between its Kenton-West Newton tower and the towers located at Mid-Ohio's Ada Substation, operating at 11 Ghz for data and surveillance data communications. The engineered radio path is a direct line-of-site between Mid-Ohio's Kenton, Ohio tower and the tower structure located within Mid-Ohio's West Newton Substation. Because of certain geological land formations in the area, the communications are then repeated in Mid-Ohio's West Newton tower to its Ada Substation to the north using 900 Mhz and 2.4 Ghz license free systems.

The data transmitted between Mid-Ohio's control center and substations are critical for electric grid reliability as well as public safety. The secured data channels carry Supervisory Control and Data Acquisition (SCADA) data used to monitor and control over 200 key components of the Mid-Ohio system. These radio systems also carry Automated Meter Infrastructure (AMI) data between the substations and the control center. The AMI system utilizes a power line carrier communications system between member/customer meters and the substations. Mid-Ohio relies upon the point-to-point radios to transport the AMI data collected at that Substation back to the control center. The AMI system not only collects metering data but it also inputs the data into Mid-Ohio's Outage Management System (OMS) giving Mid-Ohio's personnel near real-time outage and blink reports. The 2-way system also allows for communications between Mid-Ohio's offices and the member/consumer's home or business.

The point-to-point radios are also used for Substation video surveillance camera systems, alarm and event notification systems, weather station data, load management control systems and

intrusion detection systems. These systems are critical for public and employee safety, service reliability, and load forecasting.

The high speed data connections that would be obstructed by Hardin's turbines currently give Mid-Ohio the ability to control devices such as remote tie-line switch gear, capacitor banks, and regulator banks throughout Mid-Ohio's distribution territory using license free 900 Mhz omni-directional radios between the Substations and distribution devices. The connections also allow for the establishment of "Hot Spots" relied upon by Mid-Ohio's crews to access office servers from the immediate vicinity of the Substations, thereby increasing productivity as well as safety.

With respect to the transmissions between Mid-Ohio's Kenton-West Newton tower and its Lynn Substation, Mid-Ohio is concerned about potential interference from Hardin's turbines with the license free omni-directional 900 Mhz communications transmitted from that Substation and other local distribution apparatuses.

On March 19, 2010 Hardin provided the Mid-Ohio Microwave Report, prepared by Comsearch, to Mid-Ohio. That report identified four turbines that will potentially interfere with Mid-Ohio's licensed microwave path. As fully described in Mid-Ohio's Application for Leave, representatives from Hardin and Mid-Ohio have met to review Mid-Ohio's interference concerns. Mid-Ohio has provided Hardin with all information, data, and documents Hardin has requested. Hardin has assured Mid-Ohio that Mid-Ohio's concerns about the turbine layout and potential interference with Mid-Ohio's communications systems will be incorporated into the revised project layout that is necessary "in order to address some potential impacts identified by different agencies and Landowners during the OPSB process." Mid-Ohio has yet to see a turbine layout revised to eliminate the identified obstructions with its licensed microwave path and to

avoid interference with its 900 Mhz omni-directional non-licensed sites used to control its down line distribution equipment. Furthermore, because Hardin has not yet provided Mid-Ohio with a revised layout with all necessary detail, Mid-Ohio cannot determine whether Hardin's turbines will pose additional, but as of yet unidentified, interference with Mid-Ohio's communications systems.

The magnitude of the identified and avoidable permanent interference with Mid-Ohio's data transmissions as the result of the locations of Hardin's turbines would be insurmountable, resulting in loss of critical services to Mid-Ohio's member/customers, adverse impact on the "Smart Grid" systems, potential danger to Mid-Ohio's employees, and extraordinary expense to re-engineer Mid-Ohio's systems in order to remain operational. The Board should grant rehearing and modify its Order to require Hardin to shift the locations of, or eliminate, the turbines determined to cause interference with Mid-Ohio's licensed and unlicensed communications systems.

2. Hardin has already agreed to make necessary modifications to its turbine layout to avoid interference with other microwave systems.

As a condition of the issued Certificate, the Board has required Hardin to shift the location of, or eliminate, turbines that have been identified as potentially causing microwave interference with the licensed microwave paths identified during the proceeding. Hardin failed to identify Mid-Ohio's licensed microwave path and therefore the Order fails to recognize additional potential interference with critical communications systems. Hardin agreed in the Stipulation to shift the location of or eliminate obstructing turbines.⁷ The Board should similarly require Hardin to shift the location of or eliminate the turbines acknowledged by Hardin to be potential obstructions to Mid-Ohio's communications systems.

⁷ Stipulation at 10, condition (47).

The interference and obstructions with which Mid-Ohio is concerned are not hypothetical; they have been identified and acknowledged by Hardin. The Mid-Ohio Microwave Report prepared by Comsearch on behalf of Hardin confirmed and identified four specific turbines that would have a potential conflict with Mid-Ohio's licensed microwave path.⁸ Hardin has not opposed eliminating the interference with the paths previously identified in this proceeding, therefore Hardin has no basis for opposing the removal of obstructions to and interference with Mid-Ohio's licensed microwave paths and its 900 Mhz omni-directional non-licensed sites. In various exchanges of correspondence and face-to-face meetings, Hardin has assured Mid-Ohio that its turbine layout will be revised to address Mid-Ohio's concerns. The Board should grant rehearing to formally require Hardin to avoid and eliminate interference with Mid-Ohio's microwave paths.

Requiring Hardin to revise its turbine layout to avoid interference with Mid-Ohio's communications systems would not create an undue burden on Hardin. Construction of the facility has not yet begun. Not only must Hardin shift the location of, or eliminate, turbines 38 and 180 if an in-depth vertical Fresnel-Zone analysis determines those turbines would cause interference with microwave paths,⁹ Hardin must take a number of additional steps and undergo additional review of its turbine layout before it is authorized to commence construction:

- Hardin has already been ordered to implement the mitigative measures set forth in the amended application, as modified or clarified in subsequent filings;¹⁰
- Hardin must also conduct an architectural survey of the project area and submit an amendment, modification, or mitigation plan to Staff if the survey discloses a find of

⁸ Mid-Ohio Microwave Report, supra note 5.

⁹ See Order at 30, condition (47).

¹⁰ See id. at 21, condition (3).

cultural or architectural significance, or a structure that could be eligible for inclusion on the National Register of Historic Places;¹¹

- the Order requires Hardin to meet all recommended and prescribed FAA and ODOT-OA requirements and to submit its final turbine locations for ODOT-OA and FAA review prior to construction;¹² and
- prior to construction Hardin must submit the final layout and turbine locations to the National Telecommunications and Information Administration for review and approval.¹³

Given the additional revisions Hardin has committed to making and the subsequent review and approval process associated with the revised turbine layout, Hardin will not bear any undue burden or delay in taking the necessary actions to eliminate interference with Mid-Ohio's communications systems. On the other hand, Mid-Ohio would suffer significant undue harm if the turbine layout as approved is not revised so as to avoid the interference issues described herein. The Board should grant rehearing to require as a condition of certification that Hardin shift the locations of, or eliminate, any turbines that would cause interference either with Mid-Ohio's licensed microwave path or with its 900 Mhz omni-directional non-licensed sites used to control its down line distribution equipment.

D. CONCLUSION

For the reasons set forth above, Mid-Ohio Energy Cooperative, Inc. respectfully requests that the Board grant its Application for Rehearing and modify its Order to require Hardin to shift the locations of, or eliminate, any turbines determined to cause interference with Mid-Ohio's licensed and unlicensed communications systems. Such a modification would be consistent with the Board's approval of condition 47 in the Stipulation.

¹¹ See id. at 27, condition (28).

¹² See id. at 29, condition (40).

¹³ Id., condition (45).

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing was served by electronic service and first class mail, postage prepaid, on the parties listed below on this 21st day of April 2010.

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