

Detroit Edison



A DTE Energy Company

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November 30, 2009

Ms. Mary Jo Kunkle
Executive Secretary
Michigan Public Service Commission
6545 Mercantile Way
Lansing, Michigan 48909

Re: In the matter, on the Commission's own motion, to direct electric utilities, affiliated transmission companies, and independent transmission companies to identify existing or new transmission infrastructure necessary to deliver maximum and minimum wind energy production potential for wind energy resource zones and submit such information to the Wind Energy Resource Zone Board for its review
MPSC Case No. U-15899

Dear Ms. Kunkle:

Attached for electronic filing in the above-captioned matter is The Detroit Edison Company's Response. Also attached is a Proof of Service.

Very truly yours,

Jon P. Christinidis

JPC/kbt
Attachment

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

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to direct electric utilities, affiliated transmission)	
companies, and independent transmission companies)	
to identify existing or new transmission infrastructure)	Case No. U-15899
necessary to deliver maximum and minimum wind)	
energy production potential for wind energy resource)	
zones and submit such information to the Wind Energy)	
<u>Resource Zone Board for its review</u>)	

THE DETROIT EDISON COMPANY'S RESPONSE

1. Introduction

This reply is submitted on behalf of The Detroit Edison Company ("Detroit Edison") in response to and in accordance with the Commission's December 4, 2008 order in Case No. U-15899 which directs, following the issuance of the Wind Energy Resource Zone Board's ("Board's") Final Report, that electric utilities, affiliated transmission companies, and independent transmission companies in the State identify existing or new transmission infrastructure necessary to deliver maximum and minimum wind energy production potential for each of the regions identified by the Board, and to submit such information to the Board for its review.

In its Final Report issued on October 15, 2009, the Board identified four regions in the state as having the highest wind energy harvest potential. Region 4 in Michigan's Thumb area covers parts of five counties. Region 4 was identified as having a minimum capacity potential of 2,367 MW and a maximum potential of 4,236 MW representing nearly 70% of the total identified wind generation capacity in the state. *Almost all of*

Region 4 lies in Detroit Edison's electric service area. Based on previous studies performed by the Midwest Independent System Operator addressing the interconnection of wind generation in Region 4, Detroit Edison anticipates that significant expansion of the electrical system in Region 4 may occur to accommodate the interconnection of new wind generation, both for the minimum and for the maximum wind generation capacities identified by the Board. Detroit Edison does not own or operate networked high voltage transmission lines and thus will not be commenting on the transmission infrastructure associated with the board-identified wind generation capacity levels. Detroit Edison does however operate 41.57 kV electrical lines "Detroit Edison Electrical System (DEES)" in Region 4 which are interconnected to the ITC transmission system and thus will be impacted by wind farm interconnections in Region 4. Detroit Edison expects that the impacts to the DEES will be significant.

Almost all of Region 4 is served by the International Transmission Company's (ITC) transmission system and Detroit Edison is ITC's largest customer. Based on federal regulation, and as ITC's largest customer, the cost of transmission modifications by ITC may be unfairly and disproportionately borne by Detroit Edison's retail electric customers if the new wind generation located in Region 4 is used to meet the 2008 PA 295 responsibilities of Electric Providers in other parts of Michigan.

2. Detroit Edison Electrical System (DEES) Impacts

Existing capacity for direct generation interconnection on the DEES in Region 4 is limited and thus direct interconnection to the DEES will be limited without upgrades to that system. The DEES may also be impacted by new generator interconnections to the ITC transmission system in Region 4 because the DEES interconnection to the ITC transmission system sets up and creates parallel paths for power flow. Even when wind farms connect directly to transmission system, power can flow through the DEES both under normal and abnormal transmission system conditions. Because of these parallel flow paths, the reliability of the DEES and service to existing Detroit Edison's retail electric customers may be negatively impacted without a coordinated system planning effort between ITC's transmission planners and Detroit Edison's DEES planners.

As wind farms connect to the existing or expanded transmission system in Region 4, Detroit Edison may also need to re-conductor many miles of its DEES in Region 4 to protect it from overload damage due to abnormal transmission system scenarios and to maintain acceptable levels of DEES reliability. (See, for example, R460.701 et seq. *"Service Quality and Reliability Standards for Electric Distribution Systems"*) In addition to the steady state power flow impacts expected on the DEES, the increased generation from wind farms and the expansion of transmission infrastructure in Region 4 will likely significantly increase the magnitude of short circuit current for electrical system faults; the resulting impact being that many of Detroit Edison's substations in Region 4 will likely need substation equipment upgrades.

Detroit Edison cannot reasonably estimate the magnitude of the impacts or the cost of addressing the impacts to its DEES until a final resolution of the proposed ITC transmission build-out in Region 4 is reached. Specifically, the voltage, the location and the configuration of any transmission system modifications to support wind generation must be known before a reasonable estimate of the remediation costs on the DEES can be made. With that information, Detroit Edison can then estimate the number of substations that will need to be modified, if any, the number of DEES substations requiring equipment upgrades, and the miles of DEES conductor that may need to be upgraded to continue to provide reliable electric service for the Thumb area. Once the final transmission plan is agreed upon, Detroit Edison will be able to undertake its analysis of the impacts to the DEES and develop cost and material estimates to address those impacts. Detroit Edison looks forward to working with all parties to achieve new wind generation development in Region 4.

3. Cost Impacts of Transmission Development in Region 4

Detroit Edison anticipates that significant expansion of the transmission infrastructure in Region 4 may occur to accommodate the interconnection of new wind generation, both for the minimum and for the maximum wind generation capacities identified by the Board. Almost all of Region 4 receives electric transmission service from ITC's transmission system, which in turn serves Detroit Edison's electric service area. Detroit Edison is ITC's largest customer.

To Detroit Edison's knowledge there have been no discussions between or among Michigan Electric Providers that may utilize the transmission system modifications or expansions with regard to cost sharing arrangements for the anticipated transmission system construction. With nearly 70% of the State's identified wind resources being located in Region 4 within Detroit Edison's electric service territory, it is likely that other Michigan Electric Providers will rely on wind generation located in Detroit Edison's electric service territory to address their responsibilities under 2008 PA 295. Unless a cost sharing arrangement is reached between or among Electric Providers in the State being serviced by transmission development in Region 4, under MISO's transmission tariff (which incorporates ITC's transmission rates and cost allocation), by default, Detroit Edison's retail electric customers will unfairly bear the cost of all transmission system modifications and expansions built to accommodate the anticipated wind generation in Region 4.

New transmission development in Detroit Edison's electric service territory in Region 4 will almost certainly be developed and utilized by Electric Providers other than Detroit Edison to address their responsibilities under 2008 PA 295. In fact, the two wind farms currently operating in Region 4 serve the retail electric customers of Electric Providers other than Detroit Edison while the several million dollars of required transmission network modifications enabling the interconnection of those wind farms are included in ITC's transmission rates which are borne solely by Detroit Edison's retail electric customers.

There is, however, a provision in MISO's tariff which contemplates and allows for multi-party cost sharing for transmission network modifications constructed for mutual benefit and by mutual consent. Section III.A.2.a of Attachment FF¹ of MISO's ASM Tariff addresses optional funding mechanisms for transmission network upgrades and states:

Market Participant's Option to Fund: Notwithstanding the Transmission Provider's assignment of cost responsibility for a project included in the MTEP, one or more Market Participants may elect to assume cost responsibility for any or all costs of a Network Upgrade that is included in the MTEP. Provided however, in the event the Market Participant is also a Transmission Owner such election of the option to fund must be made on a consistent, non-discriminatory basis.

Detroit Edison would thus urge the Commission, prior to authorizing or facilitating construction of new transmission facilities, to justly and reasonably resolve these cost allocation issues and/or convene discussions to address just and reasonable cost allocation with the State's Electric Providers utilizing or intending to utilize, directly or indirectly, transmission and distribution to interconnect renewable generation in Detroit Edison's electric service territory.

Respectfully Submitted,

THE DETROIT EDISON COMPANY

¹ See MISO's Open Access Transmission, Energy and Operating Reserve Markets Tariff (ASM Tariff) Attachment FF: Transmission Expansion Protocol
<http://www.midwestmarket.org/publish/Document>

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PROOF OF SERVICE

STATE OF MICHIGAN)
) ss.
COUNTY OF WAYNE)

Jennifer Evans, being duly sworn, deposes and says that on the 30th day of November, 2009, a copy of The Detroit Edison Company's Response in the above captioned matter was served upon Steven Hughey (hugheys@michigan.gov) via e-mail.

Jennifer Evans

Subscribed and sworn to before
me this 30th day of November, 2009.

Notary Public