

**PUBLIC SERVICE COMMISSION OF WISCONSIN**

**IN THE MATTER OF**

**JOINT APPLICATION FOR PUBLIC SERVICE COMMISSION OF WISCONSIN**

**CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY**

**AND WISCONSIN DEPARTMENT OF NATURAL RESOURCES**

**UTILITY PERMIT**

**HAMPTON-ROCHESTER-LACROSSE 345 kV TRANSMISSION PROJECT**

**DOCKET NO. 5 CE 136**

**INITIAL BRIEF**

**ON BEHALF OF**

**THE MIDWEST INDEPENDENT TRANSMISSION SYSTEM OPERATOR**

**March 30, 2012**

**BEFORE THE  
PUBLIC SERVICE COMMISSION OF WISCONSIN**

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IN THE MATTER OF JOINT APPLICATION  
FOR PUBLIC SERVICE COMMISSION OF  
WISCONSIN CERTIFICATE OF  
PUBLIC CONVENIENCE AND NECESSITY  
AND WISCONSIN DEPARTMENT  
OF NATURAL RESOURCES UTILITY PERMIT  
HAMPTON-ROCHESTER-LACROSSE  
345 kV TRANSMISSION PROJECT

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**MISO's INITIAL BRIEF**

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**INTRODUCTION**

Midwest Independent Transmission System Operator, Inc. ("MISO"), pursuant to the Commission's Prehearing Conference Memorandum of December 06, 2011, states the following as its Initial Post-hearing Brief:

MISO intervened in this proceeding at the request of the applicants and the Commission staff in order to share its analysis of the project as independent regional transmission operator. MISO has a unique role in operating the regional interconnected power grid and harmony is required between MISO's planning and market operations, and state siting, cost review and other project determinations. Wisconsin law articulates MISO's statutory responsibilities to provide independent, fair, and nondiscriminatory operation of the transmission grid, to determine the need for additional transmission facilities in the state, and satisfy the reasonable needs of transmission users in the state for reliable, low-cost and competitively-priced electric service. Wisconsin Statute 196.485(3). Similarly, the Commission must consider regional reliability benefits to customers in the state when certificating a high-voltage project. s.196.491(3)(d)(3r)

and (3t), Stats. Based on the reliability analyses and other market benefits articulated in this docket, MISO urges the Commission to approve the 345 kV project as proposed by the applicants.

## ARGUMENT

### **1. The 345 kV project is needed to satisfy the reasonable needs of the public for an adequate supply of electric energy.**

The MISO transmission expansion plan (MTEP) is a comprehensive process involving the study of the transmission grid and its critical components under a variety of operating conditions – all for the purpose of assuring safe, reliable, and cost effective operation. Using local forecasts and broad input from stakeholders, expansion plans are developed and tested to provide transmission service in the near, mid- and long terms. MISO and its stakeholders carefully considered the Rochester –Hampton –La Crosse 345 kV project and recommended it as a critical need project in 2008 in MTEP 08, based on a projected 2011 peak of 492 MW. Significant reliability problems were evident unless new capacity is added in the area.<sup>1</sup> That analysis was updated for this proceeding using a current MTEP 11 model that assumed a 2016 peak load level of 500 MW. At that peak load level, with two critical outages, line overloading (thermal) and low voltages would be severe over a wide area. Under such conditions, service interruptions would be a risk to public health and safety as well as economic harm to the community. The study showed that a 345kV project that ties centrally into the Lacrosse area system would very effectively mitigate these problems.<sup>2</sup> The 345 kV project will support area load growth for many years, and will provide continued reliable loading levels even as

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<sup>1</sup> MISO-Webb-Direct, p. 12.

<sup>2</sup> MISO-Webb-Direct, p. 15.

significantly more new wind generation comes onto the grid in support of regional renewable energy mandates. Other alternatives do not derive all these benefits. The MISO technical studies and project approval assumed the termination point of the 345 kV project to be at the North La Crosse substation.<sup>3</sup>

The reliability analysis used local area forecasts of load growth and a forecast range is reasonable. The applicants estimate load growth rates of 1.46 percent in 2011 to 2020.<sup>4</sup> The PSCW economist supports a range of .78 percent to 1.28 percent annual load growth.<sup>5</sup> CUB's expert agreed that 1 percent average annual load growth was reasonable.<sup>6</sup> MISO's sampling of confidential Module E LSE load information indicates an average growth rate of 1.04 percent per year in the general region of the project.<sup>7</sup> We believe that any of these estimated growth rates support the immediate need for the project. Our analysis showed loadings and voltages more than 10% out of design range without the project as load levels approach 500 MW. This means that with the five to ten year planning horizon, area line loadings and voltages will be out of tolerance because 500 MW will occur by 2022 even at a growth rate of 0.7% applied to the 2011 actual of 465.<sup>8</sup>

In addition, weather has recently caused swings of 6 and 9 percent in the La Crosse area, lending support for an estimate on the high-side of the forecast.<sup>9</sup> MISO noted the prudence of maintaining a margin (through system expansion) of several percentage points between peak

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<sup>3</sup> MISO-Webb-Direct, pp. 13-17; Applicants-Kline-Exh. 3 and 4.

<sup>4</sup> Applicants-King-Tr. Pp. 145-146.

<sup>5</sup> PSCW-Urban-Tr. 647.

<sup>6</sup> CUB-Hahn-Tr. 32.

<sup>7</sup> MISO-Webb-Rebuttal, p. 5.

<sup>8</sup> MISO-Webb-Rebuttal, p. 4-6.

<sup>9</sup> PSC-Urban-Direct, p.5.

load levels and the predicted voltage collapse load level of the system.<sup>10</sup>

The project addresses critical reliability issues in the Lacrosse area and will accommodate expected load growth, with a reasonable margin for weather extremes. MISO believes the project should commence as soon as possible.

## **2. Project Design and the Regional Planning Process Are Intensive and Require Certainty.**

The Hampton-Rochester-La Crosse project has been evaluated by MISO and our stakeholders, including the MISO Transmission Owners, as providing a 345 kV source to the central La Crosse area. The MISO regional planning process adheres to the FERC Order 890 open and transparent planning principles. This process involves numerous evaluations of project proposals and their effectiveness and provides multiple opportunities for stakeholders, including impacted Transmission Owners, to review project need, design, and effectiveness.<sup>11</sup> Throughout the multi-year planning process involving the development and approval of the Hampton-Rochester-La Crosse project in 2008 and in additional plans developed since then, and as recent as December 2011, this project has been considered a part of base plans. There were no advocates for redesign of the project terminals.<sup>12</sup> The MISO Transmission Owners Agreement provides that MISO approval of regional plans are subject to further approvals required by regulatory authorities. The Agreement also provides that project designs may be changed if necessary based on prevailing circumstances. However, in order for the regional planning process to be as effective as possible project developers should make every effort to identify and address, within the regional planning processes, potential issues that could result in redesign.

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<sup>10</sup> MISO-Webb-Rebuttal, p. 5.

<sup>11</sup> MISO-Webb-Direct, p. 4-7.

<sup>12</sup> MISO-Webb-Tr. 181, 184; Applicants-Kline-Rebuttal, p. 3-13; Tr. 158; Kline-Exh. 2,3,4.

When a project is redesigned after the extensive regional planning process, MISO must ensure that the redesigned project will continue to meet the initial needs ascribed to the project. This involves additional engagement with MISO stakeholders and the MISO Board of Directors to ensure continued transparency around project development and cost impacts. In the worst case scenario, such reengagement could lead to delays in the completion of an urgently needed project that may take years to construct.

**3. French Island generation is not a substitute for a 345 kV project.**

French Island generating unit 4 cannot be relied upon under NERC standards and approved MISO business practices to be the only generator available to mitigate a serious contingency in the La Crosse area. NERC rules are the foundation for the MISO business practices that determine whether the transmission system will meet the performance requirements under the NERC prescribed contingency testing. Sirohi testified that even if Units 3 and 4 were repaired and made operational, they would meet MISO standards up to a load serving capability of only 500 MW.<sup>13</sup> Therefore the units would not support NERC and MISO standards that require that where there is uncertainty about the viability of any existing generating unit over the planning horizon, *additional* generating units must be available to provide the needed capacity to maintain loadings and voltages, without reliance on any single unit. With no additional uncommitted units available in the area, the 345 kV project is needed as a substitute for generation in the local area.<sup>14</sup> Bringing the inactivated French Island Unit 3 back into operation was not analyzed<sup>15</sup> nor was Unit 4 operation evaluated in 161 kV alternatives.<sup>16</sup>

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<sup>13</sup> PSC-Sirohi-Surrebuttal, p. 2.

<sup>14</sup> MISO-Webb-Rebuttal, p. 2-3.

<sup>15</sup> PSC Staff-Sirohi-Tr. 636

<sup>16</sup> PSC-Sirohi-Surrebuttal, p. 2.

**4. The project has significant regional benefits.**

Although the project meets critical needs as a baseline reliability project approved in the MISO MTEP, it would bring other significant benefits to the region and the wholesale power market, including reduced production costs, reduced congestion and increased power transfer capability.<sup>17</sup>

**CONCLUSION**

The 345kV project is needed to address near term and long term local reliability issues. As an element in the MISO regional expansion plan, the project will also deliver benefits to the region as part of a robust transmission grid. For those reasons, MISO urges the commission to approve the 345kV project as proposed.

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<sup>17</sup> Xcel-Beuning-Direct; also Tr. beginning at p. 113; WPPI- Noeldner-Direct p.5, Tr. 107; PSC-Direct-Neumeier, p. 2; PSC-Direct-Urban , p.8; MISO-Webb-Direct, p. 16-19.

Respectfully submitted,

/s/ Warren J. Day

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**Certificate of Service**

I hereby certify that a true and correct copy of the foregoing was e-mailed on March 30, 2012, to the persons on the Commission's service list in this case.

/s/ Lisa Holtson  
Contractor Paralegal for MISO