

**STATE OF MINNESOTA  
OFFICE OF ADMINISTRATIVE HEARINGS  
FOR THE  
MINNESOTA PUBLIC UTILITIES COMMISSION**

In the Matter of the Application of ITC  
Midwest LLC for a Certificate of Need and  
Route Permit for the Minnesota-Iowa 345 kV  
Transmission Line Project in Jackson, Martin,  
and Faribault Counties

**PUC Docket No.** ET-6675/CN-12-1053

**OAH Docket No.** 60-2500-30782

**INITIAL POST-HEARING BRIEF  
OF THE  
MINNESOTA DEPARTMENT OF COMMERCE,  
DIVISION OF ENERGY RESOURCES**

The Minnesota Department of Commerce, Division of Energy Resources, Energy Regulation and Planning (Department or DOC-DER) respectfully submits this Initial Post-Hearing Brief to provide the Administrative Law Judge (ALJ) and the Minnesota Public Utilities Commission (Commission) with an analysis of facts and law supporting its position in the above-entitled matter.

**I. PROPOSED PROJECT**

On March 22, 2013, ITC Midwest LLC (ITC, ITCM or the Company) filed the Company's *Application to the Minnesota Public Utilities Commission for a Certificate of Need: Minnesota – Iowa 345 kV Transmission Project in Jackson, Martin, and Faribault Counties* (Petition). In the Petition ITC proposed to construct a 345 kV transmission line and associated facilities located in Jackson, Martin, and Faribault Counties in Minnesota, and Kossuth County in Iowa.

ITC's proposal consists of the following elements:

- ITC’s existing Lakefield Junction substation would be expanded for a new 345 kV interconnection;
- a 345 kV line would be constructed: Lakefield Junction—Huntley—Ledyard—Kossuth County;
- a new Huntley substation would be constructed, proposed to be located south of the existing Winnebago Junction Substation;
- the existing Winnebago Junction substation would be removed; and
- the four existing 161 kV lines connecting to Winnebago Junction would be re-connected to the Huntley substation (Project).<sup>1</sup>

The Kossuth County substation is owned by MidAmerican; the other substations are owned by ITC. Both the Ledyard and the Kossuth County substations are located in Iowa. There are additional portions of the proposed Project in entirety in Iowa; from the Kossuth County substation, MidAmerican proposes to construct:

- a 345 kV line south to the existing Webster substation, near Fort Dodge, Iowa; and
- a 345 kV line running west to the new O’Brien substation, near Sanborn, Iowa.<sup>2</sup>

ITC’s proposed Project and MidAmerican’s proposed 345 kV facilities are part of the Midcontinent Independent Transmission System Operator, Inc.’s (MISO) Multi-Value Projects (MVP) portfolio. Collectively the facilities proposed by ITC and MidAmerican are called MVP 3.<sup>3</sup>

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<sup>1</sup> ITC Ex. 6 at 1 (Petition).

<sup>2</sup> ITC Ex. 6 at 1-2 (Petition).

<sup>3</sup> ITC Ex. 6 at 2 (Petition).

A closely related transmission line is MVP 4, proposed to be constructed by MidAmerican in Iowa sometime after MVP 3 is built in Minnesota. MVP 4 creates a double circuit 345/161 kV path through northern Iowa, and consists of:

- a new 345 kV transmission line Winnco—Lime Creek—Emery—Black Hawk—Hazleton;
- rebuilt 161 kV transmission (on the same towers) will be Lime Creek—Emery—Hampton—Franklin—Union Tap—Black Hawk—Hazleton; and
- new 345/161 kV transformers (450 MVA) will be installed at the Lime Creek, Emery and Black Hawk substations.<sup>4</sup>

Collectively MVP 3 and MVP 4 are referred to as the Mid-MISO MVPs.<sup>5</sup> The main alternative to the Mid-MISO MVPs discussed in this proceeding is a complete rebuild of the existing Fox Lake—Rutland—Winnebago Junction 161 kV line (161 kV Rebuild).

The 345 kV transmission line proposed Project of ITC was developed by MISO as part of a broad portfolio of high voltage transmission lines, referred to as the MVP portfolio. The MVP portfolio is a group of seventeen transmission projects distributed across the MISO footprint and for which MISO members will share the costs. The MVP portfolio was approved for implementation by MISO's Board of Directors as part of the MISO Transmission Expansion Plan for 2011 (MTEP11).<sup>6</sup> This approval occurred on December 8, 2011.<sup>7</sup> MISO then turned over projects in the MVP portfolio to transmission-owning utilities to obtain necessary state regulatory approvals, to construct, and to place in-service.

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<sup>4</sup> ITC Ex. 22 at Schedule 2 (Berry Direct).

<sup>5</sup> MISO Ex. 400 at 7 (Chatterjee Direct).

<sup>6</sup> MISO Ex. 400 at 19-20 (Chatterjee Direct).

<sup>7</sup> MISO Ex. 400 at 8 (Chatterjee Direct).

Under the provisions of the MISO transmission owners' agreement the ownership and responsibility to construct the proposed Project belong equally to ITC and MidAmerican Energy Company (MidAmerican). ITC and MidAmerican agreed that ITC would own the proposed facilities in Minnesota.<sup>8</sup> Thus, ITC filed its request for a CN for a transmission line created by MISO.<sup>9</sup> All transmission modeling for the proposed Project and the alternatives identified was performed either by ITC or MISO.<sup>10</sup>

## II. STATEMENT OF ISSUES

In its *Notice and Order for Hearing*, the Commission<sup>11</sup> identified the issues to be addressed in this matter as follows:

Minnesota Rules part 7849.0120 sets forth criteria that must be met to establish need for proposed large electric facilities, including the projects at issue. Additionally, the Commission must consider factors set forth at Minnesota Statutes sections 216B.2422, subdivision 4, and 216B.243, subdivisions 3 and 3a. The parties to this proceeding should address whether the proposed project meets these criteria and address these factors. They may also raise and address other issues relevant to the application.

## III. PROCEDURAL BACKGROUND

The Commission's June 27, 2013, *Order Granting Exemption, Finding Application Complete, Granting Variances, and Finding Joint Proceedings in the Public Interest* (Completeness Order) in this matter accepted ITC's Petition as complete and provided the following procedural history:

On March 22, 2013, ITC Midwest LLC (ITC) filed an application for a certificate of need for a 345-kilovolt, approximately 75-mile transmission line in Jackson, Martin, and Faribault Counties. The project is intended to relieve grid congestion caused by surplus power from wind farms operating in the Buffalo Ridge area of southwestern Minnesota and northwestern Iowa. In its application, ITC requested

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<sup>8</sup> DOC-DER Ex. 205 at 2 (Rakow Direct).

<sup>9</sup> See ITC Ex. 6 (Petition).

<sup>10</sup> ITC and MISO both utilized transmission planning software to analyze the proposed project. See ITC Ex. 6 at 7, 84 (Petition) and MISO Ex. 400 at 13, 35 (Chatterjee Direct).

<sup>11</sup> See the Commission's June 27, 2013 *Notice and Order for Hearing*, at 2.

that the certificate-of-need review proceedings be coordinated with the associated route-permit proceedings for the project.

On March 27, 2013, the Commission issued a notice soliciting comments on whether ITC's application was complete.

On April 19, 2013, the Midwest Independent Transmission System Operator, Inc. (MISO) filed comments recommending that the Commission find ITC's certificate-of-need application complete.

On May 1, 2013, the Minnesota Department of Commerce filed comments requesting supplemental information from ITC. The Department recommended that the Commission refer the matter to the Office of Administrative Hearings for a contested-case proceeding once ITC supplied the requested information. It stated that it had no objection to combining the certificate-of-need and route-permit proceedings.

On May 8, 2013, ITC filed reply comments and a supplement to its application providing most of the information that the Department requested. However, ITC sought an exemption from Minnesota Rules part 7849.0280(A) and (H), which require a certificate-of-need application to include certain resource-planning information.

On May 23, 2013, the matter came before the Commission.

The Commission's June 27, 2013 *Notice and Order for Hearing* referred this matter to the Office of Administrative Hearings (OAH) for a contested case proceeding and indicated that ITC and DOC-DER were parties.

On August 27, 2013 Administrative Law Judge James E. LaFave convened a prehearing conference.

On September 16, 2013 the ALJ established the following schedule:

Intervention deadline	15-Jan-14
ITC files direct testimony	24-Jan-14
Other parties file direct testimony	28-Feb-14
Parties file rebuttal testimony	28-Mar-14
Public hearings (Jackson, Martin, and Faribault counties)	Week of April 7, 2014
Deadline for foundation objections	10-Apr-14
Evidentiary hearings (St. Paul)	Week of April 14, 2014

Deadline for public comments, record closes	25-Apr-14
Parties file initial post-hearing brief, proposed findings of fact and conclusions of law	4-Jun-14
Parties file response briefs, substitute findings of fact and conclusions of law	18-Jun-13

On July 11, 2013 MISO filed a *Motion to Intervene*.

On July 23, 2013 Wind on the Wires filed a *Petition to Intervene*.

On December 24, 2013 the ALJ's *Second Amended Scheduling Order* revised the schedule for this proceeding as follows:

Intervention deadline	January 15, 2014
ITC files direct testimony	February 24, 2014
Parties file rebuttal testimony	April 25, 2014
Public hearings (Jackson, Martin, and Faribault counties)	Week of May 12, 2014
Deadline for foundation objections	May 15, 2014
Evidentiary hearings (St. Paul)	Week of May 19, 2014
Deadline for public comments, record closes	May 30, 2014
Parties file initial post-hearing brief, proposed findings of fact and conclusions of law	July 11, 2014

On January 15, 2014 Fresh Energy, the Izaak Walton League of America—Midwest Office, and the Minnesota Center for Environmental Advocacy (collectively, Clean Energy Intervenors or CEI) filed their *Petition to Intervene*.

On January 20, 2014 Citizens Energy Task Force (CETF) and NoCapX 2020 (jointly CETF/No) filed their *Petition for Limited Intervention*.

On January 27, 2014 ITC filed a letter indicating ITC did not oppose granting CETF/No's petition.

On January 31, 2014 the ALJ granted the CEI's *Petition to Intervene*.

On January 31, 2014 the ALJ granted CETF/No's *Petition for Limited Intervention*.

On February 24, 2014 ITC filed direct testimony.

On March 7, 2014 CETF/No filed a *Motion to Compel and for Leave to Participate in Discovery and Cross-Examination*.

On March 21, 2014 Minnesota Department of Commerce-Energy and Environmental Review and Analysis (DOC-EERA) filed its *ITCM Minnesota – Iowa 345 kV Transmission Line Project: Draft Environmental Impact Statement (Draft EIS)*.

On March 21, 2014 CEI filed their *Opposition to Citizens Energy Task Force and NoCapX2020's Motion to Compel Answers to Information Requests and for Leave to Participate in Discovery and Cross-Examination*, a responsive motion opposing CETF/No's motion.

Also on March 21, 2014 ITC filed its *Memorandum in Response* recommending CETF/No detail the additional discovery requests and taking no position on CETF/No's motions.

On March 28, 2014 CETF/No filed their *Reply to Responses to Motion to Compel Answers to Information Requests and for Leave to Participate in Limited Discovery and Cross-examination*, a response to the March 21, 2014 responsive motions of CEI and ITC.

Also on March 28, 2014 direct testimony was filed by the CEI, MISO, and DOC-DER.

On April 1, 2014 the ALJ's *Order Denying Citizens Energy Task Force and NoCapX2020's Motion to Compel Answers to Information Requests and Leave to Participate in Discovery and Cross-examination* denied CETF/No's March 7, 2014 motion.

On April 1, 2014 DOC-DER filed a letter requesting surrebuttal testimony be added to the schedule, with a due date of May 9, 2014.

On April 10, 2014 the ALJ's *Third Amended Scheduling Order* established the following schedule:

Parties file rebuttal testimony	April 25, 2014
The parties shall exchange and file with this office their proposed pre-labeled exhibits, an index of the proposed exhibits and their witness lists.	May 6, 2014
Deadline for foundation objections	May 6, 2014
Parties file surrebuttal testimony	May 9, 2014
Public hearings:	
Blue Earth MN	May 13, 2014
Jackson, MN	May 13, 2014
Fairmont, MN	May 14, 2014
Evidentiary hearings	May 19, 20, 21 and 23, 2014
Deadline for public comments; record closes	May 30, 2014
Parties file initial post-hearing brief, proposed findings of fact and conclusions of law	July 11, 2014
Parties file response briefs, substitute findings of fact and conclusions of law	August 8, 2014
ALJ Report	September 8, 2014
Exceptions	September 23, 2014

On April 10, 2014 the ALJ's *Order on Petitions to Intervene by Midcontinent Independent System Operator, Inc.* granted MISO's petition to participate as a full party.

On April 25, 2014 ITC, CEI, MISO, and DOC-DER filed rebuttal testimony.

On May 8, 2014 CETF/No filed a letter requesting that the record remain open for public comments until at least one week after the filing of the final EIS, to July 18 if the final EIS actually is filed on July 11, 2014, if not longer, so that the public can review the final EIS for adequacy. The briefing schedule should also be extended to reflect this Final EIS release date.

On May 9, 2014 ITC, CEI, MISO, and DOC-DER filed surrebuttal testimony.

Also on May 9, 2014 CETF/No and ITC filed comments on the draft EIS.

On May 12, 2014 ITC filed a letter indicating the Company's witnesses' intent to offer oral sur-surrebuttal in response to the surrebuttal testimony filed by DOC-DER.



On May 13, 2014, CETF/No filed an amended motion seeking an extended comment period for the receipt of public comments on the final EIS.

On May 16, 2014 DOC-EERA filed numerous public comment letters, state agency comments, and ITC's comment on the draft EIS.

On May 23, 2014, DOC-EERA filed a response to CETF/No's amended motion.

On May 27, 2014 ITC filed a response to CETF/No's amended motion.

#### **IV. DEPARTMENT ANALYSIS**

Following the Commission's statement of the issues, the Department analyzed the following:

- whether ITC's proposal met the requirements to establish a need in Minnesota (Minnesota Rule 7849.0120 A);
- if there is a need, whether an alternative could meet the need better, considering the criteria set out in Minnesota Rule 7849.0120 B
- whether the proposal is consistent with the renewable preference—Minnesota Statutes sections 216B.2422 subd. 4 and 216B.243 subd. 3a; and
- whether the proposal is consistent with regional considerations—Minnesota Statutes section 216B.243, subd. 3 (9).

##### ***A. NEED REQUIREMENTS—MINNESOTA RULES 7849.0120 A***

###### ***1. Commission Criteria for Need Analysis***

The criteria for analysis of need for a certificate of need (CN) are provided by Minnesota Rules 7849.0120 A which requires that the Commission determine that:

...the probable result of denial would be an adverse effect upon the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states, considering:

- (1) the accuracy of the applicant's forecast of demand for the type of energy that would be supplied by the proposed facility;
- (2) the effects of the applicant's existing or expected conservation programs and state and federal conservation programs;
- (3) the effects of promotional practices of the applicant that may have given rise to the increase in the energy demand, particularly promotional practices which have occurred since 1974;
- (4) the ability of current facilities and planned facilities not requiring certificates of need to meet the future demand; and
- (5) the effect of the proposed facility, or a suitable modification thereof, in making efficient use of resources.

## 2. *ITC's Case*

ITC stated that the proposed Project is designed to relieve transmission constraints in southwestern Minnesota and northern Iowa areas. ITC stated that the proposed Project would also facilitate the movement of energy associated with renewable resources to markets outside the local area.<sup>12</sup>

ITC stated in the Petition that there are currently two special protection systems (SPSs) imposed by MISO on ITC's system in southwestern Minnesota:

- the Fieldon Capacitor Bypass SPS (Fieldon SPS) and
- the Nobles County—Wilmarth SPS (Wilmarth SPS).

The Fieldon SPS has been in-place since 2001 and the Wilmarth SPS has been in-place since 2007.<sup>13</sup>

ITC's view is that an SPS is a remedial operating solution to a transmission reliability violation, often resulting from the installation of new facilities which either aggravate an existing transmission violation or initiate a new violation. ITC's experience is that SPSs are generally

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<sup>12</sup> ITC Ex. 22 at 5-12 (Berry Direct).

<sup>13</sup> ITC Ex. 6 at Appendix J, pages 17-18 (Petition).

undesirable because they can lead to exponential growth in demands placed on the transmission system and create operational complexities.<sup>14</sup>

ITC stated that the results of the Company's analysis suggest that both SPSs would be retired if MVP 3 were constructed. However, ITC also noted that MISO makes the final determination of whether an SPS should or should not be retired.<sup>15</sup>

### **3. Department Analysis**

#### *i. Accuracy of the forecast of demand*

In this case, one of ITC's claimed needs is to relieve SPSs in southwestern Minnesota. Because these SPS are currently in existence, the accuracy of ITC's forecast of future demand for the type of energy that would be supplied by the proposed facility is not relevant. That is, one of the claimed needs is to alleviate problems that currently exist, rather than the claimed need being based on a potential future state of the electrical system.

Regarding transmission issues in general, Department witness Mr. Adam Heinen's analysis of recent operations estimated that there were 12 constraints, for a total of 1,981 hours, in calendar year 2011 and 3 constraints, for a total of 1,242 hours, in calendar year 2012 for the area near the proposed Project. Based on this analysis of historical data Mr. Heinen concluded that the number and magnitude of constraints suggest that additional transmission capacity is needed.<sup>16</sup> Specifically, Mr. Heinen stated "I conclude that construction of a transmission line in the Project area would likely improve deliverability and reduce constraints on the transmission system."<sup>17</sup>

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<sup>14</sup> ITC Ex. 6 at Appendix J, page 18 (Petition).

<sup>15</sup> ITC Ex. 6 at Appendix J, page 19 (Petition).

<sup>16</sup> DOC-DER Ex. 200 at 7 (Heinen Direct).

<sup>17</sup> DOC DER Ex. 200 at 14 (Heinen Direct).

Regarding these SPSs in particular, Mr. Heinen determined that MISO had labeled the SPSs as inactive in the *MISO Transmission Expansion Plan 2013* (MTEP13). Thus, while it is clear that there has been curtailment in the area it was unclear whether there were still reliability concerns to be addressed. Therefore, Mr. Heinen requested further explanation in rebuttal testimony.<sup>18</sup>

Three separate witnesses addressed Mr. Heinen's questions regarding the SPSs in Rebuttal Testimony:

- Mr. Randall Porter for CEI;
- Mr. Diguanto Chatterjee for MISO; and
- Mr. Joe Berry for ITC.

Regarding ITC witness Mr. Berry, Mr. Heinen's surrebuttal concluded that Mr. Berry did not address why MISO labeled the SPSs in the area of MVP 3 as inactive or whether reliability concerns still exist. Further, Mr. Heinen concluded that, in ITC's estimation, either the 161 kV Rebuild alternative or the proposed MVP 3 could relieve the two SPSs in the southwestern Minnesota and Northern Iowa areas.<sup>19</sup> However, Mr. Heinen stated that he was:

... unable to identify a definitive statement regarding future retirement of SPS conditions. Also of note, ITCM Witness Berry suggests that construction of the 161 kV rebuild alternative also has the potential to relieve SPS conditions in the Project Area.<sup>20</sup>

Regarding MISO witness Mr. Chatterjee, Mr. Heinen's surrebuttal interpreted Mr. Chatterjee's rebuttal as indicating that even though an active SPS is not required in 2015, and thus is designated inactive, based on MISO's transmission modeling assumptions the

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<sup>18</sup> DOC-DER Ex. 200 at 8-10 and 13-14 (Heinen Direct).

<sup>19</sup> DOC-DER Ex. 202 at 3 (Heinen Surrebuttal).

<sup>20</sup> DOC-DER Ex. 202 at 6 (Heinen Surrebuttal).

thermal loading concerns are still present and need to be relieved by a transmission project at some point in time.<sup>21</sup>

Mr. Porter and Mr. Chatterjee addressed the relative merits of the 161 kV Rebuild alternative and the MVP 3 in terms of the abilities to allow retirement of the two SPS. This issue is addressed below in the section of this Initial Brief that discusses the analyses of alternatives.

The Department concluded that the accuracy of the applicant's forecast of demand for the type of energy that would be supplied by the proposed facility is not relevant to the question of need because one of the claimed needs is to address a situation that currently exists rather than a forecasted future state of the electrical system; as a result, “construction of a new transmission line is appropriate and needed.”<sup>22</sup>

ii. *Effects of conservation programs*

Conservation is a tool for reducing future growth in demand and energy requirements. However, experience indicates that conservation is unlikely to reduce demand below current levels. Since the claimed need relates to the system as it currently exists the Department concluded that conservation could not address the issues at hand— to retire existing SPSs and increase generation export:

Although the forecast indicates increased demand in the Project area, it is unlikely that this demand will be served by the Project. In fact, the Applicant stated that this slow demand growth may exacerbate issues because this demand is not sufficient enough to utilize wind resources being constructed in the Project area. ITCM Ex. \_\_\_ at Appendix 19 53 (Initial Petition). Essentially, electric supply exceeds electric demand in southwestern Minnesota and transmission allows the surplus generation to be exported to other areas. Therefore, increases in demand in the Project area would decrease the need for transmission and the associated export capacity.

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<sup>21</sup> DOC-DER Ex. 202 at 5 (Heinen Surrebuttal).

<sup>22</sup> DOC-DER Ex. 200 at 14 (Heinen Direct).

As noted by ITCM, the purpose of this Project is to relieve the existing capacity constraint, improve the ability of renewable generation capacity to reach energy markets further east, and, subsequently, reduce LMPs in Minnesota. Ultimately, the question of need is related more to the ability of Project to improve deliverability and relieve any existing reliability conditions in Minnesota.<sup>23</sup>

Regarding generation export—transmitting generation from southwestern Minnesota to load in other regions—the need to export is determined by subtracting load (consumption of electricity) in southwestern Minnesota from generation (production of electricity) in southwestern Minnesota. Conservation in southwestern Minnesota would decrease local demand. However, the lower the level of demand in southwestern Minnesota, the higher the need to export since lower demand means a greater quantity of generation that must be consumed elsewhere:

...one interesting fact, assuming the same relative locations of generation facilities and load centers [fn: “Load center” means the location of consumers demanding electricity] ... a lower future demand for power creates the need for *more* transmission in this region, not less. This result occurs because the Buffalo Ridge area is already a generation exporting region. Thus, the less demand for power inside the Buffalo Ridge area, the more generation capacity that must be exported via transmission and vice versa. Unless there are material changes in the relative locations of generation resources, demand resources and load centers, this result will occur whether the demand decrease is due to energy conservation, load management, rooftop solar installations, recessions, or anything else. Thus, the need to increase generation outlet in southern Minnesota and northern Iowa can be thought of as a need to increase transfer capability in this region.<sup>24</sup>

Thus, the Department concluded that existing or expected conservation programs and state and federal conservation programs will not be able to address the claimed need:

*iii. Promotional practices*

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<sup>23</sup> DOC-DER Ex. 200 at 13-14 (Heinen Direct).

<sup>24</sup> DOC-DER Ex. 205 at 38-39 (Rakow Direct).

No party introduced evidence regarding the need for generation export being related to promotional practices. Instead, the need for generation export is related to overall state policy objectives such as the Minnesota renewable energy standard; see Minn. Stat. § 216B.1691. Further, ITC is a transmission-only company; ITC does not serve retail load, does not own generation assets, and thus claims to be solving a problem created by other parties' actions. The Department concluded that promotional practices of the applicant have not given rise to the claimed needs.

*iv. Current and planned facilities*

The problem to be addressed is caused by the current state of the transmission system in southwestern Minnesota. Therefore, current facilities cannot be expected to resolve the issue. No party introduced evidence that planned facilities not requiring a CN could address the claimed need. The Department concluded that current and planned facilities not requiring a CN will not be able to meet the claimed need. Note that the 161 kV Rebuild alternative, which was extensively analyzed by the Department, is not a current facility, nor is it planned by ITC; thus, this alternative is not relevant to this criterion.

*iv. Efficient use of resources*

The proposed Project is located in and adjacent to some of the region's strongest wind resources. Thus, the effect of the proposed facility, or any alternative that would meet the claimed need to increase export capability from southwestern Minnesota, is to enable the use of the most efficient resources wind resources in the state.<sup>25</sup>

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<sup>25</sup> ITC Ex. 6 at 51-53 (ITC Petition).

#### **4. Department Recommendation**

The Department recommended that, assuming that final costs are approximately \$285 million, the Commission find that construction of a new transmission line is appropriate and needed.<sup>26</sup> In other words, the probable result of denial would be an adverse effect upon the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states.

#### **B. ALTERNATIVES REQUIREMENTS—MINNESOTA RULES 7849.0120 B**

##### **1. Criteria for Alternatives Analysis**

The criteria regarding analysis of alternatives for a CN are provided in Minnesota Rules 78949.0120 B, which requires the Commission to determine that:

...a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record, considering:

- (1) the appropriateness of the size, the type, and the timing of the proposed facility compared to those of reasonable alternatives;
- (2) the cost of the proposed facility and the cost of energy to be supplied by the proposed facility compared to the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives;
- (3) the effects of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives; and
- (4) the expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives.

##### **2. ITC's Case**

Regarding the appropriateness of the size, the type, and the timing of alternatives (the screening analysis), ITC dismissed voltage alternatives higher than 345 kV (500 kV and 765 kV) because they do not exist in the area. Introducing new voltages would result in higher costs for

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<sup>26</sup> DOC-DER Ex. 200 at 14 (Heinen Direct).



substation upgrades, interconnection and so forth. Additionally, no conditions were identified that warranted higher voltages.<sup>27</sup>

Regarding lower voltages, ITC accepted 161 kV for further analysis. However, other lower voltages were rejected because they:

- currently do not exist in the area; or
- are too small to meet the identified need.<sup>28</sup>

Upon completion of the screening analysis ITC determined to evaluate three alternatives in detail:

- MVP 3,
- both Mid-MISO MVPs, and
- the 161 kV Rebuild.<sup>29</sup>

ITC analyzed the costs and effects on the natural and socioeconomic environments of the proposed facility and of the alternatives in several steps. First, ITC's engineering transmission modeling determined that each of the alternatives would resolve existing thermal violations on the transmission system without creating an unacceptable level of new violations. However, the 161 kV Rebuild alternative did the poorest job of alleviating or eliminating violations.<sup>30</sup>

Second, ITC's engineering transmission modeling determined the increase in the incremental transfer capability attributable to each alternative. Again, MVP 3 alone and both Mid-MISO MVPs outperformed the 161 kV Rebuild alternative.<sup>31</sup>

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<sup>27</sup> ITC Ex. 6 at Appendix J page 6 (Petition).

<sup>28</sup> ITC Ex. 6 at Appendix J, page 6 (Petition).

<sup>29</sup> ITC Ex. 6 at Appendix J, pages 6-7 (Petition)

<sup>30</sup> ITC Ex. 6 at 79 (ITC Petition).

<sup>31</sup> ITC Ex. 6 at 79 (ITC Petition).

Third, ITC analyzed whether the addition of MVP 3 would allow the SPSs to be retired. The results of ITC's analysis indicated that the impact of MVP 3 on the transmission system would allow for the retirement of both SPSs.<sup>32</sup>

Fourth, ITC considered other factors by analyzing how much generation could be connected to the area transmission system before the capacity provided by the 161 kV Rebuild alternative would be depleted. ITC concluded that MVP 3 alone and both Mid-MISO MVPs would support more generation development in southwest Minnesota than the 161 kV Rebuild alternative.<sup>33</sup>

Fifth, ITC considered line losses. ITC's analysis showed that the line loss reduction that MVP 3 alone would provide is more than double what the 161 kV Rebuild alternative would provide; the Mid-MISO MVPs would more than double the loss reduction of MVP 3 alone, and would provide more than six times that of the 161 kV Rebuild alternative.<sup>34</sup>

Sixth, ITC considered the impact on energy prices. ITC's analysis indicated that the Mid-MISO MVPs provide for a substantial reduction in locational marginal price (LMP).<sup>35</sup> For Minnesota, ITC stated that the lower LMPs would reduce annual payments by between \$48.3 million and \$76.6 million across the cases evaluated.<sup>36</sup>

Regarding the expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives, ITC considered the effects of the proposal and alternatives on overall regional reliability. ITC stated that MVP 3 would establish a new 345 kV connection between the Minnesota and Iowa 345 kV systems. This connection would provide system

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<sup>32</sup> ITC Ex. 6 at 81 (ITC Petition).

<sup>33</sup> ITC Ex. 6 at 83 (ITC Petition).

<sup>34</sup> ITC Ex. 6 at 84 (ITC Petition).

<sup>35</sup> The LMP is the price to purchase another MWh of electricity at any one location, typically a substation. *See generally*, ITC Ex. 6 Appendix M at 3 fn 8 (ITC Petition).

<sup>36</sup> ITC Ex. 6 at 85 (ITC Petition).

operators with flexibility in reliably operating the electrical grid by enabling more transfers between states. In contrast, ITC concludes that the 161 kV Rebuild alternative would provide little in the way of regional reliability benefits.<sup>37</sup>

ITC's analysis did not perform an overall cost analysis of the alternatives. Further, ITC placed no upper limit on how much the proposed Project might actually cost, or the amount of that final cost for which ITC may request recovery.<sup>38</sup> These critical flaws are discussed below.

### **3. Department Analysis**

#### *i. Size and type*

The Department reviewed the screening analysis performed by ITC and MISO and did not object to the screening of the higher voltage, lower voltage, and generation alternatives. However, the Department's review of MISO's analysis of same voltage (345 kV) alternatives indicated a distinct preference on the part of MISO to approve for further detailed analysis the longer (and more expensive) options rather than to also fully analyze shorter, cheaper alternatives.<sup>39</sup> For example, MISO's *Midwest ISO Transmission Expansion Plan 2009* (MTEP09) at page 194 indicated that the shorter Lakefield Junction—Rutland 345 kV line had a benefit/cost ratio of 2.52 while the longer, Lakefield Junction—Fox Lake—Rutland—Winnebago—Adams 345 kV alternative had a significantly lower benefit/cost ratio of 0.90. These results mean that the shorter line had benefits greater than costs (was cost-effective) while the longer line was not cost-effective.<sup>40</sup>

In the Petition ITC attempted to screen out the more cost-effective Lakefield Junction—Rutland alternative by stating that the termination of the 345 kV line at Rutland resulted in

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<sup>37</sup> ITC Ex. 6 at 83 (ITC Petition).

<sup>38</sup> See, e.g., ITC Ex. 30 at 3, 16-17 (Collins Rebuttal).

<sup>39</sup> DOC-DER Ex. 205 at 15 (Rakow Direct).

<sup>40</sup> DOC-DER Ex. 205 at 12-13 (Rakow Direct).

constraints farther east on the 161 kV system, increasing loading on the 161 kV line between Rutland and Winnebago Junction.<sup>41</sup> However, MISO's MTEP09 already addressed ITC's "constraints" concern.<sup>42</sup> Thus, the shorter line was determined by MISO in MTEP09 to be the best alternative; yet as noted below MISO provided no reasonable basis for later dropping consideration of the shorter, more cost-effective alternative in favor of a longer line.

Subsequently, in the *Midwest ISO Transmission Expansion Plan 2010* (MTEP10), MISO restudied the issues related to the Fox Lake—Rutland 161 kV flowgate. In MTEP10 the Lakefield Junction—Rutland alternative was not considered as a stand-alone option by MISO despite being the best option in MTEP09. During discovery MISO explained this change by stating "because this project was contained within other system alternatives being actively studied to address broader needs subsequent to MTEP09 analyses, it was not separately carried forward."<sup>43</sup> This statement does not adequately explain why, in addition to considering the 161 kV alternative embedded within other lines, MISO didn't also continue to consider – on a stand-alone basis -- the cost-effective Lakefield Junction—Rutland alternative.

As Dr. Rakow explained, MISO essentially combined a short, cost effective segment with other short, non-cost effective segments to create larger transmission projects that could be cost effective when considered together. In essence, the cost-effective Lakefield Junction—Rutland segment was used to subsidize other segments of a larger project that were not cost-effective.<sup>44</sup> However, one lesson of MTEP10 is that, in this instance, other shorter more localized alternatives perform better economically than longer alternatives. This result is demonstrated by

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<sup>41</sup> ITC Ex. 6 at 89 (Petition).

<sup>42</sup> DOC-DER Ex. 205 at 12-13 (Rakow Direct).

<sup>43</sup> DOC-DER Ex. 205 at 14 (Rakow Direct) and DOC-DER Ex. 206 at SR-5, page 253 of 278 (Rakow Direct Attachments).

<sup>44</sup> DOC-DER Ex. 205 at 15 (Rakow Direct).

the fact that, in MTEP10, only the 2<sup>nd</sup> Fox Lake—Rutland—Winnebago 161kV alternative (with a ratio of 10.23) had a benefit/cost ratio greater than 1.<sup>45</sup>

MISO's MTEP10 concluded at page 205 that "the Lakefield Junction—Winnebago project as well as a variation of the Lakefield Junction—Winnebago—Webster—Blackhawk—Hazelton 345kV project are currently proposed to be included in the Candidate MVP Portfolio analysis to be studied for MVP eligibility."<sup>46</sup> Once again MISO dropped from consideration the shorter alternative that performed best in favor of carrying forward to subsequent stages of analysis longer projects with benefit/cost ratios less than 1.0 (meaning that costs were greater than benefits).<sup>47</sup>

Dr. Rakow concluded his review of the screening analysis by requesting the Applicant and/or MISO to explain in rebuttal testimony which claimed needs the shorter (and more cost effective in the MTEP analyses) Lakefield Junction—Rutland 345 kV alternative could not be

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<sup>45</sup> DOC-DER Ex. 205 at 14 (Rakow Direct).

<sup>46</sup> DOC-DER Ex. 206 at SR-5, page 255 of 278 (Rakow Direct Attachments).

<sup>47</sup> DOC-DER Ex. 205 at 15 (Rakow Direct). It is the Department hope that MISO greatly improves its transmission planning process in the future. As to Minnesota CNs, for example, Dr. Rakow made the following suggestions:

I would hope that MISO's process would more carefully consider the cost per MW of transfer capability in the future. As explained in my direct testimony, MISO's analysts, under MISO's current planning framework, repeatedly disregarded the results of prior rounds of analysis that identified reasonable alternatives, selected progressively larger and more expensive alternatives, and as shown in MISO's *Multi Value Project Portfolio: Results and Analysis* ended up analyzing only 345 kV alternatives for this region. [citation omitted] It appears that MISO could do more to support the proposals of its members in CN proceedings such as this one. MISO could take several steps to improve its analytical process. For example, MISO could take the simple step of ensuring that least cost alternatives are carried forward from one transmission study to the next. The least cost project from previous analysis may not pass a screening analysis in subsequent analysis due to revised needs, but it should at least be considered. If it is rejected, the reasons for the rejection should be clearly documented. Further, MISO analysts, in studies that are expected to lead to projects submitted for approval by a state utilities commission, should consider the requirements of the relevant state process. The Minnesota Commission, for example, has clear CN criteria to consider and takes seriously the impact on ratepayers of costs and cost overruns. Lastly, if MISO wishes to establish the minimum threshold for alternatives to meet, then it is incumbent upon MISO to work with CN applicants to ensure that the list of claimed needs stated in an applicant's CN petition is, in MISO's view, adequate.

DOC-DER Ex. 208 at 28 (Rakow Surrebuttal).

expected to meet.<sup>48</sup> ITC witness Mr. Berry addressed this issue in his rebuttal testimony by stating that the analysis of the Lakefield—Rutland 345 kV alternative showed negative transfer capability and, when added with the 161 kV Rebuild alternative, provided a lower transfer capability than the 161 kV Rebuild alternative alone.<sup>49</sup> Thus, Mr. Berry concluded that the Lakefield—Rutland 345 kV alternative could not meet the claimed need to increase generation outlet in southern Minnesota and northern Iowa and would have an inferior performance when compared to the 161 kV Rebuild alternative on its own.<sup>50</sup> Dr. Rakow’s surrebuttal testimony agreed with Mr. Berry that the Lakefield—Rutland 345 kV alternative does not merit detailed analysis.

*ii. Timing*

The projected in-service date for the proposed Project is mid-year 2017. MISO supported the 2017 in-service date by observing, “Along with other Midwestern states, Minnesota has adopted Renewable Energy Standards generically referred to as RPS requirements. The Mid-MISO MVPs will facilitate the satisfaction of these RES.”<sup>51</sup> Unfortunately, and contrary to MISO’s reasoning, mid-year 2017 is far too early for such a large project to mesh with the RES compliance plans of Minnesota utilities.

Table 1 in Dr. Rakow’s rebuttal testimony demonstrated that the utilities serving Minnesota do not need to add significant amounts of wind for RES compliance until after 2020. Only Interstate Power and Light Company’s (IPL) plan proposes to acquire new energy to meet the Minnesota RES in the near future; IPL’s Minnesota RES requirement is relatively small.

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<sup>48</sup> DOC-DER Ex. 205 at 18 (Rakow Direct).

<sup>49</sup> ITC Ex. 22 at 31-32 (Berry Rebuttal).

<sup>50</sup> DOC-DER Ex. 208 at 18 (Rakow Surrebuttal).

<sup>51</sup> MISO Ex. 400 at 33 (Chatterlee Direct).

Thus, a smaller transmission project, such as the 161 kV Rebuild, would be a better match for the Minnesota RES compliance plans in the near term.<sup>52</sup>

The Department concluded that the size, the type, and the timing of the proposed Project have not been shown to be appropriate when compared to those of reasonable alternatives. Specifically, the Department concluded that the transfer capability of the 161 kV Rebuild would better match the needs demonstrated by the status of compliance with the Minnesota RES.<sup>53</sup>

*iii. Cost of the proposed facility*

The Department performed extensive cost analysis of ITC's proposed Project and the 161 kV Rebuild. The Department's initial conclusion was that considering:

- the close economic performance of the two alternatives at the proposed cost level;
- the superior performance of the 161 kV Rebuild at higher cost levels; and
- the lower cost of the incremental transfer capability created by the 161 kV Rebuild;

the Commission should approve a CN for ITC's proposed Project subject to the cost control process recommended by Mr. Johnson.<sup>54</sup>

The cost control process recommended by Mr. Johnson was that the Commission condition approval on ITC's agreement to cap its costs for recovery purposes under MISO at the \$285 million<sup>55</sup> high-end estimate provided in this proceeding, without the additional 30 percent contingency. This approach would provide the Commission some assurances that the cost estimates relied upon in this proceeding are reliable and that ratepayers would not be subject to

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<sup>52</sup> DOC-DER Ex. 207 at 5 (Rakow Rebuttal).

<sup>53</sup> DOC-DER Ex. 208 at 34 (Rakow Surrebuttal).

<sup>54</sup> DOC-DER Ex. 205 at 44-45 (Rakow Direct).

<sup>55</sup> In his rebuttal testimony, ITC's Mr. Collins identified the proposed Project cost as \$285 not \$283 million. ITC Ex. 30 at 4 fn 1 (Collins Rebuttal). Mr. Johnson agreed to that amount in his surrebuttal testimony. DOC-DER Ex. 204 at 5 (Johnson Surrebuttal).

excessive cost overruns.<sup>56</sup> More importantly, given the results of Dr. Rakow’s analysis regarding alternatives, without this cost cap it is not possible to conclude that the need identified in this proceeding could not be better met with the 161 kV alternative:

...given the “close economic performance of the two alternatives at the proposed cost level,” use of a 30 percent higher contingency for both the proposed Project and the 161 kV Rebuild alternative meant I could not conclude at that time that the Commission should grant the Applicant a certificate of need, even with the conditions the Department has recommended.<sup>57</sup>

Dr. Rakow’s conclusion that the proposed project and the 161 kV Rebuild had a “close economic performance” was based on the results of his analysis, which considered different scenarios such as high and low construction costs, high and low demand for power, whether the MVP 5 project is built, and other factors. Dr. Rakow’s analysis indicated that the most critical factor that affects the question of whether or not the proposed project is cost effective is the assumption about construction costs: “the level of construction costs has a material effect on the overall conclusion as to which project is reasonable.”<sup>58</sup> Thus, this conclusion regarding the importance of the level of construction costs is the basis for Mr. Johnson’s proposal regarding the condition for approval of the CN, as discussed above.

ITC expressed strong disagreement with Mr. Johnson’s proposal. First, Mr. Collins disavowed the accuracy of ITC’s own cost estimate. Specifically, Mr. Collins stated “the \$283 million cost estimate modeled for comparison of options in the Certificate of Need cannot be

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<sup>56</sup> DOC-DER Ex. 203 at 21 (Johnson Direct).

<sup>57</sup> DOC-DER Ex. 208 at 6 (Rakow Surrebuttal).

<sup>58</sup> DOC-DER Ex. 205 at 31-32 (Rakow Direct). Factors such as the level of demand for electricity and whether or not the MVP 5 project is built also affect the results of cost effectiveness, but to a lesser degree. *Id.*



viewed as a budget-quality number and it would not be just and reasonable to use that number as a cap or proxy for actual final cost.”<sup>59</sup>

Dr. Rakow responded to Mr. Collins’ statement by noting that, if ITC’s cost estimate cannot be used as a proxy for actual final cost, then it is not at all clear what the purpose of ITC’s cost estimate is in this proceeding.<sup>60</sup> Dr. Rakow stated that:

Because ITCM’s cost estimate of the proposed Project cannot be used as a proxy for final cost, the plus or minus 30 percent cost band is meaningless, at least for purposes of evaluating the likely cost of the project or for comparing its cost to reasonable alternatives.<sup>61</sup>

Further, Dr. Rakow concluded that:

Mr. Collins’ statement means that ITCM has not met a key criterion for obtaining a certificate of need. To analyze a petition for a certificate of need, it is necessary to compare the proposal to possible alternatives, in keeping with Minnesota Statute §216B.243.<sup>62</sup>

In addition to Mr. Collins’ rebuttal testimony, Ms. Ashbacker disputed whether a voluntary cost cap agreement within a state Commission process was even possible. Ms. Ashbacker stated, “the Federal Energy Regulatory Commission (“FERC”) has exclusive jurisdiction over ITC Midwest rates because ITC Midwest is a transmission-only company providing service at the wholesale level. A cost cap would conflict with FERC’s jurisdiction.”<sup>63</sup> However, the question in this proceeding is whether or not the *Minnesota* Public Utilities Commission should grant a certificate of need and, if so, whether to condition that certificate of need to ensure that the proposal is consistent with Minnesota statutes and rules. ITC certainly has authority to voluntarily not request recovery of costs over a certain amount to ensure that the project meets the requirements of Minnesota statutes and rules.

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<sup>59</sup> ITC Ex. 30 at 16-17 (Collins Rebuttal).

<sup>60</sup> DOC-DER Ex. 208 at 4-6 (Rakow Surrebuttal).

<sup>61</sup> DOC-DER Ex. 208 at 4 (Rakow Surrebuttal).

<sup>62</sup> DOC-DER Ex. 208 at 5 (Rakow Surrebuttal).

<sup>63</sup> ITC Ex. 28 at 3 (Ashbacker Rebuttal).

Ms. Ashbacker also testified that it was in ITC's interest to bring projects in on-budget:

Given that transmission is our singular business, it is in the best interest of our reputation and credibility to complete projects within the estimated budgets we develop. The importance of being "on budget" will become increasingly important in a FERC Order 1000 competitive environment.<sup>64</sup>

In response, Mr. Johnson stated that if ITC behaves as it claims it will do and keep its costs within "budget," then ITC should have no concern regarding Mr. Johnson's recommendation that ITC agree to be bound by its cost estimates.<sup>65</sup> The point of this recommendation in Mr. Johnson's Direct Testimony was to ensure that the proposed project would comply with Minnesota statutes and rules.

In addition, Mr. Johnson recommended that the Commission not allow rate-regulated utilities under the Commission's jurisdiction to pass through any cost overruns through transmission cost recovery riders without justification. The point of this recommendation was to ensure that ratepayers would be protected from issuing a "blank check" for transmission lines, and to hold ITC to the same accountability for the cost estimates it proposes the Commission use to evaluate its request for a certificate of need as investor-owned utilities requesting CNs in Minnesota must do.<sup>66</sup>

Mr. Johnson noted that these accountability goals are important in this proceeding because:

- 1) ITC's cost estimates are subject to significant uncertainty; and
- 2) ITC already has a history of final costs greatly exceeding initial estimates.<sup>67</sup>

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<sup>64</sup> ITC Ex. 28 at 14 (Ashbacker Rebuttal).

<sup>65</sup> DOC-DER Ex. 204 at 23 (Johnson Surrebuttal).

<sup>66</sup> DOC-DER Ex. 203 at 10-14 (Johnson Direct).

<sup>67</sup> DOC-DER Ex. 203 at 16-17 (Johnson Direct).

In addition to ITC's decision not to stand by its own cost estimates in this proceeding as discussed above, ITC's history of cost overruns is demonstrated by the facts in ITC's very first docket before the Minnesota Commission; a docket in which ITC purchased the transmission assets of Interstate Power and Light Company (IPL), Docket No. E001/PA-07-540 (Transmission Sale).<sup>68</sup> In the Transmission Sale docket ITC estimated that Minnesota ratepayers would pay lower rates due to the sale of IPL's transmission assets. However, in IPL's subsequent 2010 rate case (MPUC Docket No. E001/GR-10-276), IPL proposed to charge its residential ratepayers bills that were much *higher*, due to ITC's transmission costs being much higher than had been represented in the Transmission Sale docket. As explained by Mr. Johnson, these facts were spelled out in the Commission's Order in the 2010 rate case proceeding; ITC's costs increased by over 300 percent from the amounts represented in the Transmission Sale proceeding.<sup>69</sup>

Because it is important to maintain the integrity of the Commission's CN process to ensure that proposals comply with Minnesota statutes and rules, the Department now recommends and the Commission requires that utilities subject to the Commission's ratemaking authority may recover through their transmission cost recovery riders (TCRs) only the amount of cost shown to be reasonable in the CN proceeding where the Commission granted authority for the project, or to justify, to the Commission's satisfaction, why it would be appropriate to charge Minnesota ratepayers for any ITC cost-overruns *through the extraordinary ratemaking tool of a rider*.<sup>70</sup> If the Commission granted ITC a CN without limiting the recovery of any cost overruns through riders, the Commission would be treating ITC differently from CN requests of

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<sup>68</sup> DOC-DER Ex. 203 at 16-17 (Johnson Direct).

<sup>69</sup> DOC-DER Ex. 203 at 17 (Johnson Direct).

<sup>70</sup> DOC-DER Ex. 204 at 21 (Johnson Surrebuttal).

traditional rate-regulated utilities, which are held to financial accountability regarding the costs they estimate in CN proceedings.<sup>71</sup>

This question is particularly important since ITC’s costs are already higher than the costs of other transmission providers, as Mr. Johnson demonstrated:

**Table 1: MVP O&M Costs by Utility<sup>72</sup>**

<b>Utility Name</b>	<b>MVP Transmission O&amp;M Annual Allocation Factor</b>
ITCM	9.40%
MidAmerican Energy Corporation	6.24%
Northern States Power Companies	5.71%
Otter Tail Power Company	8.79%
American Transmission Company	7.43%

**Table 2: MISO MVP Indicated Annual Fixed Charged Rates by Utility<sup>73</sup>**

<b>Utility Name</b>	<b>First Year Annual Fixed Charged Rate</b>	<b>20th Year Annual Fixed Charged Rate</b>
ITCM	19.51%	17.26%
MidAmerican Energy Corporation	14.27%	12.16%
Northern States Power Companies	15.19%	12.68%
Otter Tail Power Company	15.55%	14.60%
American Transmission Company	14.37%	13.72%

ITC’s decision not to stand by the accuracy of its own cost estimate has significant impacts for any determination using the Commission’s criteria in Minnesota Rules 7849.0120 B for the following reasons. First, regarding the cost of the proposed facility and the

<sup>71</sup> DOC-DER Ex. 204 at 27 (Johnson surrebuttal).

<sup>72</sup> DOC-DER Ex. 203 at 18 (Johnson Direct).

<sup>73</sup> DOC-DER Ex. 203 at 20 (Johnson Direct).

cost of energy to be supplied by the proposed facility compared to the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives—ITC has not provided a cost estimate for the proposed Project that can be used as a proxy for the actual final cost and, thus, provided no meaningful evaluation of the cost of the proposed Project; no cost comparison of alternatives can be performed. As a result, the Department concludes that ITC’s proposal does not comply with Minnesota statutes and rules as discussed above.

Second, regarding the effects of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives—as with criterion 2, ITC has not provided a cost estimate for the proposed Project that can be used as a proxy for the actual final cost; thus no overall impact on the socioeconomic environments can be determined since it is not clear how much Minnesota ratepayers may be charged for ITC’s proposal, particularly given the higher costs for ITC’s proposals, as indicated in the tables above.<sup>74</sup>

Analysis of alternatives was significantly complicated by evidence regarding the Odell Wind Farm introduced by the public during the Jackson public hearing on May 13, 2014. Mr. Aaron Backman, Executive Director of the Economic Development Authority for the City of Windom testified that the Odell Wind Farm is about to be constructed in the area and will require a 345 kV transmission line. He testified that the 161 kV Rebuild is too small.<sup>75</sup> Following Mr. Backman’s public hearing testimony Dr. Rakow confirmed that the Commission orally approved a draft site permit on March 6, 2014, for the 200 MW Odell Wind Farm, MPUC Docket No. IP-6914/WS-13-843.<sup>76</sup>

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<sup>74</sup> DOC-DER Ex. 208 at 34 (Rakow Surrebuttal).

<sup>75</sup> Tr. Jackson Public Hearing at 20 (Backman).

<sup>76</sup> DOC-DER Ex. 209 at 1-2 (Rakow Statement).

The issues regarding the transmission needs of the Odell Wind Farm were further discussed during the evidentiary hearing. For example, Dr. Rakow confirmed that Exhibit 535 listed two transmission studies regarding the Odell Wind Farm, one of which specifically listed the proposed Project as assumed to be in-service.<sup>77</sup> The record does not demonstrate whether the 161 kV would or would not be adequate to serve the transmission needs of the Odell Wind Farm.<sup>78</sup> The significance of the Odell Wind Farm is that it has been approved by the Commission<sup>79</sup> and the current record does not include any analysis to allow a determination of whether the 161 kV Rebuild would meet the Odell Wind Farm's transmission needs. Additional study and analysis would be required to confirm or reject this statement.<sup>80</sup>

The overall recommendation of the Department is that, despite the fact that ITC's filing was inadequate, contained inconsistencies, and appears to be premature, the fact of the Odell Wind Farm being constructed in the near future together with its transmission needs, and the fact that there is no analysis in the record from which to conclude that the 161 kV Rebuild would be sufficient to meet this need, the Department no longer recommends that the Commission deny ITC's Petition:

New facts presented at the Blue Earth public hearing in this matter require my reassessment of the current record and my acknowledgement that I can no longer conclude from the record that the 161 kV Rebuild has been demonstrated to be a reasonable alternative to the proposed Project.

...

Commission issuance of a site permit and other approvals for the Odell Wind Farm is highly significant regarding need. As suggested by Mr. Backman, it means that construction of this large wind farm is likely to commence soon; in my experience, wind farm construction proceeds quickly to completion following approval of a site permit from the Commission.

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<sup>77</sup> See Tr. Evidentiary Hearing at 87-88 (Rakow).

<sup>78</sup> Tr. Evidentiary Hearing at 88-89 (Rakow).

<sup>79</sup> The Commission approved the site permit with conditions at the Commission's June 26, 2014, meeting.

<sup>80</sup> DOC-DER Ex. 209 at 1-2 (Rakow Statement).

This means that, in addition to the current general need to increase transmission transfer capacity as confirmed by DOC DER witness Mr. Adam Heinen, there will be a near-term need for higher transmission transfer capacity to accommodate the 200 MW Odell Wind Farm.

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As a result, I must amend my Surrebuttal Testimony on pages 34 and 35 for the following questions and answers:

**Q. Please provide the status of your analysis of alternatives at this time.**

A. Minnesota Rules 7849.0120 B contains four overall criteria to guide the evaluation of alternative[s]. My testimony addresses three of these criteria. In light of the facts elicited at the Blue Earth public hearing regarding the Commission's recent oral approval of a site permit for the 200 MW Odell Wind Farm, ~~t~~The status of my analysis under these criteria is as follows:

1. *The appropriateness of the size, the type, and the timing of the proposed facility compared to those of reasonable alternatives—* the transfer capability of the 161 kV Rebuild alternative better matches the needs demonstrated by the status of compliance with the Minnesota RES. However, the record does not support a conclusion that the 161 kV Rebuild will be adequate to accommodate the Odell Wind Farm. There is no analysis of this question in the record.

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**Q. What is your overall recommendation at this time?**

A. ~~Since—Although~~ ITCM's filing was inadequate, contained inconsistencies and appears to be premature, the fact of the Odell Wind Farm being constructed in the near future together with its transmission needs, and the fact that there is no analysis in the record from which to conclude that the 161 kV Rebuild would be sufficient, I no longer recommend that the Commission deny ITCM's Petition without prejudice and direct ITCM to refile the Petition at such times as ITCM is able to produce well-supported cost estimates that can justly and reasonably be used as a proxy for actual final cost. My other recommendations remain unchanged as to future CN filings by ITCM. [I do not duplicate my remaining unchanged recommendations] In addition the following recommendations from my direct testimony remain applicable: . . . .<sup>81</sup>

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<sup>81</sup> DOC-DER Ex. 209 at 1-2 (Rakow Statement).

iv. *Effects upon the natural and socioeconomic environments*

The Department's standard analysis in Minnesota CN proceedings is to use the Commission's externality values and estimated cost of complying with future CO<sub>2</sub> regulations to compare the overall impact of the alternatives on a unified basis. However, in this case ITC did not use the Minnesota Commission's values to compare cost based upon socioeconomic considerations. ITC witness Dr. Schatzki claimed to have used emission cost values.<sup>82</sup> However, the values Dr. Schatzki used were not the Commission's values.<sup>83</sup>

Therefore, Dr. Rakow recommended that the Commission order ITC to make a compliance filing containing a spreadsheet ITC can use to calculate the cost of alternatives in future CN filings in a consistent manner. The spreadsheet should enable ITC to include the Commission's CO<sub>2</sub> internal cost and externality values. The Department also recommended that the Commission order ITC to use the Commission's externality values and cost of future CO<sub>2</sub> regulation value in future Minnesota CN proceedings.<sup>84</sup>

v. *Comparative reliability*

The reliability issue claimed by ITC in the Petition is to "remove Minnesota and regional transmission system constraints which currently limit the ability to reliably deliver generation throughout the MISO footprint."<sup>85</sup> Both the 161 kV Rebuild and the proposed Project increase the ability to deliver generation.<sup>86</sup> The question is what level of transfer best meets Minnesota's needs. That issue is addressed elsewhere in this brief.

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<sup>82</sup> ITC Ex. 23 at 6 (Schatzki Direct).

<sup>83</sup> DOC-DER Ex. 208 at 22 (Rakow Surrebuttal).

<sup>84</sup> DOC-DER Ex. 208 at 35 (Rakow Surrebuttal).

<sup>85</sup> ITC Ex. 6 at 7 (Petition).

<sup>86</sup> DOC-DER Ex. 205 at 10 (Rakow Direct), explaining that ITCM's screening analysis concluded that the 161 kV rebuild was adequate for study.



A second reliability issue is relieving the Fieldon SPS and Wilmarth SPS. ITC's Mr. Berry stated that the proposed Project is expected to allow these SPSs to be retired.<sup>87</sup> MISO's Mr. Chatterjee agreed that the proposed Project provides a benefit by permitting the removal of the SPSs that are present in southern Minnesota.<sup>88</sup> Regarding the alternative, ITC did not address the impact of the 161 kV Rebuild upon the SPS. However, MISO's Mr. Chatterjee testified at the evidentiary hearing that the 161 Rebuild would require the reconfiguration of the SPS but would not allow their retirement.<sup>89</sup> In other words, the SPS would have to be redesigned to protect different elements.

#### **4. Department Recommendation**

First, the Department no longer recommends that the Commission deny ITC's Petition as noted above. Second, the Department continues to recommend that the Commission allow utilities subject to the Commission's ratemaking authority to recover through their TCRs only the amount of cost shown to be reasonable in this CN proceeding or to justify, to the Commission's satisfaction, why it would be appropriate to charge Minnesota ratepayers for any ITC cost-overruns *through the rider*. Third, the Department recommends that the Commission order ITC to make a compliance filing containing a spreadsheet that ITC can use to calculate the costs of alternatives in future CN filings in a consistent manner. The spreadsheet should enable ITC to include the Commission's CO<sub>2</sub> internal cost and externality values. Finally, the Department recommends that the Commission order ITC to use the Commission's externality values and cost of future CO<sub>2</sub> regulation value in future CN proceedings.

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<sup>87</sup> ITC Ex. 22 at 9 (Berry Direct).

<sup>88</sup> MISO Ex. 401 at 12 (Chatterjee Rebuttal).

<sup>89</sup> Tr. Evidentiary Hearing at 61-62 (Chatterjee).

**C. SOCIOECONOMICS REQUIREMENTS—MINNESOTA RULES 7849.0120 C**

**1. Criteria**

Minnesota Rules 78949.0120 C requires that the Commission determine that:

...by a preponderance of the evidence on the record, the proposed facility, or a suitable modification of the facility, will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health, considering:

- (1) the relationship of the proposed facility, or a suitable modification thereof, to overall state energy needs;
- (2) the effects of the proposed facility, or a suitable modification thereof, upon the natural and socioeconomic environments compared to the effects of not building the facility;
- (3) the effects of the proposed facility, or a suitable modification thereof, in inducing future development; and
- (4) the socially beneficial uses of the output of the proposed facility, or a suitable modification thereof, including its uses to protect or enhance environmental quality.

**2. ITC's Case**

ITC analyzed the impact of the proposed Project upon the natural and socioeconomic environments. Based upon this review ITC concluded that no land use or environmental factor would prevent the proposed facilities from being constructed and operated in a manner consistent with Minnesota's environmental and natural resource laws. Furthermore, ITC concluded that MVP 3 would facilitate economic development in southwest Minnesota by supporting new generation.<sup>90</sup>

**3. Department Analysis**

*i. Relationship to overall state energy needs*

As discussed in detail above, the proposed Project would provide significant transfer capability far in advance of the needs indicated by the Minnesota RES. A smaller project would

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<sup>90</sup> ITC Ex. 6 at 12 (ITC Petition).

better match the project with the Minnesota RES and the state's overall energy needs. However, only the proposed project has been studied in terms of the specific needs of the Odell Wind Farm, whose energy is currently contracted to be purchased by Xcel Energy. The Department concludes that no alternative studied in detail in this proceeding significantly conflicts with overall state energy needs.

*ii. Effects upon the environment compared to the no build*

The primary benefit of the proposed Project in terms of environmental impact, compared to the no build alternative, is that line losses, and associated emissions of pollutants would be lower.<sup>91</sup> The proposed Project would also help enable new generation facilities to be interconnected to the transmission grid.<sup>92</sup> Given the location of the proposed Project such facilities are overwhelmingly likely to be wind facilities.<sup>93</sup> The offsetting impacts would be the construction impacts and the electromagnetic fields associated with the proposed Project's operation.<sup>94</sup> Overall, the Department concludes that the effects of the alternatives studied in detail in this proceeding upon the natural and socioeconomic environments are superior to the effects of not building the proposed Project.

*iii. Inducing future development*

As discussed during the public hearings and in expert witness testimony, the overall impact of the proposed Project or the alternatives would be to induce economic development in the region where the project is proposed to be constructed. This development is most likely to be additional wind farms and potentially natural gas fueled power plants. The Department did not

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<sup>91</sup> ITC Ex. 6 at Appendix J pages 19-21 (Petition).

<sup>92</sup> ITC Ex. 6 at Appendix J pages 11-16 (Petition).

<sup>93</sup> ITC Ex. 6 at Appendix J pages 16-17 (Petition).

<sup>94</sup> ITC Ex. 6 at 112-119 (Petition).

object to ITC's statements and thus concludes that the proposed Project or any of the alternatives studied in detail would induce varying amounts of economic development.

*iv. Socially beneficial uses of the output*

As discussed during the public hearings and in expert witness testimony, the overall impact of the proposed Project or the alternatives would be to induce additional generation, likely wind as well as natural gas fueled, in the region where the project is intended to be constructed.<sup>95</sup> During planning, such generation would offset other potential expansion alternatives; such expansion alternatives likely would have equal or greater emissions of pollutants. During operation such generation would offset electricity produced by the load following unit. Such generation would have equal or greater emissions of pollutants. In summary, the Department concludes that either the proposed Project or the 161 kV Rebuild studied in detail would have the socially beneficial uses that include protection or enhancement of environmental quality.<sup>96</sup>

**4. Department Recommendation**

The Department concludes that either the proposed Project or the 161 kV Rebuild would be consistent with and meet the requirements of Minnesota Rules 78949.0120 C.

**D. REQUIREMENTS OF OTHER AGENCIES—MINNESOTA RULES 7849.0120 D**

**1. Criteria**

Minnesota Rules 78949.0120 D requires that the Commission determine that:

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<sup>95</sup> Specifically, ITC states “Right now, available wind energy from existing wind generators in southwest Minnesota cannot always be delivered to load due to the existing system’s constrained capacity... These operational procedures have been necessary to enable new generators, including gas and wind generators to interconnect to the grid...” ITC Ex. 6 at 7 (Petition).

<sup>96</sup> DOC DER also notes that it relies on the Environmental Impact Statement’s (EIS) analysis of impacts on the socioeconomic and natural environments in a CN proceeding, and recommends that the Commission consider the Final EIS that will be filed by the Department of Commerce, Energy Environmental Review and Analysis unit in the Commission’s decision in this matter.

...the record does not demonstrate that the design, construction, or operation of the proposed facility, or a suitable modification of the facility, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

**2. *ITC's Case***

Based upon its analysis of relevant policies, rules, and regulations of other agencies and governments ITC concluded that “All rules and regulation applicable to the construction and operation of the Project have been identified by ITC Midwest, and ITC Midwest can comply with all of them.”<sup>97</sup> For example, national ambient air quality standards for ozone are 0.075 parts per million —ppm on an eight hour averaging period. The state standard is 0.08 ppm based upon the fourth highest eight hour daily maximum average in one year. A small amount of ozone is created due to corona from the operation of transmission lines. However, ITC concluded that the emission of ozone from the operation of transmission lines of the voltages proposed for the proposed Project is not anticipated to have a significant impact on the environment.<sup>98</sup>

**3. *Department Analysis***

Throughout this proceeding the Department did not question ITC’s assertion that the Company had identified all rules and regulation applicable to the construction and operation of the proposed Project and can comply with all of them. Further, no evidence was provided by other parties indicating that ITC would fail to meet the requirements of other agencies.

**4. *Department Recommendation***

The Department recommends that the Commission find that the record does not demonstrate that the design, construction, or operation of the proposed facility or the 161 kV

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<sup>97</sup> ITC Ex. 6 at 13 (ITC Petition).

<sup>98</sup> ITC Ex. 6 at 108 (ITC Petition).

Rebuild studied in detail will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

***E. RENEWABLE PREFERENCE—MINNESOTA STATUTES SECTIONS 216B.2422 SUBD. 4 AND 216B.243 SUBD. 3A***

***1. Criteria***

Minnesota Statutes section 216B.2422, subdivision 4 provides renewable preference language that requires:

The commission shall not approve a new or refurbished nonrenewable energy facility in an integrated resource plan or a certificate of need, pursuant to section 216B.243, nor shall the commission allow rate recovery pursuant to section 216B.16 for such a nonrenewable energy facility, unless the utility has demonstrated that a renewable energy facility is not in the public interest. The public interest determination must include whether the resource plan helps the utility achieve the greenhouse gas reduction goals under section 216H.02, the renewable energy standard under section 216B.1691, or the solar energy standard under section 216B.1691, subdivision 2f.

Minnesota Statutes section 216B.243, subdivision 3a also provides renewable preference language and requires that:

The commission may not issue a certificate of need under this section for a large energy facility that generates electric power by means of a nonrenewable energy source, or that transmits electric power generated by means of a nonrenewable energy source, unless the applicant for the certificate has demonstrated to the commission's satisfaction that it has explored the possibility of generating power by means of renewable energy sources and has demonstrated that the alternative selected is less expensive (including environmental costs) than power generated by a renewable energy source. For purposes of this subdivision, "renewable energy source" includes hydro, wind, solar, and geothermal energy and the use of trees or other vegetation as fuel.

## **2. ITC's Case**

In terms of constructing renewable generation, ITC stated that generation cannot address a shortage of generation outlet capacity;<sup>99</sup> generation additions would make the generation outlet shortfall even worse. Therefore, ITC dismissed all generation, including renewable generation.

## **3. Department Analysis**

The Department agreed that additional generation (renewable or otherwise) would not be able to address some of the claimed needs such as allowing the existing generation in the Buffalo Ridge area to be transmitted to load. Therefore, it was appropriate to conclude that new renewable resources do not pass a screening test and do not merit detailed analysis.<sup>100</sup>

## **4. Department Recommendation**

The Department recommended that the Commission find that ITC has demonstrated that: 1) a renewable energy facility is not in the public interest, 2) ITC has explored the possibility of generating power by means of renewable energy sources and 3) the alternative ITC selected is less expensive (including environmental costs) than power generated by a renewable energy source.

## **F. REGIONAL CONSIDERATIONS—MINNESOTA STATUTES §216B.243, SUBD. 3 (9)**

### **1. Criteria**

Minnesota Statutes section 216B.243, subd. 3 (9) states that the Commission must evaluate “with respect to a high-voltage transmission line, the benefits of enhanced regional reliability, access, or deliverability to the extent these factors improve the robustness of the transmission system or lower costs for electric consumers in Minnesota.”

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<sup>99</sup> ITC Ex. 6 at 87 (Petition).

<sup>100</sup> DOC-DER Ex. 205 at 18-19 (Rakow Direct).

## **2. ITC's Case**

ITC stated that the proposed Project is part of MISO's MVP 3 and would enhance the regional electrical system and relieve a constrained 161 kV line in Minnesota. The proposed Project would also contribute to a portfolio of regional projects with significant reliability, economic, and public policy benefits in Minnesota and the greater region.<sup>101</sup> The proposed Project would do so by relieving transmission system constraints in Minnesota and the region which currently limit the ability to reliably deliver generation throughout the MISO footprint.<sup>102</sup>

## **3. Department Analysis**

Tables A6.1 through A6.35 in Dr. Rakow's direct testimony demonstrate that either the proposed Project or the 161 kV Rebuild would result in a decrease in Minnesota's energy costs (lower LMPs) that is greater than the cost increase attributable to Minnesota's share of the capital costs. That is, both alternatives studied in detail would lower costs for electric consumers in Minnesota.<sup>103</sup> If ITC's actual costs are equal to or less than the estimate provided in this proceeding, ITC's proposed Project would have a superior impact. However, if ITC's actual costs exceed the estimate provided in this proceeding, the 161 kV Rebuild would have the superior impact. Based upon this analysis the Department concludes that the proposed Project would be superior if and only if its costs do not exceed the cost estimates provided by ITC.

## **4. Department Recommendation**

The Department recommended that the Commission find that the proposed Project would improve the robustness of the transmission system and lower costs for electric consumers in Minnesota, if and only if actual costs do not exceed the cost estimates provided by ITC.

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<sup>101</sup> ITC Ex. 6 at 1 (Petition).

<sup>102</sup> ITC Ex. 6 at 7 (Petition).

<sup>103</sup> DOC-DER Ex. 206, SR-6aat 1-24 and SR-6b at 1-24 (Rakow Direct Attachments).



## V. OVERALL DEPARTMENT RECOMMENDATION

The Department takes no position regarding which alternative best meets the criteria established by Minnesota Statutes and Minnesota Rules. The data available in the record indicate that the proposed Project would allow a wind farm with a Commission-approved PPA (the Odell Wind Farm) to be interconnected albeit at costs that may greatly exceed the cost estimates provided by ITC. Unfortunately, ITC and MISO failed to provide transmission data regarding the ability of the 161 Rebuild to interconnect the Odell Wind Farm.

The Department recommends that the Commission allow utilities subject to the Commission's ratemaking authority to recover through their TCRs only the amount of cost shown to be reasonable in this CN proceeding—the Company's cost estimate—or to justify to the Commission's satisfaction why it would be appropriate to charge Minnesota ratepayers for any ITC cost-overruns through a rider.

Also, the Department recommends that the Commission order ITC to make a compliance filing containing a spreadsheet ITC can use to calculate the cost of alternatives in future CN filings in a consistent manner. The spreadsheet should enable ITC to include the Commission's CO<sub>2</sub> internal cost and externality values. In addition the Department recommends that the Commission order ITC to use the Commission's externality values and cost of future CO<sub>2</sub> regulation value in future CN proceedings.

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Respectfully submitted,

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