

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

IN THE MATTER OF THE APPLICATION  
OF ITC MIDWEST LLC FOR A  
CERTIFICATE OF NEED 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

**ITC MIDWEST LLC'S POST-HEARING BRIEF  
IN SUPPORT OF ITS APPLICATION FOR A CERTIFICATE OF NEED**

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## I. INTRODUCTION

ITC Midwest LLC respectfully submits this Post-Hearing Brief (“Brief”) to the Administrative Law Judge (“ALJ”). This Brief and the Proposed Findings of Fact, Conclusions of Law and Recommendation (“Proposed Findings”) support granting a Certificate of Need for the Minnesota - Iowa 345 kV Transmission Project (“Project” or “MN-IA 345 kV Project”).

The Project is the ITC Midwest-owned portion of Multi-Value Project 3 (“MVP 3”).<sup>1</sup> All Parties<sup>2</sup> to this proceeding agree that a new high voltage transmission line is needed in southwest Minnesota.<sup>3</sup> The record demonstrates that MVP 3 and, therefore the Project, is needed to:

- 1) enhance local and regional reliability by supporting a more robust local and regional transmission system;
- 2) provide outlet capability to a) transmit power from existing wind farms, b) enable Commission approved projects necessary to meet Minnesota’s renewable energy standard (“RES”) requirements and c) meet longer-term demand for interconnections in the Buffalo Ridge area to

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<sup>1</sup> Ex. 6 at 2 (Certificate of Need Application).

<sup>2</sup> References to “Parties” in this proceeding refers to ITC Midwest; Department of Commerce, Division of Energy Resources (“DOC DER”); Midcontinent Independent System Operator, Inc. (“MISO”); and Wind on the Wires, Fresh Energy, Izaak Walton League of America - Midwest Office, and the Minnesota Center for Environmental Advocacy (“Clean Energy Intervenors” or “CEI”). NoCapX and Citizens Energy Task Force (“CETF/No”) received only limited party status and are referenced separately.

<sup>3</sup> Ex. 6 at 7-8 (Certificate of Need Application); Ex. 200 at 14 (Heinen Direct); Ex. 402 at 6 (Chatterjee Surrebuttal); Ex. 302 at 2 (Porter Rebuttal); Ex. 300 at 2 (Goggin Direct).

reliably connect and transfer renewable energy required to meet state renewable energy portfolio standards (“RPS”) throughout the MISO footprint; and

- 3) to improve the efficiency of energy supply in Minnesota and neighboring states by reducing energy losses and energy production costs.

This Brief and the Proposed Findings summarize ITC Midwest’s proposal, the applicable law and record. ITC Midwest has proven multiple needs for the Project, ITC Midwest has satisfied all requirements for a Certificate of Need, and the record does not show a more reasonable and prudent alternative exists that will meet the identified needs. Therefore, a Certificate of Need should be granted for the Project.

## **II. SUMMARY OF PROJECT AND NEEDS**

### **A. Components of MVP 3 and Relation to MVP 4**

ITC Midwest seeks a Certificate of Need to enable it to construct the Minnesota segments of MVP 3. MVP 3 connects existing substations in Minnesota and new substations in Iowa and will be owned and constructed by ITC Midwest and MidAmerican Energy Company (“MidAm”). MVP 3 is comprised of the following facilities:

*ITC Midwest Facilities, “MN-IA 345 kV Project”*

- A 345 kV transmission line and associated facilities located in Jackson, Martin, and Faribault counties in Minnesota, connecting

to the existing Lakefield Junction Substation and a new Huntley Substation;

- A 345 kV transmission line between the new Huntley Substation and a new ITC Midwest-owned Ledyard Substation in Kossuth County, Iowa and
- A 345 kV transmission line and associated facilities between the new Ledyard Substation and the new MidAm-owned Kossuth County Substation.<sup>4</sup>

#### *MidAm Facilities*

- A 345 kV connection from the new Kossuth County Substation south to MidAm's existing Webster Substation, near Fort Dodge, Iowa; and
- A 345 kV line running west from the new Kossuth County Substation to MidAm's new O'Brien Substation, near Sanborn, Iowa.<sup>5</sup>

Figure 1 shows the ITC Midwest and MidAm 345 kV facilities that comprise MVP 3.

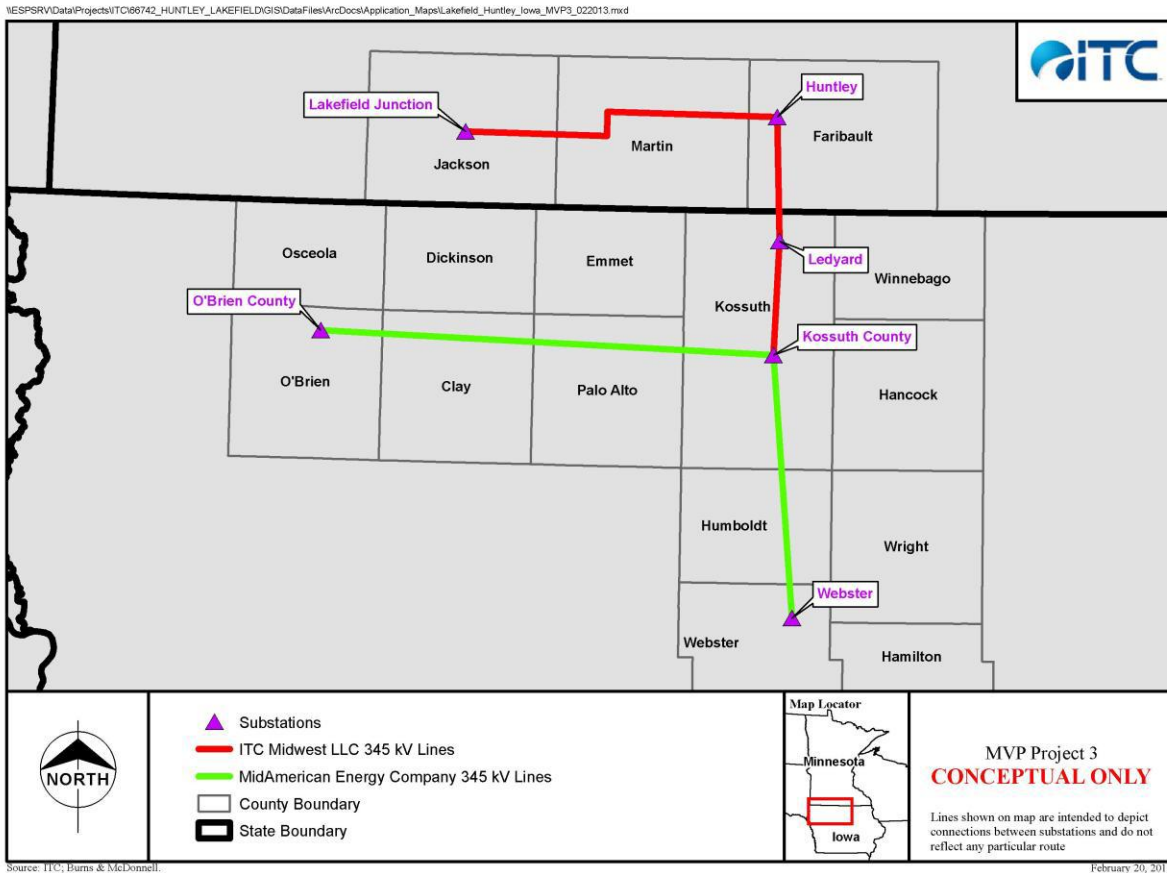
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<sup>4</sup> Ex. 6 at 1 (Certificate of Need Application).

<sup>5</sup> Ex. 6 at 1-2 (Certificate of Need Application).



Figure 1. MVP 3



MVP 3 is one of 17 projects MISO included in its MVP Portfolio. MISO developed the MVP Portfolio through an extensive stakeholder process and the portfolio is designed to provide reliability as well as economic and public policy

benefits across the MISO footprint, including support of renewable energy policy mandates.<sup>6</sup> As MISO witness Digaunto Chatterjee testified:

The overall goal for the MVP portfolio analysis was to design a transmission portfolio that takes advantage of the linkages between local and regional reliability and economic benefits to promote a competitive and efficient electric market within MISO.<sup>7</sup>

MVP 3 is closely related and connected to MVP 4<sup>8</sup> (referred to collectively as the “Mid-MISO MVPs”). Together, MVP 3 and MVP 4 provide a transmission path through southwest Minnesota to eastern Iowa.<sup>9</sup> MVP 3 adds new 345 kV connections from Lakefield, Minnesota and northwestern Iowa to north-central Iowa. MVP 4 provides a new connection from MVP 3 facilities in north-central

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<sup>6</sup> MISO Transmission Expansion Plan 2009 (“MTEP09”) at 1; see *Midwest Indep. Transmission Sys. Operator, Inc.*, 133 FERC ¶ 61,221 (2010), *order on reh’g*, 137 FERC ¶ 61,074 (2011), *aff’d in part, dismissed in part and remanded in part sub nom. Ill. Commerce Comm’n v. FERC*, 721 F.3d 764 (7th Cir. 2013), *cert. denied sub nom. Schuette v. FERC*, 134 S. Ct. 1277 (2014); *Hoosier Rural Energy Coop. Inc. v. FERC*, 134 S. Ct. 1278 (2014). The MISO Portfolio was developed prior to the addition of the “MISO South” Region which includes Mississippi, Louisiana, Arkansas, and Texas. References in this brief to the “MISO Classic Footprint” refer to “MISO prior to the integration of MISO South at the end of 2013. See <https://www.misoenergy.org/AboutUs/MediaCenter/PressReleases/Pages/MISOCOMPLETESLARGEST-EVERPOWERGRIDINTEGRATION.aspx>

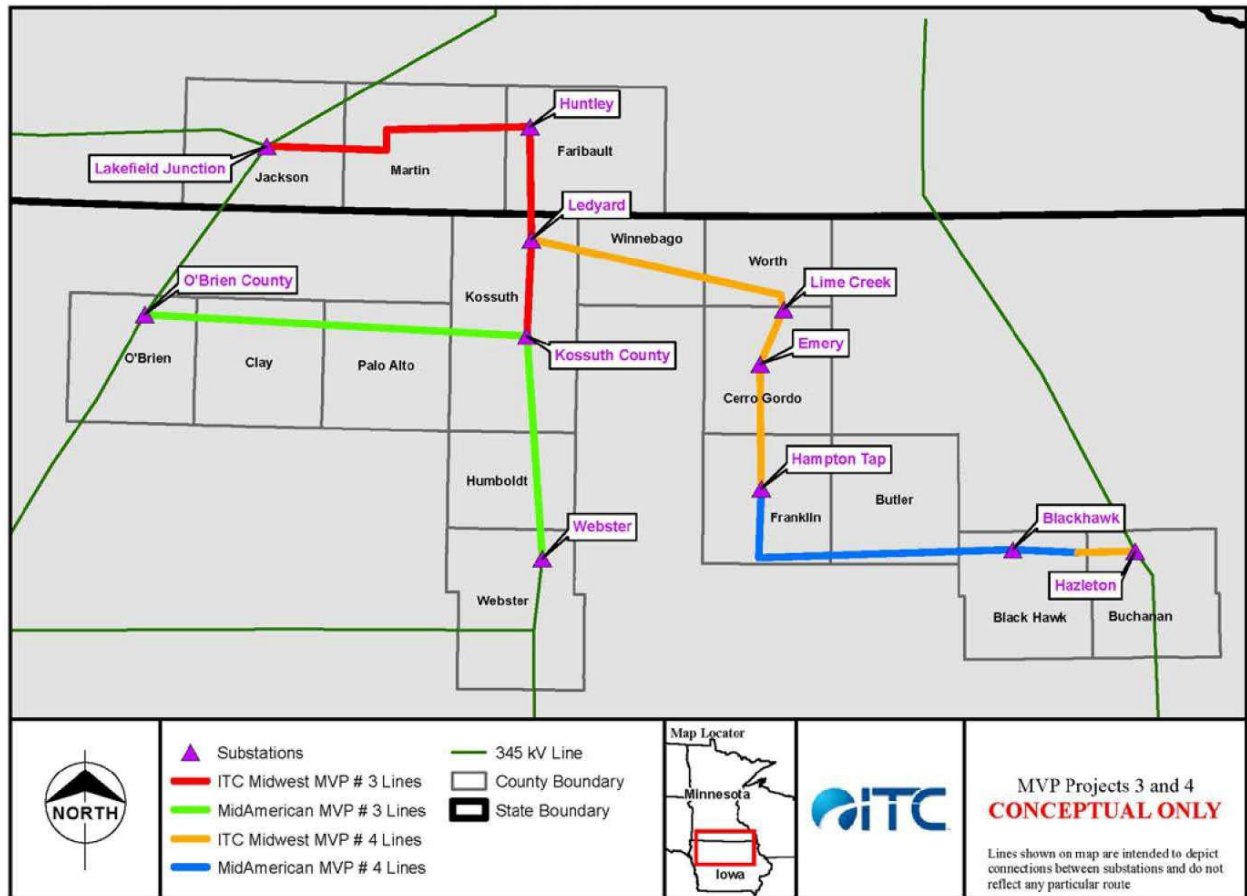
<sup>7</sup> Ex. 400 at 21 (Chatterjee Direct).

<sup>8</sup> Ex. 6 at Appendix M (LMP Impacts of Proposed Minnesota-Iowa 345 kV Transmission Project) at 2.

<sup>9</sup> Ex. 6 at Appendix M (LMP Impacts of Proposed Minnesota-Iowa 345 kV Transmission Project) at 2.

Iowa to existing 345 kV facilities in eastern Iowa.<sup>10</sup> Figure 2 shows the new 345 kV connections.

**Figure 2. MVP 3 and MVP 4 345 kV Facilities<sup>11</sup>**



**B. Long-Term Planning for the Transmission System is Required**

MVP 3 will meet the immediate, near-, and longer-term needs of the transmission system in southwest Minnesota. Consideration of both existing and future needs is inherent in any major transmission project due to the long-term

<sup>10</sup> Ex. 22 at 3 (Berry Direct).

<sup>11</sup> Ex. 22 at Schedule 2 (Berry Direct).

nature of the investment, the lumpiness of high voltage (345 kV+) transmission investment because relatively large increments of capability are added at one time, the generator/transmission lag, and Minnesota's status as a net importer of electricity.

In the CapX2020 docket, the Commission recognized that high-voltage transmission infrastructure typically lasts 50 years or more.<sup>12</sup> As a result, "the obligation to build a single transmission line to meet short- and medium-term needs provides an opportunity to anticipate a longer-term need."<sup>13</sup> Based on the longer-term needs, the Commission approved the three CapX2020 345 kV projects in an "upsized" configuration for each line, *i.e.*, designed so that it can accommodate a second 345 kV circuit when future needs and conditions warrant.

Transmission lines also have significant project development cycles from application to construction. As the Commission found, this transmission development timeline affects the timing of generation interconnections:

It takes several years to obtain a certificate of need, site transmission lines, acquire property and necessary permits, and physically construct the transmission lines.

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<sup>12</sup> *In the Matter of the Application of Great River Energy, Northern States Power Company (d/b/a Xcel Energy) and Others for Certificates of Need for the CapX 345-kV Transmission Projects*, Docket No. ET-2, E-002, *et al.*/CN-06-1115, ORDER GRANTING CERTIFICATES OF NEED WITH CONDITIONS ("CapX Order") at 29 (May 22, 2009).

<sup>13</sup> *In the Matter of the Application of Great River Energy, Northern States Power Company (d/b/a Xcel Energy) and Others for Certificates of Need for the CapX 345-kV Transmission Projects*, Docket No. ET-2, E-002, *et al.*/CN-06-1115, ORDER GRANTING CERTIFICATES OF NEED WITH CONDITIONS at 29-30 (May 22, 2009).

The process must begin well ahead of the date that a generator is ready to connect if the transmission lines are going to be ready in time.<sup>14</sup>

Minnesota also benefits from having adequate transmission capacity to help ensure access to low-cost generation resources. The Commission noted in its CapX2020 Order:

[B]ecause Minnesota imports more electricity than it exports Applicants argue that Minnesota has much to gain from keeping transmission capacity abundant. Transmission constraints can result in service interruptions and blackouts. But even when they do not, a transmission constraint bars a utility from acquiring electricity from a low-cost but remote resource, requiring the utility to substitute a closer – and higher-cost – resource.<sup>15</sup>

Accordingly, Minnesota benefits from having a robust electrical system that minimizes constraints.

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<sup>14</sup> *In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Certificates of Need for Four Large High Voltage Transmission Line Projects in Southwestern Minnesota*, Docket No. E-002/CN-01-1958, FINDINGS OF FACT, CONCLUSIONS OF LAW AND RECOMMENDATION (“ALJ Report”) at 50 (Nov. 8, 2002).

<sup>15</sup> *In the Matter of the Application of Great River Energy, Northern States Power Company (d/b/a Xcel Energy) and Others for Certificates of Need for the CapX 345-kV Transmission Projects*, Docket No. ET-2, E-002, *et al.*/CN-06-1115, ORDER GRANTING CERTIFICATES OF NEED WITH CONDITIONS at 29 (May 22, 2009).

### C. Existing Electrical System and Development of Buffalo Ridge

The electrical system in the Project area was designed to serve the residential and commercial needs of rural southwest Minnesota.<sup>16</sup> In 2001, the Minnesota Legislature enacted Minnesota Statutes Section 216B.1691, setting aggressive renewable energy goals for Minnesota utilities.<sup>17</sup> At that time, the Buffalo Ridge region was already recognized as a prime area for wind development in the upper Midwest due to the high wind speeds available in this area.<sup>18</sup> According to the U.S. Department of Energy's National Renewable Energy Laboratory's ("NREL") wind resource assessment data, the state of Minnesota has 489,271 MW of developable wind energy resources, which could provide 1,679 TeraWatt-hours per year, enough generation to meet Minnesota's electricity consumption almost 25 times over.<sup>19</sup>

Wind generation development has quickly outstripped the capability of the transmission system in southwest Minnesota and it has become apparent that

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<sup>16</sup> Ex. 6 at Appendix J (ITC Midwest LLC Multi-Value Project #3 Planning Study) at 1.

<sup>17</sup> When enacted, Minnesota Statutes Section 216B.1691 set good faith objectives for renewable energy. The same statute was amended with a new section in 2007 and established a Renewable Energy Standard, or RES, with mandated energy goals. The statute sets forth the RES obligations for Minnesota State utilities. This statute generally requires Xcel Energy to obtain 30% of its retail energy sales from renewable sources by 2020 and all other Minnesota utilities to achieve 25% retail renewable energy sales by 2025.

<sup>18</sup> Ex. 6 at 51 (Certificate of Need Application); Ex. 300 at 13 (Goggin Direct) (citing CEI Exhibits 1.2 and 1.3).

<sup>19</sup> Ex. 300 at 13 (Goggin Direct); Ex. 6 at 51-52 (Certificate of Need Application) (showing 80-meter height wind resource map for Minnesota published by NREL).

the electrical system designed to serve primarily local load is ill-suited to meet the demands of wind generation. The same year the Legislature passed Minnesota Statutes Section 216B.196.1, Xcel Energy proposed a major investment involving multiple transmission lines (“825 Projects”) to increase outlet capability on the Buffalo Ridge to 825 MW.<sup>20</sup> At that time, there was 300 MW of wind generation installed.<sup>21</sup>

While the 825 Projects docket proceeded, regional study efforts commenced to identify additional transmission system upgrades to ensure the reliable integration of these new wind resources. All of these planning efforts, beginning with the MISO Transmission Expansion Plan (“MTEP”) 2003 Exploratory Study and followed by a series of approximately 10 studies that culminated in the MVP Portfolio in MTEP11, concluded there was a need to build an additional 345 kV or larger bulk transmission line connecting Minnesota

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<sup>20</sup> *In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Certificates of Need for Four Large High Voltage Transmission Line Projects in Southwestern Minnesota*, Docket No. E-002/CN-01-1958, ORDER GRANTING CERTIFICATES OF NEED SUBJECT TO CONDITIONS (“Buffalo Ridge Order”) at 5 (Mar. 11, 2003).

<sup>21</sup> *In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Certificates of Need for Four Large High Voltage Transmission Line Projects in Southwestern Minnesota*, Docket No. E-002/CN-01-1958, FINDINGS OF FACT, CONCLUSIONS OF LAW AND RECOMMENDATION (“Buffalo Ridge ALJ Report”) at 55 (Nov. 8, 2002) (finding that approximately 300 MW of generation were installed on the Buffalo Ridge at the commencement of the proceeding). The ALJ’s Report was accepted, adopted and incorporated with exceptions by the Commission in the Order granting the Certificates of Need. Buffalo Ridge Order, *supra* note 21, at 1.

and Iowa to enable the reliable interconnection of additional wind sources in southwest Minnesota and northern Iowa.<sup>22</sup>

#### **D. Continued Wind Generation Development**

In the decade since the 825 Projects, wind generation has continued to develop, but transmission system development has not kept pace. As CEI witness Randall Porter, P.E., testified, approximately 1,525 MW of wind generation is currently installed in the Buffalo Ridge area.<sup>23</sup> This is a five-fold increase in installed generation since 2001 when the 825 Projects were proposed.<sup>24</sup> Representatives from Minnesota wind development interests, including EDF Renewable Development, Iberdrola, Geronimo Energy, and Vestas appeared at the public hearings to confirm the need for MVP 3. Iberdrola's Adam Sokolski stated: "Without the proposed project, growth of wind energy along the Buffalo Ridge in the future will grind to a halt as this line . . . provides key interconnection and delivery paths essential to interconnect and deliver new wind energy projects."<sup>25</sup>

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<sup>22</sup> Ex. 6 at 53-55 (Certificate of Need Application).

<sup>23</sup> Ex. 302 at 8 (Porter Rebuttal).

<sup>24</sup> *In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Certificates of Need for Four Large High Voltage Transmission Line Projects in Southwestern Minnesota*, Docket No. E-002/CN-01-1958, FINDINGS OF FACT, CONCLUSIONS OF LAW AND RECOMMENDATION ("Buffalo Ridge ALJ Report") at 55 (Nov. 8, 2002)

<sup>25</sup> Adam Sokolski Comments at 1 (May 30, 2014).



As more generation has been added to the system in southwest Minnesota, existing transmission capacity has become more constrained. These constraints, primarily on the Fox Lake - Rutland - Winnebago Junction 161 kV transmission line, have necessitated Special Protection Schemes (“SPSs”) to maintain reliability in the event of certain contingencies, and result in the frequent curtailment of existing generation.<sup>26</sup> When wind generation is curtailed, offsetting generation must be run, typically fossil fuel generation, resulting in a loss of low-cost generation and associated environmental benefits.<sup>27</sup>

**E. Benefits of MVP 3**

The capacity of the existing transmission system is exhausted, and all Parties agree that additional new transmission facilities are needed to address existing deficiencies.<sup>28</sup> ITC Midwest, MISO, and CEI provided compelling engineering analyses supporting the need for MVP 3.

First, MVP 3 will improve reliability. Local reliability will be improved by eliminating two constraints in Minnesota on the Fox Lake-Rutland-Winnebago 161 kV line which MISO has identified as one of the most constrained lines on

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<sup>26</sup> Ex. 6 at Appendix J (ITC Midwest LL Multi-Value Project #3 Planning Study) at 1.

<sup>27</sup> Ex. 6 at 58-59 (Certificate of Need Application).

<sup>28</sup> Ex. 200 at 14-15 (Heinen Direct); Ex. 400 at 40-41 (Chatterjee Direct); Ex. 300 at 2-3 (Goggin Direct); Ex. 29 at 24 (Berry Rebuttal).

the MISO transmission system.<sup>29</sup> These constraints have required adoption of SPSs to reliably operate the heavily loaded 161 kV system in southwest Minnesota.<sup>30</sup>

Regional reliability will be enhanced by MVP 3 by establishing a new 345 kV tie between Minnesota and Iowa.<sup>31</sup> Collectively, MVP 3 and MVP 4 will increase the robustness of the transmission system by eliminating an additional 35 constraints located in a broad geographic region from Redwood County in southwestern Minnesota to Buchanan County in eastern Iowa. The affected Minnesota counties include Redwood, Nicollet, Watonwan, Martin, Faribault, Freeborn, and Mower.<sup>32</sup>

Second, MVP 3 will provide generation outlet capability sufficient to meet the immediate, near-term and longer-term interconnection requirements. MVP 3 will address existing curtailment restrictions, enable development and interconnection of wind projects needed to meet near-term Minnesota RES requirements and interconnect additional renewable energy necessary to meet RPS requirements throughout the MISO footprint.

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<sup>29</sup> An extensive analysis completed by MISO in 2010 confirmed that the Lakefield-Fox Lake-Rutland 161 kV line constitutes a highly congested flowgate that requires mitigation. MTEP10 at 198-99.

<sup>30</sup> Ex. 6 at 66 (Certificate of Need Application) (citing MTEP10).

<sup>31</sup> Ex. 400 at 24-27 (Chatterjee Direct)

<sup>32</sup> Ex. 400 at 23-24 (Chatterjee Direct).

Existing wind-generated energy from Buffalo Ridge is currently being curtailed. CEI witness Michael Goggin testified that, according to one report, 847,700 MWh of potential wind energy production was curtailed in MISO in 2012.<sup>33</sup>

The level of curtailment will only increase in the future unless new transmission line facilities are constructed. MISO estimated that the MVP Portfolio will enable 1,933 MW of new installed generation.<sup>34</sup> If, however, the rest of the MVP Portfolio were constructed without all but MVP 3 and MVP 4, 1,130 MW of this prospective wind would be curtailed.<sup>35</sup>

There is significant and strong demand for transmission capacity to support planned and future generation resources, driven in significant part by state RPS requirements throughout MISO. The MISO Definitive Planning Phase (“DPP”) generation interconnection queue has 2,797 MW of nearby wind generation, 1,052 MWs in Minnesota and 1,745 MWs in Iowa.<sup>36</sup> The studies relating to these wind projects rely upon the MVP Portfolio, including MVP 3

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<sup>33</sup> Ex. 300 at 22 (Goggin Direct).

<sup>34</sup> Ex. 400 at 34 (Chatterjee Direct) (“Without the Mid-MISO MVPs, MISO identified that approximately 1,933 megawatts (“MW”) of the existing and planned wind connected capacity within the MISO portion of Minnesota and Iowa is calculated to be curtailed, in addition to a baseload generating plant, in order to maintain reliable system loading levels.”).

<sup>35</sup> Ex. 29 at 15-16 (Berry Rebuttal).

<sup>36</sup> Ex. 402 at 6 (Chatterjee Surrebuttal); *see* Ex. 535 (Stability Analysis Report for August 2012 West MISO DPP, March 29, 2013).

and MVP 4, to provide additional transmission capacity.<sup>37</sup> Mr. Porter testified that there are 4,300 MW of generator interconnection agreements (“GIAs”) in the DPP that are contingent on construction of MVP 3.<sup>38</sup> Mr. Chatterjee confirmed that all DPP projects assume these MVP Portfolio projects would be constructed.<sup>39</sup> This means that all generator interconnection requests in MISO’s DPP would have to be restudied if MVP 3 were not constructed.<sup>40</sup>

Included within these proposed wind projects are Commission-approved projects necessary to meet Minnesota’s RES requirements. For instance, the Commission approved Xcel Energy’s plan to contract four wind generated from 750 MWs of wind turbine facilities in North Dakota and Minnesota.<sup>41</sup> Dr. Rakow identified these wind farms as: Odell (near Mountain Lake, MN), Border Wind (northeastern Rolette County, ND), Courtenay (near Jamestown, ND), and

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<sup>37</sup> Ex. 402 at 6 (Chatterjee Surrebuttal); Ex. 304 at 6 (Goggin Surrebuttal); Ex. 535 (Stability Analysis Report for August 2012 West MISO DPP, March 29, 2013).

<sup>38</sup> Ex. 302 at 7 (Porter Rebuttal).

<sup>39</sup> Ex. 402 at 5 (Chatterjee Surrebuttal).

<sup>40</sup> Ex. 535 (Stability Analysis Report for August 2012 West MISO DPP, March 29, 2013); Ex. 302 at 7-8 (Porter Rebuttal) (“If the Project is not built then the[se] wind generators either need to renegotiate their contracts or terminate their projects. Termination of such wind generation projects would cause a great loss to those developers, landowners, and local communities.”).

<sup>41</sup> *In the Matter of the Petition of Xcel Energy for Approval of the Acquisition of 600 MW of Wind Generation and In the Matter of the Petition of Xcel Energy for Approval of the Acquisition of 150 MW of Wind Generation*, Docket Nos.E002/M-13-603 and E002/M-13-716, ORDER (December 13, 2013). Ex. 207 at 8 (Rakow Rebuttal) (listing these projects as well as Minnesota Power’s Bison 4 wind project).

Pleasant Valley (near Austin, MN).<sup>42</sup> Significantly, these wind farms, including Odell, “are waiting for a 345 kV line to be built before they can come into full operation.”<sup>43</sup>

The Commission approved Xcel Energy’s power purchase agreements with these projects and specifically found Xcel Energy will use the energy generated from each of these projects to meet its RES obligations.<sup>44</sup> The Commission also recognized Xcel Energy’s estimate that it will need to acquire an additional 1,000 MW of electricity from wind power to maintain compliance with the RES.<sup>45</sup>

MVP 3 will enable 750 MW of wind generation and, as Mr. Porter testified, is a prudent project to address these needs:

The 345 line, based upon my 25 plus years of electrical engineering experience is a prudent choice to move electricity from Buffalo Ridge in southwestern Minnesota to points within Minnesota and to the entire MISO region. The proposed line would also reduce existing and future transmission congestion and curtailment of wind energy facilities in the area. In addition, a 345 line would facilitate ongoing and future

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<sup>42</sup> Ex. 207 at 5 n.2 (Rakow Rebuttal).

<sup>43</sup> Evidentiary Hearing Transcript (“Ev. Hrg. Tr.”) at 54 (Porter).

<sup>44</sup> Ex. 209 at 1 (Rakow Statement).

<sup>45</sup> *In the Matter of the Petition of Northern States Power Company for Approval of the Acquisition of 600 MW and 150 MW of Wind Generation*, Docket Nos. E002/CN-13-603 and E002/CN-13-716, ORDER APPROVING ACQUISITIONS WITH CONDITIONS at 14 (Dec. 13, 2013).

development of the wind energy facilities that are planned for Buffalo Ridge . . . <sup>46</sup>

Third, MVP 3 will increase the efficiency of the energy supply by reducing losses and congestion, resulting in reduced production costs, locational marginal prices (“LMPs”) and emissions. Specifically, as noted by ITC Midwest witness

Dr. Todd Schatzki:

Based on my analysis of the factors considered by Dr. Rakow in his comparison of transmission alternatives, I find that MVP Project 3 (with or without MVP Project 4) is expected to provide greater net benefits than the 161 kV Rebuild Alternative. My analysis is based on more reliable and comprehensive estimates of project impacts to Minnesota customers, including the use of production cost, rather than LMP impacts, and the use of emission costs based on all changes in emissions, rather than only those arising from reductions in transmission line losses.<sup>47</sup>

Absent the addition of new transmission facilities in southwest Minnesota, SPSs will continue to be needed, wind curtailment will continue, no new generation will be able to interconnect to the transmission system and congestion will continue to lead to less efficient delivery of energy and higher production costs.

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<sup>46</sup> Ev. Hrg. Tr. at 53-54 (Porter).

<sup>47</sup> Ex. 33 at 2 (Schatzki Rebuttal).

The only testimony on the record that questioned the need for MVP 3 was from Dr. Steve Rakow of the DOC DER regarding the merits of just rebuilding the Fox Lake - Rutland - Winnebago Junction 161 kV line (“161 kV Rebuild Alternative”). His analysis related to the comparative cost of the 161 kV Rebuild Alternative and focused on Minnesota-only impacts and benefits<sup>48</sup> and did not challenge the engineering justifications for MVP 3.<sup>49</sup> At hearing, he submitted a written statement his testimony recognized that given the timing of the 200 MW Odell wind farm and its transmission needs, he could “no longer conclude from the record that the 161 kV Rebuild has been demonstrated to be a more reasonable alternative to the proposed Project.”<sup>50</sup> Another DOC DER witness, Adam Heinen, testified that a new transmission line is needed in southwest Minnesota to “improve deliverability and reduce constraints on the transmission

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<sup>48</sup> Ex. 208 at 31 (Rakow Surrebuttal) (“Further, the lower export capability is not necessarily a negative factor at this time because the lower level of export capability can meet the immediate needs of the Minnesota RES and allows the larger transfer capability of the 345 kV alternative to be reserved until it is actually needed to meet a broader need for generation to meet the Minnesota RES—after sometime in 2021.”).

<sup>49</sup> *See generally* Ex. 205 at 7-44 (Rakow Direct) (describing Dr. Rakow’s screening analysis and cost analysis of alternatives). Ex. 208 at 14 (Rakow Surrebuttal) (stating that Dr. Rakow “take[s] no position regarding the accuracy of the engineering studies”).

<sup>50</sup> Ex. 208 at 7 (Rakow Surrebuttal).

system”.<sup>51</sup> Limited intervenor NoCapX/CETF apparently opposes the Project, but provided no testimony to challenge the need.

In contrast, ITC Midwest, MISO, and CEI offered expert engineering testimony identifying a long list of inadequacies of the 161 kV Rebuild Alternative. Mr. Porter testified that, if approved, the 161 kV Rebuild Alternative “would likely freeze the Minnesota Wind Industry at current levels.”<sup>52</sup> These three parties demonstrated that the 161 kV Rebuild Alternative would not meet the identified needs from an engineering perspective and should be rejected.

The record, therefore, demonstrates that MVP 3 is needed, and there is no more reasonable and prudent alternative to MVP 3. Further, as detailed below, all rule criteria and statutory requirements are met. The ALJ should recommend that the Commission grant a Certificate of Need for MVP 3.

### **III. PROCEDURAL BACKGROUND**

ITC Midwest’s Proposed Findings of Fact, Conclusions of Law, and Recommendation provide a recitation of the procedural history in this Docket.

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<sup>51</sup> Ex. 200 at 7 (Heinen Direct) (calculating constraints for 2011 and 2012, finding that constraints existed for 23 percent and 14 percent of each year, respectively and concluding that “[t]he number, and magnitude, of constraints suggest that additional transmission capacity is needed in the Project area.”); Ex. 202 at 6 (Heinen Surrebuttal) (“Based on my analysis in Direct Testimony, I concluded that construction of a transmission line in the Project Area would likely improve deliverability and reduce constraints on the transmission system.”).

<sup>52</sup> Ex. 302 at 8 (Porter Rebuttal).



#### IV. THE RECORD - PROJECT

##### A. Timing

The Project is estimated to be in service by second quarter 2017 if Route A, Modified Route A, or Route B is selected.<sup>53</sup> However, the in-service date would likely be delayed if the Commission's decisions on the Applications occur later than Fall 2014,<sup>54</sup> or if the Commission selects a route other than Route A, Modified Route A, or Route B.<sup>55</sup>

##### B. Design and Right-of-Way

ITC Midwest proposes a 345 kV/161 kV design for the 345 kV portions of the Project. Depending on the route selected, the Project will be constructed primarily using double circuit structures with both a 345 kV line and a 161 kV line or as double circuit capable with a 345 kV line and capability to add a 161 kV line in the future when conditions warrant. For the associated 161 kV lines, described in more detail in the Proposed Findings and in ITC Midwest's Brief in Support of the Route Permit, single-circuit or double-circuit 161 kV design is proposed.

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<sup>53</sup> Ex. 21 at 3 (Ashbacker Direct). The proposed routes and alternative are detailed in ITC Midwest LLC's Post-Hearing Brief In Support of its Application for a Route Permit, Docket No. 12-1337.

<sup>54</sup> Ex. 21 at 6 (Ashbacker Direct).

<sup>55</sup> Ex. 21 at 4 (Ashbacker Direct). For example, the in-service date would likely be delayed approximately three months or possibly longer if one of the I-90-R Options were selected. *See* Ex. 21 at 4-5 (Ashbacker Direct); Ex. 22 at 17, 20 (Berry Direct).

A 200-foot wide right-of-way will be needed for the 345 kV transmission line portions of the Project with the exception of the limited area crossing the Pilot Grove WPA.<sup>56</sup> Within the 200-foot right-of-way, ITC Midwest will have vegetation management rights, will place its structures in the centerline of the right-of-way and will prohibit placement of other structures within the center 150-foot area.<sup>57</sup> In the outer 25 feet on either side of this center 150-foot area of the 200-foot easement, ITC Midwest will ensure that no structures or other improvements are constructed in this outer 25 feet that pose a safety concern to the Project.<sup>58</sup> This 200-foot width provides sufficient area to ensure safe and reliable operation of the line in compliance with National Electric Safety Code (“NESC”), North American Electric Reliability Corporation (“NERC”), and ITC Midwest standards.<sup>59</sup> The easements ITC Midwest plans to acquire will not allow ITC Midwest to manage vegetation beyond the 200-foot easement without additional rights or permission obtained from landowners.<sup>60</sup>

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<sup>56</sup> Ex. 7 at 34 (Route Permit Application).

<sup>57</sup> Ex. 7 at 34 (Route Permit Application).

<sup>58</sup> Ex. 7 at 34 (Route Permit Application).

<sup>59</sup> Ex. 21 at 8 (Ashbacker Direct); Ev. Hrg. Tr. at 27-28 (Ashbacker).

<sup>60</sup> Ev. Hrg. Tr. at 28 (Ashbacker).

### C. Costs

The final cost of the entire MN-IA 345 kV Project is highly dependent on a number of factors that are outside of ITC Midwest’s control, including the final route (which impacts final design), the timing of construction, and availability of construction crews, and the cost of materials.<sup>61</sup> In light of these uncertainties, ITC Midwest provided approximate Project costs using a bandwidth of a plus/minus 30 percent.<sup>62</sup> The midpoint values of these estimated total Project cost ranges are provided in **Figure 3** below:

**Figure 3. Project Costs (\$ Millions)**

Minnesota Route	Minnesota Cost of Construction <sup>63*</sup>	Iowa Cost of Construction <sup>64</sup>	Total Project Cost <sup>65</sup>
Route A	\$208	\$77	\$285
Route B <sup>66</sup>	\$196	\$77	\$273
Modified Route A	\$207	\$77	\$284

\*Cost of construction includes associated facilities from Winnebago Junction Substation to the Proposed Huntley Substation

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<sup>61</sup> Ex. 6 at 28 (Certificate of Need Application).

<sup>62</sup> This bandwidth does not include a contingency. Ev. Hrg. Tr. at 25 (Ashbacker).

<sup>63</sup> Ex. 24 at 21 (Coeur Direct).

<sup>64</sup> Ex. 6 at 6 (Certificate of Need Application).

<sup>65</sup> Ex. 20 at 9 (Grover Direct).

<sup>66</sup> While both routes are approximately the same length, the materials and labor costs for Route B are estimated to be lower than for Route A because only the 345 kV circuit would be installed as part of the Project. ITC Midwest estimates the cost to install the 161 kV circuit along Route B, considering only materials and labor, would be approximately \$28 million. Therefore, if Route B were also constructed initially as a 345 kV/161 kV line configuration, it would cost an estimated \$222 million. Ex. 7 at 25 (Route Permit Application).

All but \$7.4 million of the ITC Midwest costs for MVP 3 will be recovered regionally, pursuant to MISO's Federal Energy Regulatory Commission ("FERC") approved tariffs. Minnesota ratepayers' share of the annual revenue requirement is determined by the percent of total MISO energy used in Minnesota, which has been estimated at approximately 13.3 percent based on MISO's posted 2010 energy withdrawal data for the MISO Classic footprint.<sup>67</sup>

Mr. Grover estimated the total annual first year revenue requirement for the Project will be approximately \$52.4 million.<sup>68</sup> Of this amount, approximately \$7.0 million will be collected from Minnesota ratepayers.<sup>69</sup>

## V. THE RECORD - NEED

### A. Overview

The MN-IA 345 kV Project and the other segments of MVP 3 will address three categories of need: transmission system reliability (local and regional), generation outlet capability and efficient delivery of energy. Each of these is described in detail in this section.

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<sup>67</sup> Ex. 20 at 9 (Grover Direct); Ex. 203 at 7 (Johnson Direct) ("I agree that Minnesota utilities will be assigned approximately 13.3 percent of ITCM's MVP portion of the Project's costs under Schedule 26A.").

<sup>68</sup> Ex. 20 at 10 (Grover Direct).

<sup>69</sup> Ex. 20 at 10 (Grover Direct).

## **B. Transmission System Reliability**

### **1. *Local Reliability***

MVP 3 is needed to improve local transmission system reliability. The transmission system in southwestern Minnesota, developed to serve rural load, has increasingly been called upon to transmit significant amounts of wind generation energy. The increasing demand for generation interconnections in the Buffalo Ridge area has stressed the local transmission system, creating persistent reliability issues that are managed through SPSs and curtailment of renewable generation.

One of the primary constraints in southern Minnesota is the Fox Lake - Rutland - Winnebago Junction 161 kV transmission line. This constraint limits the amount of energy that can be delivered from southwest Minnesota to loads to the east. Approximately 1,500 MW of installed generation (predominately wind) is located in Blue Earth, Brown, Cottonwood, Faribault, Freeborn, Jackson, Meeker, Lyon, Murray, Pipestone, Rock, Swift, and Yellow Medicine counties in southern Minnesota.<sup>70</sup> Mr. Berry explained the impact on existing generation when the Fox Lake - Rutland - Winnebago Junction 161 kV constraint limits the transfer capability of the transmission system as follows:

The constraint results in the curtailment of some of this installed generation, impacting primarily wind

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<sup>70</sup> Ex. 22 at 6 (Berry Direct).

generation. In 2011 and 2012, for example, the constraint resulted in more than 2,000 binding hours which impacted MISO's Day-Ahead Energy Market. In my MVP Project 3 Planning Study located in the Application at Appendix J, I found that this constraint limited generation outlet capability under six generation scenarios both in the summer peak and shoulder base cases.<sup>71</sup>

These constraints have prompted adoption of two SPSs (Fieldon Capacitor Bypass and Nobles County-Wilmarth) that allowed additional wind generation to interconnect in the absence of needed transmission facilities. The SPSs are necessary to prevent overloading of the Fox Lake - Rutland - Winnebago Junction 161 kV line in the case of critical contingencies.<sup>72</sup>

The use of SPSs is a typically a short-term fix for reliability violations resulting from inadequate transmission infrastructure to support new generation facilities.<sup>73</sup> The SPSs decrease system reliability and robustness when used to mitigate transmission facility thermal overloads and voltage instability. SPSs rely on complex automatic control schemes to mitigate the lack of adequate local transmission infrastructure. Such schemes reduce costs in the short-term by delaying the development of needed transmission upgrades. But as Mr. Berry testified:

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<sup>71</sup> Ex. 22 at 6 (Berry Direct).

<sup>72</sup> Ex. 22 at 8 (Berry Direct).

<sup>73</sup> Ex. 6 at 66 (Certificate of Need Application).

SPSs create a barrier for new generation developments in the area as costs for transmission upgrades are transferred to newly-proposed developments. This cost transfer promotes expansion of the existing SPSs to new generation developments or development of new SPSs in the area, further reducing the reliability of the transmission system as multiple transmission facilities and/or generation units are dropped from the system as a result of a single contingent event.<sup>74</sup>

The SPSs existed at the time ITC Midwest acquired Interstate Power and Light Company's transmission in 2007.<sup>75</sup> When adopted, "they were intended as a short term operational tool to enable the interconnection of new generation until needed transmission facilities could be constructed."<sup>76</sup> ITC Midwest has since adopted a policy forbidding any new SPSs on ITC Midwest's system. ITC Midwest concluded from its experience that SPSs are generally undesirable because they greatly expand the complexity of operating the transmission system, negatively impact reliability and place significant demands on a utility's transmission staff.<sup>77</sup>

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<sup>74</sup> Ex. 22 at 9 (Berry Direct); *see* Ex. 6 at 66-67 (Certificate of Need Application).

<sup>75</sup> Ex.6 at 68 (Certificate of Need Application).

<sup>76</sup> Ex. 22 at 8-9 (Berry Direct).

<sup>77</sup> Ex. 6 at 66-67 (Certificate of Need Application).

MVP 3 will relieve heavy loading on the existing 161 kV system serving southern Minnesota and will enable the retirement of the SPSs in the area.<sup>78</sup>

MVP 3 will also improve operational flexibility by providing an additional transmission connection between the Lakefield Junction and the Huntley substations. This will provide greater flexibility for maintenance outages of other transmission lines in the area.<sup>79</sup>

## 2. *Regional Reliability*

MVP 3 enhances the reliability of the regional bulk “highway” transmission system by creating a strong new 345 kV transmission tie between Minnesota and Iowa to meet the increasing demands placed on the system, including demands by wind energy resources.<sup>80</sup> The intermittent nature of wind generation adds to the operational variability and uncertainty inherent in all power systems. This reliability concern is significantly reduced with a robust grid which allows the benefits of diversity to be realized (geographic, resource, and load).<sup>81</sup>

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<sup>78</sup> Ex. 22 at 8 (Berry Direct). Mr. Berry testified that MVP 3 alone would likely enable the retirement of the SPSs. *Id.* MISO studied MVP 3 and MVP 4 collectively and confirmed that the SPSs would be retired once the projects are in service. Ev. Hrg Tr. at 62-64 (Chatterjee).

<sup>79</sup> Ex. 22 at 9 (Berry Direct).

<sup>80</sup> Ex. 22 at 9-10 (Berry Direct). To this extent, reliability and generation outlet capability needs overlap. The overall need is to ensure the reliable operation of the transmission system with the interconnection of additional wind resources.

<sup>81</sup> Ex. 29 at 8 (Berry Rebuttal).



## C. Generation Outlet Capability

### 1. *Long-Term Study Efforts*

For more than a decade, transmission system engineers have recognized the need for additional 345 kV facilities in southwest Minnesota and northern Iowa. Multiple study efforts were undertaken, beginning in 2003, and concluding with MTEP11's extensive stakeholder process, led to approval of the MVP Portfolio.

Since the early 2000s, transmission owners, MISO, and other stakeholders have engaged in study efforts to determine how best to build out the transmission system to support RES obligations.<sup>82</sup> General engineering principles also led to the conclusion that a 345 kV voltage solution is required to address the needs in southwest Minnesota and the surrounding states.<sup>83</sup> Given the significant amount of wind generated capacity already connected in southwest Minnesota and northern Iowa and the expected new additions, the capability of a higher voltage is needed and the 345 kV class is the standard high voltage in this area.<sup>84</sup> Lower voltage facilities cannot, as a practical matter, move large amounts of power across long distances efficiently.<sup>85</sup> Regional transfers occur primarily on

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<sup>82</sup> Ex. 6 at 88 (Certificate of Need Application)

<sup>83</sup> Ex. 29 at 11 (Berry Rebuttal).

<sup>84</sup> Ex. 29 at 11 (Berry Rebuttal).

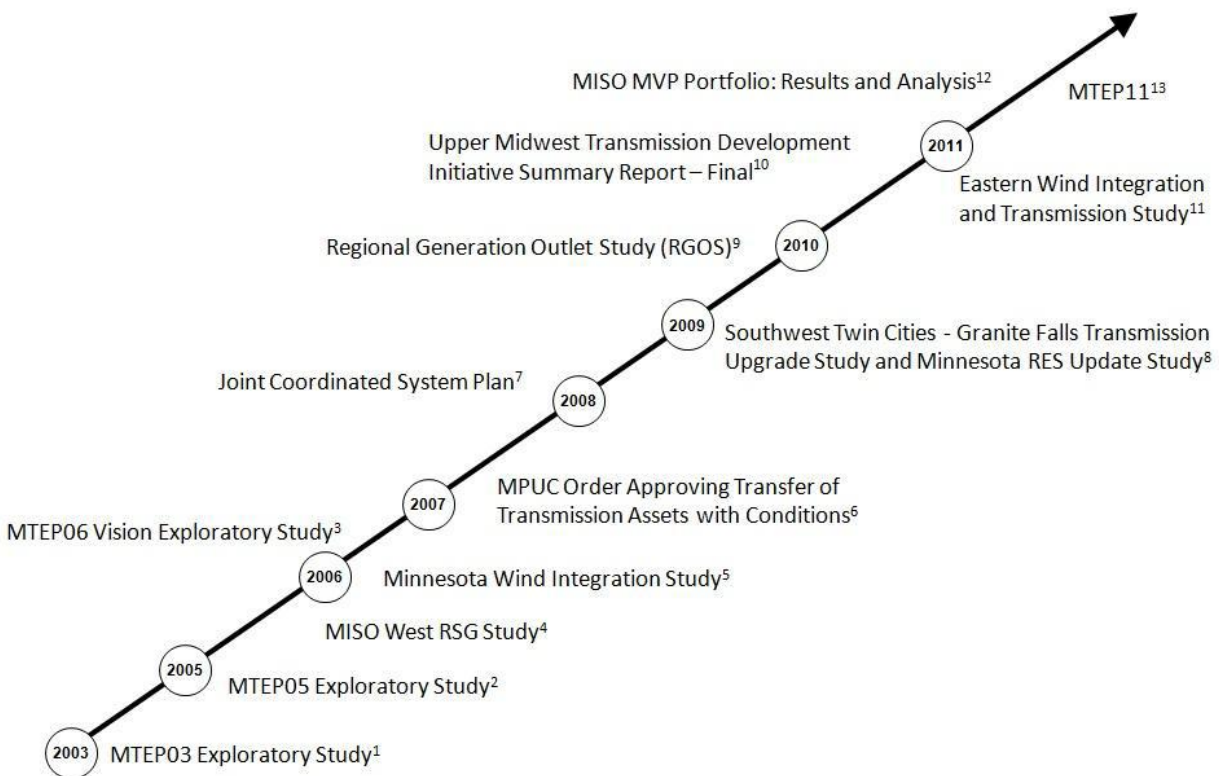
<sup>85</sup> Ex. 29 at 11 (Berry Rebuttal).

the higher voltage systems (345 kV and above) and rely on the lower voltage transmission system as contingency support.<sup>86</sup>

**Figure 4** below summarizes the various planning efforts.<sup>87</sup>

**Figure 4. Studies Identifying Need for 345 kV+ Bulk Transmission**

**Lines in Southern Minnesota and Northern Iowa<sup>88</sup>**



<sup>86</sup> Ex. 29 at 11 (Berry Rebuttal).

<sup>87</sup> Ex. 6 at 53 (Certificate of Need Application).

<sup>88</sup> See Ex. 6 at Appendix F for citations to all studies listed in Figure 4.

Many of the studies identified in **Figure 4** were conducted as long-range planning exercises to determine the most cost-effective solutions for moving high volumes of wind from Midwestern states with strong wind resources to larger load centers in the East.<sup>89</sup> For example, the governors of Iowa, Minnesota, North Dakota, South Dakota, and Wisconsin formed the Upper Midwest Transmission Development Initiative (“UMTDI”) in 2008 to identify regional transmission planning and cost allocation issues associated with the delivery of renewable energy from wind rich areas within its five-state footprint.<sup>90</sup>

On September 29, 2010, UMTDI published its Executive Committee Final Report (“UMTDI’s Final Report”)<sup>91</sup> on these issues, identifying those areas where it was likely that wind generation would be developed, as well as the likely paths for the Extra High Voltage (“EHV”) transmission lines (345 kV and above) that would be needed to deliver that generation to load.<sup>92</sup> The UMTDI’s Final Report identified likely wind development across southern Minnesota from the Buffalo Ridge in the southwest corner of the State along the I-90 corridor to the southeast corner of the State.<sup>93</sup> UMTDI also identified, among others, a likely west to east EHV transmission path along the border between Minnesota and Iowa to deliver

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<sup>89</sup> Ex. 6 at 53 (Certificate of Need Application).

<sup>90</sup> Ex. 6 at 54 (Certificate of Need Application).

<sup>91</sup> See Ex. 6 at Appendix G (UMTDI’s Final Report).

<sup>92</sup> Ex. 6 at 54 (Certificate of Need Application).

<sup>93</sup> Ex. 6 at 54 (Certificate of Need Application).

the generation from the UMTDI wind zones to load.<sup>94</sup> UMTDI noted that this transmission corridor generally coincided with a Lakefield Junction to Mitchell County, Iowa 345 kV transmission line that MISO had identified as a potential project in its contemporaneous regional generation outlet capacity study.<sup>95</sup> While UMTDI cautioned that it was not endorsing any particular project or corridor arising out of its or MISO's generation outlet studies, it affirmed its general support for the identified transmission projects and corridors because they appeared to have value in all identified reasonable futures.<sup>96</sup>

Also beginning in 2008, MISO, in conjunction with state utility regulators and industry stakeholders, initiated the Regional Generator Outlet Study ("RGOS") in a collaborative, multi-year effort to determine how to build the transmission facilities that would meet the significant renewable energy requirements within MISO at the lowest delivered cost per megawatt hour.<sup>97</sup> RGOS first identified areas where wind generation would likely be sited, then indicated where development of additional high voltage transmission lines should be focused.<sup>98</sup> RGOS also identified "wind zones" in each state and

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<sup>94</sup> Ex. 6 at 54 (Certificate of Need Application).

<sup>95</sup> Ex. 6 at 55 (Certificate of Need Application).

<sup>96</sup> Ex. 6 at 55 (Certificate of Need Application).

<sup>97</sup> Ex. 6 at 61 (Certificate of Need Application); *see* Ex. 400 at 20 n. 20 (Chatterjee Direct).

<sup>98</sup> Ex. 6 at 61 (Certificate of Need Application).

evaluated how the MISO states' RPS could be met effectively and cost-efficiently from generation development.<sup>99</sup>

The UMTDI approved the RGOS wind siting locations.<sup>100</sup> The siting locations were then used as inputs into MVP portfolio analysis in collaboration with transmission-owning MISO members, including ITC Midwest, and evaluated for effectiveness in meeting the RGOS objectives.<sup>101</sup> The proposed MVP Portfolio was included in MISO's MTEP11 planning and review process.

Since its inception, MISO has conducted transmission studies of the transmission system within the MISO footprint to identify and recommend construction of projects required to address network reliability issues, projects that increase system efficiency and reduce costs, as well as projects that meet specific state and federal public policy objectives. MISO reports on its recommended transmission projects in its annual MTEP.<sup>102</sup>

When developing each MTEP, Mr. Chatterjee testified that two considerations are key:

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<sup>99</sup> Ex. 6 at 61 (Certificate of Need Application).

<sup>100</sup> Ex. 400 at 33. (Chatterjee Direct).

<sup>101</sup> Ex. 400 at 20 (Chatterjee Direct); *see* Ex. 402 at 9 (Chatterjee Surrebuttal) (stating that the wind generation sites identified by RGOS were the "same wind generation sites were used as inputs into the MTEP 2011 MVP portfolio analysis where detailed reliability and economic analyses were performed, and Multi Value transmission projects such as the MID-MISO MVPs were identified to mitigate transmission constraints").

<sup>102</sup> Ex. 6 at 44 (Certificate of Need Application)

First, the security of the transmission system must be maintained. That is, the transmission system must be able to withstand disturbances (generator and/or transmission facility outages) without interruption of service to load. This is achieved, in part, by ensuring that disturbances do not lead to cascading loss of other generation and transmission facilities. Second, the transmission system must be adequately planned to be able to accommodate load growth and/or changes in load and load growth patterns, as well as changes in generation and generation dispatch patterns without causing equipment to perform outside of its design capability. Additional considerations include addressing constraints that limit market efficiency and providing for expansions that enable energy policy mandates to be achieved.<sup>103</sup>

In accordance with the Transmission Owners Agreement, “approval of an MTEP by the Board certifies the MTEP as MISO’s plan for meeting the transmission needs of all stakeholders subject to any required approvals by federal or state regulatory authorities.”<sup>104</sup>

An MVP is a relatively new type of transmission project developed by MISO and stakeholders, and accepted by the FERC.<sup>105</sup> As explained by Mr. Chatterjee:

The overall goal for the MVP portfolio analysis was to design a transmission portfolio that takes advantage of the linkages between local and regional reliability and economic benefits to promote a competitive and

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<sup>103</sup> Ex. 400 at 12 (Chatterjee Direct).

<sup>104</sup> Ex. 400 at 11-12 (Chatterjee Direct).

<sup>105</sup> Ex. 400 at 18 (Chatterjee Direct).

efficient electric market within MISO. The portfolio was designed using reliability and economic analyses, applying several Future Scenarios to determine the robustness of the designed portfolio under a number of potential energy policies.<sup>106</sup>

An MVP is a project that must be (i) evaluated as part of a portfolio of projects whose benefits are spread broadly across the MISO footprint and (ii) must meet at least one of the following criteria:

- the project must be developed through the transmission expansion planning process, enable reliable and economic transmission of energy policy mandates, and deliver this energy in a more reliable and economic method;
- the project must provide multiple types of economic value across the entire MISO footprint and have a benefit to cost ratio greater than 1.0; or
- the project must address at least one transmission issue associated with a projected reliability violation.<sup>107</sup>

The MVP study evaluated a portfolio solution that could reliably integrate about 25 GW of renewable energy.<sup>108</sup> Like the engineers in the studies that preceded the MVP analysis, the MISO and the MISO stakeholder community agreed a 345 kV system was the proper voltage for the objectives and the needs

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<sup>106</sup> Ex. 400 at 21 (Chatterjee Direct).

<sup>107</sup> Ex. 200 at 3 (Heinen Direct); Ex. 400 at 18-19 (Chatterjee Direct).

<sup>108</sup> Ex. 29 at 11 (Berry Rebuttal).

of the study.<sup>109</sup> In 2011, the MISO Board approved a portfolio of 17 MVPs, all high voltage projects.<sup>110</sup>

## 2. *Current and Future Generation Demand Drivers*

The demand for additional renewable energy resources is driven, in significant part, by Minnesota's RES and the RPSs in other MISO states.

For example, it is undisputed that the Odell 200 MW wind farm is needed for Xcel Energy's RES requirements and the technical interconnection studies for the Odell wind farm rely upon MVP 3 to deliver its output.<sup>111</sup> In addition, Mr. Goggin testified that even after the 950 MW attributed to Bison 4, Odell, Courtenay, Pleasant Valley and Border Winds, additional wind capacity of 1,120 to 1,388 MW is needed for Minnesota through 2025 to meet the RES.<sup>112</sup> In support of his calculation, Mr. Goggin noted that Xcel Energy has indicated that it

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<sup>109</sup> Ex. 29 at 11 (Berry Rebuttal).

<sup>110</sup> See generally, MISO Transmission Expansion Plan 2011 ("MTEP11").

<sup>111</sup> Ex. 492 at 4-5 (Chatterjee Surrebuttal); Ex. 302 at 7 (Porter Rebuttal); Ex. 535 (Stability Analysis Report for August 2012 West MISO DPP, March 29, 2013); *In the Matter of the Petition of Xcel Energy for Approval of the Acquisition of 600 MW of Wind Generation* and *In the Matter of the Petition of Xcel Energy for Approval of the Acquisition of 150 MW of Wind Generation*, Docket Nos. E002/M-13-603 and E002/M-13-716, ORDER (December 13, 2013). See Ex. 209 at 1 (Rakow Statement).

<sup>112</sup> Ex. 304 at 5-6 (Goggin Surrebuttal). Mr. Goggin was responding to Dr. Rakow's rebuttal testimony regarding the Minnesota need for RES compliance. While Dr. Rakow stated he took "no position on the accuracy of AWEA's calculation of RES compliance needs," Rakow Rebuttal at 7, he also asserted that Goggin miscalculated these needs. See also Ex. 301 at 10-11 (Goggin Direct).



intends to purchase wind energy above and beyond what has been approved by the Commission.<sup>113</sup> Mr. Goggin explained:

Of the 950 megawatts witness Rakow lists, the four projects that have contracts with Xcel Energy total 750 megawatts. In its petition for approval of Border Winds wind project, which initiated docket CN-13-716, Xcel Energy stated the following:

Using a 40% capacity factor it will take roughly 1,000 MW more wind generation to maintain compliance **after** Odell, Courtenay, Pleasant Valley and Border Winds.<sup>114</sup>

In approving Xcel Energy's application, the Commission recognized that "[t]ransmission interconnection risk" was a major factor facing development of the projects that are necessary to meet the RES.<sup>115</sup>

MVP 3 is an assumed facility for these wind projects and denial of the Certificate of Need "would result in significant delays in construction of wind projects needed to meet the Minnesota RES and RPS requirements in other states."<sup>116</sup> Moreover, Mr. Chatterjee stated that "the Minnesota RES will not be

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<sup>113</sup> Ex. 304 at 4 (Goggin Surrebuttal).

<sup>114</sup> Ex. 304 at 6 (Goggin Surrebuttal) (emphasis added) (citing *In the Matter of the Petition of Northern States Power Company for Approval of the Acquisition of 150 MW of Wind Generation*, Docket No. E002/ M-13-716 at 8 (August 9, 2013) (emphasis added)); see ORDER APPROVING ACQUISITIONS WITH CONDITIONS, Docket E-002/M-13-603 and E- 002/M-13-716 at 14 (December 13, 2013) (acknowledging 1,000 MW need).

<sup>115</sup> Ex. 402 at 4-5 (Chatterjee Surrebuttal).

<sup>116</sup> Ex. 402 at 6 (Chatterjee Surrebuttal).

satisfied in the absence of the construction and interconnection of planned wind projects.<sup>117</sup> He explained:

The RES was among the RPSs that were considered in planning the MVP portfolio of transmission projects. Much of the wind generation required to meet the RES has not yet been constructed, and is the subject of MISO interconnection studies. These studies currently assume that the MVP portfolio is constructed according to a timeline. In the event the MID-MISO MVPs are not approved and constructed, some of the wind generation that is relied upon by Minnesota utilities to meet the RES will be curtailed or not interconnected.<sup>118</sup>

The immediate and near-term demand for interconnection capacity in the MVP 3 project area is supported by the DPP interconnection queue which, as noted, has 2,797 MW of wind generation in Minnesota and Iowa wind awaiting interconnection<sup>119</sup>.

The Project is also supported by numerous wind developers with an interest in the Project area.

For example, Shannelle Montana, representing EDF Renewable Development, testified about the benefits the communities in southwestern

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<sup>117</sup> Ex. 402 at 5 (Chatterjee Surrebuttal).

<sup>118</sup> Ex. 402 at 4 (Chatterjee Surrebuttal).

<sup>119</sup> Ex. 402 at 6 (Chatterjee Surrebuttal); *see* Ex. 535 (Stability Analysis Report for August 2012 West MISO DPP, March 29, 2013).

Minnesota would realize as a result of wind development projects.<sup>120</sup> EDF Renewable Development has worked with projects including the Lakefield Wind Project and the Nobles and Fenton Projects. Ms. Montana testified that many of the communities in which EDF Renewable Development has been working in have been asking for more development as a result of the economic benefits to their communities, including job creation and increases in tax revenues.<sup>121</sup> Ms. Montana further testified that the MVP 345 kV lines, particularly the MN - IA 345 kV line, “is very important for us to continue developing.”<sup>122</sup> Ms. Montana explained that transmission was necessary to increase development “to get the power from our project areas to more densely populated areas” which “allows us to sell the project and have a successful project.”<sup>123</sup>

Justin Pickar, Director of Development at Geronimo Energy, also testified regarding the need for the Project. Geronimo Energy has an interest in projects that have PPAs approved by the MPUC that are dependent on the MN - IA 345 kV line being built.<sup>124</sup> Mr. Pickar testified about the negative impacts that denial of this the Certificate of Need would have on Geronimo Energy’s Odell wind

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<sup>120</sup> Public Hearing Transcript (Blue Earth) at 51-52, May 13, 2014.

<sup>121</sup> Public Hearing Transcript (Blue Earth) at 52, May 13, 2014.

<sup>122</sup> Public Hearing Transcript (Blue Earth) at 52, May 13, 2014.

<sup>123</sup> Public Hearing Transcript (Blue Earth) at 52, May 13, 2014.

<sup>124</sup> Public Hearing Transcript (Blue Earth) at 54, May 13, 2014.

farm.<sup>125</sup> According to Mr. Pickar, “[t]he direct impact from our wind farm’s going to bring around \$50 million over 20 years and 10 to 12 good-paying full-time jobs to the area. So we support the ITC 345 kV MVP line being built and see the need.”<sup>126</sup>

Brad Hauptert, a site supervisor for Vestas also testified regarding need for the Project. Vestas has wind turbines in the upper Midwest, including southern Minnesota and northern Iowa, and it has 100 employees in the region.<sup>127</sup> Mr. Hauptert discussed the job opportunities that wind development has brought to the area.<sup>128</sup> Mr. Hauptert testified that there was very little opportunity “until the wind industry came into the area and offered a lot of very good-paying jobs for many people in the area.”<sup>129</sup> Mr. Hauptert further elaborated that these jobs brought with them good benefits, stability, and a higher rate of income.<sup>130</sup>

Mr. Sokolski, a business developer at Iberdrola Renewables, also submitted comments to supplement his testimony at the public hearing on May 14, 2014. Iberdrola Renewables owns and operates the Trimont, Elm Creek, and

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<sup>125</sup> Public Hearing Transcript (Blue Earth) at 54, May 13, 2014.

<sup>126</sup> Public Hearing Transcript (Blue Earth) at 54-55, May 13, 2014.

<sup>127</sup> Public Hearing Transcript (Blue Earth) at 78, May 13, 2014.

<sup>128</sup> Public Hearing Transcript (Blue Earth) at 78, May 13, 2014.

<sup>129</sup> Public Hearing Transcript (Blue Earth) at 78, May 13, 2014.

<sup>130</sup> Public Hearing Transcript (Blue Earth) at 78, May 13, 2014.

Elm Creek II wind projects.<sup>131</sup> In addition to the community benefits and job growth discussed by other witnesses, Mr. Sokolski addressed the need for MVP 3 in the area for the wind industry to continue to develop: “Denial of the project will increase the cost of a future transmission project to provide the multiple benefits of the proposed project by pushing off the capital and labor costs into the future, when materials and labor will be more expensive than they are today.”<sup>132</sup> Mr. Sokolski stated that denying the Project would not solve any of the existing problems on the local transmission system “which are frequently overloaded causing curtailment of wind production.”<sup>133</sup>

Additional transmission capacity is not only needed to meet Minnesota’s RES but it is also needed to meet other MISO states’ RPS requirements. In its MTEP11 study, MISO estimated that approximately 24 GW of renewable energy would need to be installed to comply with states’ respective RPS mandates and goals in the 12 MISO states that have RPS mandates.<sup>134</sup>

MISO analyzed the ability of the existing transmission system to support this level of generation. The analysis showed that without the 17 projects in MISO’s MVP Portfolio, 34,711,578 MWh of wind energy would need to be

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<sup>131</sup> Adam Sokolski Comments at 1 (May 30, 2014).

<sup>132</sup> Adam Sokolski Comments at 2 (May 30, 2014).

<sup>133</sup> Adam Sokolski Comments at 2 (May 30, 2014).

<sup>134</sup> MTEP11 at 50.

curtailed. This sum is equivalent to 63 percent of the 55,010,629 MWh of renewable energy needed to cover the RPS mandates and goals that have been established by states within MISO's footprint.<sup>135</sup>

Mr. Berry's analysis also demonstrated that MVP 3 alone will increase transfer capability from wind zones in southwest Minnesota to load in Minnesota and throughout MISO. Transfer capability into Minnesota is increased by up to 1,000 MW during off-peak times and 2,500 MW during summer peak periods. MVP 3 and MVP 4 together will enable delivery of up to 1,900 MW of additional wind capacity during off-peak times and 3,300 MW of additional capacity during peak times for a Minnesota transfer.<sup>136</sup>

The entire MVP Portfolio will enable the delivery of 41 million MWh of renewable energy and provide economic benefits in each MISO local resource zone of between 1.6 to 2.8 times the costs.<sup>137</sup>

#### **D. More Efficient and Cost Effective Energy Delivery**

MVP 3 is also needed to increase the efficiency of energy delivery. Lower voltage lines are less efficient at delivering energy, resulting in higher system losses. In addition, the existing burden on the transmission system results in congestion that adversely affects the cost to produce energy. MVP 3 will reduce

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<sup>135</sup> Ex. 6 at Appendix L (MISO Candidate MVP Reliability Analysis Wind Curtailment) at 7.

<sup>136</sup> Ex. 22 at 8 (Berry Direct).

<sup>137</sup> MTEP11 at 1, 7.

overall system losses and reduce existing constraints which will lower both energy production and capacity costs.

### **1. Losses**

New transmission lines added to the electric system affect the resistive losses of the system. In turn, the costs for capacity and energy for the system are affected. If adding a new transmission line reduces losses, then the amount of energy generated to serve load is reduced, as is the amount of capacity needed to meet peak loads. This not only reduces the costs ratepayers incur for energy generation, but also reduces the emissions associated with the reduced generation.<sup>138</sup>

MVP Project 3 will result in 5 MW of system capacity savings and an annual energy savings of 13 GW-hours.<sup>139</sup> MVP 3, in conjunction with MVP 4, will nearly triple the improved efficiency with 13 MW of system capacity savings and 34 GW-hours of energy savings.<sup>140</sup>

### **2. Energy Production Costs**

The production cost value of MVP 3 was demonstrated by Dr. Schatzki and MISO, in its MVP Portfolio analysis. Both analyses relied on PROMOD, a

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<sup>138</sup> Ex. 6 at 83-84 (Certificate of Need Application).

<sup>139</sup> Ex. 6 at Appendix J (ITC Midwest LLC Multi-Value Project #3 Planning Study) at 20.

<sup>140</sup> Ex. 6 at Appendix J (ITC Midwest LLC Multi-Value Project #3 Planning Study) at 20.

software program that simulates the operation of the regional generation and transmission system.<sup>141</sup> PROMOD allows the estimation of many market outcomes of interest, including time-varying LMPs and generator-by-generator production costs and emission levels.<sup>142</sup> It also allows analysis under different sets of assumptions about energy demand, operating conditions, and transmission system infrastructure.<sup>143</sup> As Dr. Schatzki explained:

The PROMOD analysis quantifies the lower wholesale electric energy prices that will result from the Project, but it does not quantify other potential wholesale electricity price benefits such as lower operating reserve costs and lower costs associated with capacity (resource adequacy) requirements. Focusing just on the wholesale electric energy price comparison results of the PROMOD analysis therefore will understate the full range of price benefits that can be expected from the Project.<sup>144</sup>

Dr. Schatzki testified that the PROMOD analysis results indicate that the development of MVP 3 would lead to production cost savings in Minnesota which, in turn, are expected to lower the prices paid by Minnesota retail electric customers.<sup>145</sup> As Dr. Schatzki explained in his direct testimony, first, the

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<sup>141</sup> Ex. 23 at 11 (Schatzki Direct).

<sup>142</sup> Ex. 23 at 11 (Schatzki Direct).

<sup>143</sup> Ex. 23 at 11 (Schatzki Direct).

<sup>144</sup> Ex. 23 at 14 (Schatzki Direct).

<sup>145</sup> Ex. 23 at 26 (Schatzki Direct).



development of MVP 3 reduces MISO Production Costs, which indicates that MVP 3 would lead to reductions in production costs both within and outside of Minnesota.<sup>146</sup> In his rebuttal testimony, Dr. Schatzki found that the development of MVP 3 alone would lower production costs within Minnesota by \$14.1 million to \$20.4 million annually and that MVP 3 and MVP 4 combined would result in annual production cost reductions of \$19.3 to \$27.5 million.<sup>147</sup>

Second, the development of MVP 3 reduces Minnesota LMPs. This reduction also indicates lower energy costs in Minnesota because LMPs reflect the marginal cost of energy production.<sup>148</sup> The analyses show that development of MVP 3, alone and with MVP 4, reduces wholesale energy payments. The reductions in wholesale energy payments for Minnesota loads from MVP 3 and MVP 4 range from \$36.1 million to \$52.5 million under the scenarios studied.<sup>149</sup> For the development of MVP 3 only, the reductions in wholesale energy payments for Minnesota loads range from \$0.2 million to \$4.6 million.<sup>150</sup>

Given that retail rates in Minnesota are based on cost-of-service, Dr. Schatzki concluded that these reductions indicate that the development of MVP 3 would lead to cost savings that would lower the energy prices paid by Minnesota

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<sup>146</sup> Ex. 23 at 26 (Schatzki Direct).

<sup>147</sup> Ex. 23 at 16-17 (Schatzki Rebuttal). This analysis assumes that MVP 5 is also constructed. *Id.*

<sup>148</sup> Ex. 23 at 26 (Schatzki Direct).

<sup>149</sup> Ex. 23 at 21 (Schatzki Direct).

<sup>150</sup> Ex. 23 at 21 (Schatzki Direct).

retail customers.<sup>151</sup> Mr. Heinen similarly concluded that MVP 3 “likely would decrease LMPs, which would, all else being equal, have a positive impact on Minnesota ratepayers through lower rates.”<sup>152</sup>

Mr. Goggin endorsed the analyses Dr. Schatzki presented in direct testimony. Mr. Goggin testified that Dr. Schatzki’s findings “are consistent with the large body of other analyses that have examined the impact of wind power on electricity prices, power system production costs, and emissions.”<sup>153</sup>

#### **E. Alternatives Studied**

ITC Midwest evaluated a wide range of alternatives to determine if they could meet the identified needs. These alternatives included higher voltage lines, other 345 kV lines and lower voltage lines, such as the 161 kV Rebuild Alternative. It is undisputed that ITC Midwest appropriately screened higher voltage lines, other 345 kV lines, and lower voltage lines.<sup>154</sup> ITC Midwest analyzed the 161 kV Rebuild Alternative in more detail in ITC Midwest’s MVP Project 3 Planning Study<sup>155</sup> and in testimony. The extensive record on the relative

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<sup>151</sup> Ex. 23 at 26 (Schatzki Direct).

<sup>152</sup> Ex. 200 at 12 (Heinen Direct).

<sup>153</sup> Ex. 300 at 25 (Goggin Direct).

<sup>154</sup> Ex. 205 at 13 (Rakow Direct) (discussing concerns with ITC Midwest’s screening of the Lakefield-Rutland alternative); Ex. 208 at 18 (Rakow Surrebuttal) (agreeing with Mr. Berry “that the Lakefield-Rutland 345 kV alternative does not merit further analysis”).

<sup>155</sup> Ex. 22 at Schedule 2 (Figure 1 of May 22, 2013, ITC Midwest LLC Multi-Value Project 3 Planning Study).

performance of MVP 3 and the 161 kV Rebuild Alternative demonstrates that the 161 kV Rebuild Alternative is not a reasonable and prudent alternative to MVP 3.

The engineering testimony regarding the 161 kV Rebuild Alternative unanimously dismissed the 161 kV Rebuild Alternative based on inadequate performance. The engineering witnesses, ITC Midwest's Joe Berry and Doug Collins, MISO's Digaunto Chatterjee, and CEI's Randall Porter provided multiple engineering reasons why the 161 kV Rebuild Alternative is not a reasonable alternative to MVP 3. For example, Mr. Chatterjee testified:

[T]hese two "alternatives" are not equivalent. As noted in my testimony, the 161 kV Rebuild would only alleviate two (2) of the thirty-seven (37) constraints from central Minnesota to Iowa. Further, the 161 kV Rebuild is inconsistent with the goal of the MVP portfolio to create a robust 345 kV overlay across the upper MISO footprint to enable the reliable and efficient delivery of energy.<sup>156</sup>

Mr. Chatterjee emphasized his point in surrebuttal testimony:

As noted earlier, all these 345 kV connections work in concert to keep regional flows on the 345 kV system and thereby efficiently relieve significant congestion on the 161 and 69 kV transmission systems. As noted in my Rebuttal Testimony and again in this Surrebuttal Testimony, the 161 kV Rebuild would do nothing to relieve 35 of the 37 reliability constraints in Minnesota and Iowa, some on adjacent 161 and 69 kV transmission just east and west of Winnebago and Lakefield respectively. Thus the 161 kV Rebuild should not be

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<sup>156</sup> Ex. 401 at 7 (Chatterjee Rebuttal).

characterized as a reasonable or comparable alternative.<sup>157</sup>

Other engineering reasons for rejecting the 161 kV Rebuild Alternative are:

- The 161 kV Rebuild Alternative will not enable the existing SPSs to be retired. To the contrary, the SPSs would need to be redesigned to protect different elements and different SPSs may have to be added to protect the system.<sup>158</sup> As Mr. Chatterjee explained:

So the SPS is designed to protect against a 345 kV contingency, so today you -- the most vulnerable 161 kV line is the Lakefield to Rutland line and shows up as the most binding element. However, if you just fix that and address that with just a rebuild, other constraints elsewhere on the system in Minnesota and Iowa, because of the same contingencies, will now show up as more limiting. So the SPS cannot be retired, it will have to be reconfigured to protect other elements which will now show up as more binding.<sup>159</sup>

- MVP 3 provides superior performance with respect to enabling wind energy that is generated to be transferred across the transmission system.<sup>160</sup>
- The 161 kV Rebuild Alternative alleviates only two of the 37 constraints in Minnesota and Iowa that MVP 3, in combination with MVP 4, alleviate.<sup>161</sup>

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<sup>157</sup> Ex. 402 at 12 (Chatterjee Surrebuttal).

<sup>158</sup> Ev. Hrg. Tr. at 62-63 (Chatterjee).

<sup>159</sup> Ev. Hrg. Tr. at 62 (Chatterjee).

<sup>160</sup> Ex. 29 at 15 (Berry Rebuttal).

<sup>161</sup> Ex. 401 at 7 (Chatterjee Rebuttal).

- The 161 kV Rebuild Alternative provides less transfer capability than MVP 3 in nearly every scenario studied, assuming that certain other MVP facilities are in place.<sup>162</sup>
- The 161 kV Rebuild Alternative does not add a new transmission line and, therefore, does not provide the operational benefits of the Project.<sup>163</sup>
- The 161 kV Rebuild Alternative does not provide flexibility for large-scale wind development. The 161 kV Rebuild Alternative is vulnerable to being “used up” depending on how generation develops in the area. The addition of only 500 MW of wind or other generation to the 161 kV Alternative would consume all the capacity of the upgraded line.<sup>164</sup>
- The 161 kV Rebuild Alternative provides local, rather than regional benefits.<sup>165</sup> The transfer capacity of the 161 kV Rebuild Alternative alone and in combination with MVP Project 4 is virtually identical, thereby reinforcing that the capacity benefits of the 161 kV Rebuild Alternative are limited to the 161 kV system in southern Minnesota and are local rather than regional in nature.<sup>166</sup>
- The reduction in line losses and the corresponding reduction of emissions from the reduced generation from the 161 kV Rebuild Alternative would be less than half the line loss/emissions reduction of MVP 3.<sup>167</sup>

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<sup>162</sup> Ex. 29 at 20 (Berry Rebuttal) (citing Rakow Testimony at 41; Ex. 6 at 79-82 (Certificate of Need Application)).

<sup>163</sup> Ex. 29 at 20 (Berry Rebuttal).

<sup>164</sup> Ex. 29 at 20 (Berry Rebuttal).

<sup>165</sup> Ex. 29 at 10-11 (Berry Rebuttal) (citing Ex. 6 at 83 (Certificate of Need Application)).

<sup>166</sup> Ex. 29 at 20 (Berry Rebuttal) (citing Ex. 6 at Appendix J (ITC Midwest LLC Multi-Value Project #3 Planning Study)).

<sup>167</sup> Ex. 29 at 21 (Berry Rebuttal) (citing Ex. 6 at Appendix J (ITC Midwest LLC Multi-Value Project #3 Planning Study) at 19-21).

- The 161 kV Rebuild Alternative would not serve the long-term needs of southwest Minnesota and northwest Iowa, areas which have, and are expected to, continue to experience tremendous growth in the development of wind generation.<sup>168</sup>
- The 161 kV Rebuild Alternative would delay future upgrades that would be needed to accommodate the projects in the queue in southwest Minnesota that would be used to meet renewable portfolio standards of the states within the MISO footprint.<sup>169</sup>
- If the 161 kV Rebuild Alternative is substituted for the Project, the MISO interconnection queue for western MISO would need to be restudied. All generator interconnection agreements MISO has issued since the August 2012 DPP Study Cycle have identified MVP 3 as mitigation for the identified constraints.<sup>170</sup>

Mr. Berry also found that MVP 3 provides more transfer capacity than the 161 kV Rebuild Alternative under nearly every scenario, particularly in the summer shoulder cases.<sup>171</sup> The comparative performance is shown in the following figures from Mr. Berry's MVP 3 Study.

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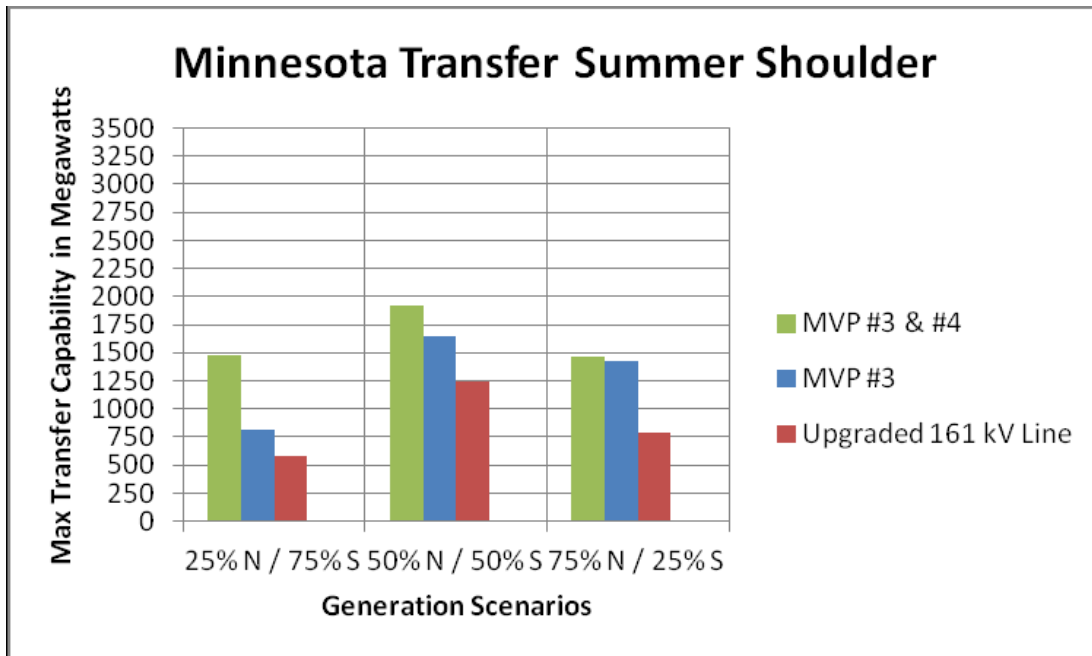
<sup>168</sup> Ex. 30 at 14 (Collins Rebuttal).

<sup>169</sup> Ex. 302 at 7 (Porter Rebuttal).

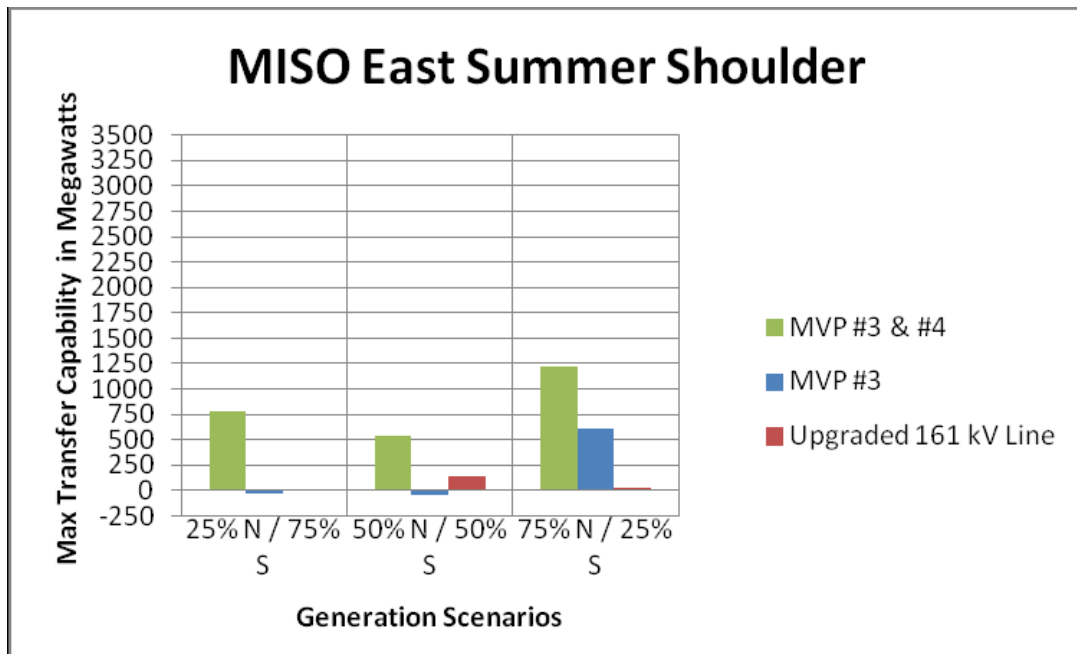
<sup>170</sup> Ex. 302 at 8 (Porter Rebuttal).

<sup>171</sup> Ex. 29 at 21 (Berry Rebuttal) (citing Ex. 6 at Figures 20 (Incremental Transfer Capability of Transmission Options Minnesota Summer Shoulder) and 22 (Incremental Transfer Capability of Transmission Options MISO East Summer Shoulder)).

**Figure 5: Incremental Transfer Capability of Transmission Options Minnesota  
Shoulder Case**



**Figure 6: Incremental Transfer Capability of Transmission Options MISO East  
Summer Shoulder**



The testimony and evidence submitted into the record verify the existence of three needs, reliability (local and regional); generation outlet (existing, planned and future) and for the efficient delivery of energy (losses, congestion, and production costs). The testimony and evidence further verify that MVP 3 meets all of these needs and that there is no more prudent and reasonable alternative on the record.

## **VI. LEGAL REQUIREMENTS**

### **A. Overview and Burden of Proof**

Minnesota Statutes Section 216B.243 provides that a Certificate of Need is required prior to the construction a “large energy facility” in Minnesota.<sup>172</sup> It is undisputed that the Project falls within this statutory definition.<sup>173</sup> Specifically, the statute provides:

No proposed large energy facility shall be certified for construction unless the applicant can show that demand for electricity cannot be met more cost effectively through energy conservation and load-management measures and unless the applicant has otherwise justified its need.<sup>174</sup>

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<sup>172</sup> Minn. Stat. § 216B.243, subd. 3.

<sup>173</sup> Minnesota Statute Section 216B.2421 defines a large energy facility as “any high-voltage transmission line with a capacity of 200 kilovolts or more and greater than 1,500 feet in length.” Minn. Stat. § 216B.2421, subd. 2(2).

<sup>174</sup> Minn. Stat. § 216B.243, subd. 3.



The statutory requirement, coupled with the Commission's decision criteria, provide for a variety of factors and considerations that must be taken into account when deciding whether to grant a Certificate of Need for a project.

The principal legal requirements for transmission Certificates of Need are found in Minnesota Statutes Section 216B.243, subs. 3 and 3a, together with the Commission's criteria for Certificates of Need in Minn. R. 7849.0120 (A)-(D). In addition, Minnesota Statutes Section 216.2422, subd. 4 (renewable energy preference) and Minnesota Statutes Section 216B.2426 (distributed generation), must be taken into account when considering this Certificate of Need request.<sup>175</sup>

ITC Midwest bears the burden of proving the claimed need for a proposed transmission line.<sup>176</sup> The burden of proof in this proceeding is proof by a preponderance of the evidence.<sup>177</sup>

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<sup>175</sup> Three other statutes relating to Certificate of Need proceedings are inapplicable here. Minnesota Statutes Sections 216B.1612 (C-BED) and 216B.1691 (REO) apply to retail load serving entities and do not apply to a transmission company such as ITC Midwest. Minnesota Statutes Section 216H.03, the "carbon" statute was held unconstitutional as violative of the dormant Commerce Clause in *North Dakota v. Heydinger*, --F. Supp. 2d --, 2014 WL 1612331 (D. Minn. Apr. 18, 2014); appeal docketed, Nos. 14-2156 and 14-2251 (8th Cir. May 16, 2014). In addition, it does not prohibit the construction of a transmission line unassociated with a specific generator. See *In the Matter of the Application of Greater River Energy, Northern States Power Company (d/b/a Xcel Energy) and others for Certificates of Need for Three 345 kV Transmission Lines*, Docket No. E001/CN-06-1115, FINDINGS OF FACT, CONCLUSIONS AND RECOMMENDATIONS at ¶ 479 (Feb. 27, 2009) (stating that "[t]he CapX projects will not connect to a particular generator" and that the Commission would have the opportunity to assess compliance with Section 216H.03 in the applicants' resource plan filings).

<sup>176</sup> See Minn. Stat. § 216B.243, subd. 3.

<sup>177</sup> Minn. R. 1400.7300, subp. 5.

In other words, the ALJ considers the purpose for which an applicant seeks a Certificate of Need, and the extent to which any proposed alternative would achieve that purpose.<sup>178</sup>

## **B. Statutory Requirements**

Minnesota Statutes Section 216B.243, subdivision 3 requires the Commission to take into account all of the decision criteria set forth in the statutes.

This statute establishes the overall obligations on ITC Midwest and provides a road map for the Commission to make determinations in this case. The statute first requires the Commission to consider whether energy conservation could eliminate the need for the requested facility.<sup>179</sup> The statute then identifies 12 factors for the Commission to consider in determining whether the applicant has justified its claimed need.<sup>180</sup> The key considerations most relevant to MVP 3 are shown in bold, underlined, text.

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<sup>178</sup> *In the Matter of the Application of Great River Energy, Northern States Power Company (d/b/a Xcel Energy) and Others for Certificates of Need for the CapX 345-kV Transmission Projects*, Docket No. ET-2, E-002, et al./CN-06-1115, ORDER GRANTING CERTIFICATES OF NEED WITH CONDITIONS at 27 (May 22, 2009).

<sup>179</sup> Minn. Stat. § 216B.243, subd. 3.

<sup>180</sup> Minn. Stat. § 216B.243, subd. 3(1)-(12).

- (1) the accuracy of the long-range energy demand forecasts on which the necessity for the facility is based;
- (2) the effect of existing or possible energy conservation programs under sections 216C.05 to 216C.30 and this section or other federal or state legislation on long-term energy demand;
- (3) the relationship of the proposed facility to overall state energy needs, as described in the most recent state energy policy and conservation report prepared under section 216C.18, or, in the case of a high-voltage transmission line, the relationship of the proposed line to regional energy needs, as presented in the transmission plan submitted under section 216B.2425;
- (4) promotional activities that may have given rise to the demand for this facility;
- (5) **benefits of this facility, including its uses to protect or enhance environmental quality, and to increase reliability of energy supply in Minnesota and the region;**
- (6) possible alternatives for satisfying the energy demand or transmission needs including but not limited to potential for increased efficiency and upgrading of existing energy generation and transmission facilities, load-management programs, and distributed generation;
- (7) **the policies, rules, and regulations of other state and federal agencies and local governments;**
- (8) any feasible combination of energy conservation improvements, required under section 216B.241, that can (i) replace part or all of the energy to be provided by the proposed facility, and (ii) compete with it economically;
- (9) **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;**

- (10) whether the applicant or applicants are in compliance with applicable provisions of sections 216B.1691 and 216B.2425, subdivision 7, and have filed or will file by a date certain an application for certificate of need under this section or for certification as a priority electric transmission project under section 216B.2425 for any transmission facilities or upgrades identified under section 216B.2425, subdivision 7;
- (11) whether the applicant has made the demonstrations required under subdivision 3a; and
- (12) if the applicant is proposing a nonrenewable generating plant, the applicant's assessment of the risk of environmental costs and regulation on that proposed facility over the expected useful life of the plant, including a proposed means of allocating costs associated with risk.<sup>181</sup>

One other statute that establishes criteria for a Certificate of Need determination applicable to the Project is Minnesota Statutes Section 216B.2426 (distributed generation). Minnesota Statutes Section 216B.2426 requires that distributed generation be "considered" as follows:

The Commission shall ensure that opportunities for the installation of distributed generation, as that term is defined in section 216B.169, subdivision 1, paragraph

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<sup>181</sup> Subfactor (12) is not applicable because ITC Midwest is not proposing a nonrenewable generating plant.

(c), are considered in any proceeding under section 216B.2422, 216B.2425, or 216B.243.<sup>182</sup>

**C. Inapplicable Statutes**

Given the specific proposal here made by a transmission company that does not serve retail customers, certain Certificate of Need requirements are inapplicable. These statutes are Minnesota Statutes Section§ 216B.1612, subd. 5(c); 216B.243, subd. 3(1); 216B.1694, subd. (2)(5); and 216B.2422, subd. 4.

**1. *Minnesota Statutes Sections 216B.1612, subdivision 5(c) and 216B. 243, subdivision 3(1)***

Minnesota Statutes Sections 216B.1612, subdivision 5(c) and 216B.243, subdivision 3(1) relate to whether the applicant is in compliance with Minnesota’s renewable energy objectives, including the purchase of energy from C-BED projects, and the identification of the necessary transmission facilities to support these objectives.

ITC Midwest does not provide electric service to retail, therefore the C-BED statutory requirements do not apply.<sup>183</sup>

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<sup>182</sup> Minnesota Statutes Section 216B.169, subdivision 1(c) defines distributed generation as “a distributed generation facility of no more than ten megawatts of interconnected capacity that is certified by the commissioner under subdivision 3 as a high-efficiency, low-emissions facility.”

<sup>183</sup> Ex. 6 at 16 (Certificate of Need Application).

**2. *Minnesota Statutes Section 216B.1694, subdivision 2(4)***

Minnesota Statutes Section 216B.1694, subdivision 2(4) relates to whether the applicant has considered an innovative energy project as a supply option before expanding a fossil-fuel-fired generation facility or entering into a purchased power agreement exceeding five years.

This statutory provision does not apply because ITC Midwest's proposal is a transmission project, not a generation project or a power purchase agreement.

**3. *Minnesota Statutes Section 216B.2422, subdivision 4***

Minnesota Statutes Section 216B.2422, subdivision 4 pertains to transmission lines being built to transmit electricity generated from non-renewable sources. Because ITC Midwest is building transmission facilities independent of any specific generator, this statute is inapplicable.<sup>184</sup>

**D. Minnesota Rule 7849.0120 Criteria**

Minnesota Rule 7849.0120 establish criteria mirroring the criteria established by Minnesota Statutes Section 216B.243, subd. 3. The Commission must evaluate "the factors listed under each of the [rule] criteria" "to the extent that the Commission considers them applicable and pertinent to a facility

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<sup>184</sup> *In the Matter of the Application of Great River Energy, Northern States Power Company (d/b/a Xcel Energy) and Others for Certificates of Need for the CapX 345-kV Transmission Projects*, Docket No. ET-2, E-002, et al./CN-06-1115, ORDER GRANTING CERTIFICATES OF NEED WITH CONDITIONS at 6 (May 22, 2009).

proposed[.]”<sup>185</sup> The Commission must make a written finding as to each criterion.<sup>186</sup>

The four rule factors, together with the 12 subfactors, which are set forth in Minn. R. 7849.0120 (emphasis added), are:

(A) 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;

(B) a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a

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<sup>185</sup> Minn. R. 7849.0100.

<sup>186</sup> Minn. R. 7849.0100.

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;

(C) 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; and

(D) 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.

To be granted a Certificate of Need, ITC Midwest must satisfy the requirements of both the statutes and rules. In many respects the statutory criteria and the Commission's rules are essentially the same. Since the Commission must make a written finding regarding each of the rule criteria, (*see* Minn. R. 7849.0100), ITC Midwest presents its analysis by first focusing on the rules and whether MVP 3 satisfies the rule criteria. To the extent that the statutory criteria differ, these statutory criteria are separately analyzed.

## **VII. SPECIFIC APPLICATION OF RULE CRITERIA AND STATUTES**

This section details the rule criteria and statutes relevant to granting a Certificate of Need for the MN-IA 345 kV Project.

A. Minnesota Rule 7849.0120(A): “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. *Accuracy of the Demand Forecast. Minnesota Rule 7849.0120(A)(1).*

Minnesota Rule 7849.0120(A)(1) requires consideration of “the accuracy of the applicant’s forecast of demand for the type of energy that would be supplied by the proposed facility” when determining if denial of a Certificate of Need application would have an adverse effect.

ITC Midwest provided historical and forecasted load data for the Project area and discussed how even limited additional load exacerbates overloading problems on the transmission system.<sup>187</sup> The peak load in the area is expected to grow only 38 MW between 2013 and 2023.<sup>188</sup> The off-peak load similarly is expected to increase only 36 MW during the same period.<sup>189</sup> This load growth estimate, which Mr. Heinen found was “consistent with electricity demand and load growth in southwestern Minnesota”, is insufficient to absorb the thousands of MWhrs of energy, primarily from wind, being produced in southwest

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<sup>187</sup> Ex. 6 at Appendix J (ITC Midwest LLC Multi-Value Project #3 Planning Study) at 19.

<sup>188</sup> Ex. 6 at Appendix J (ITC Midwest LLC Multi-Value Project #3 Planning Study) at 19.

<sup>189</sup> Ex. 6 at Appendix J (ITC Midwest LLC Multi-Value Project #3 Planning Study) at 19.

Minnesota and confirms the need for new transmission to serve this generation.<sup>190</sup>

Dr. Rakow recognized the relationship in his testimony, noting that the lower the demand, the greater the need for transmission to support generation.<sup>191</sup>

He further testified:

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>192</sup>

2. *Effects of Conservation Programs. Minnesota Rule 7849.0120(A)(2).*

Minnesota Statutes Section 216B.243, subdivision 3 states that “no proposed large energy facility shall be certified for construction unless the applicant can show that demand for electricity cannot be met more cost

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<sup>190</sup> Ex. 6 at Appendix J (ITC Midwest LLC Multi-Value Project #3 Planning Study) at 19; Ex. 200 at 13 (Heinen Direct).

<sup>191</sup> Ex. 205 at 38-39 (Rakow Direct).

<sup>192</sup> Ex. 205 at 38-39 (Rakow Direct).

effectively through energy conservation and load management. Similarly, Minnesota Statutes Section § 216B.243, subd. 3(8) provides the Commission, in assessing need, shall consider “any feasible combination of energy conservation improvements, required under section 216B.241, that can . . . (i) replace part of all of the energy to be provided by the proposed facility, and (ii) compete with it economically.” These statutory requirements are contained in this rule subpart.

This subfactor is not relevant to the Commission’s analysis of MVP 3 because the need is not driven by the demand for electricity. In addition, the Commission recognized that ITC Midwest has no relationship with end-users to affect the level of demand and therefore granted an exemption from the Certificate of Need Application content requirements relating to conservation programs.<sup>193</sup>

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<sup>193</sup> *Application of ITC Midwest LLC for a Certificate of Need for the Minnesota-Iowa 345 kV Transmission Line Project in Jackson, Martin, and Faribault Counties, Minnesota*, Docket No. ET6675/CN-12-1053, DECISION ON REQUEST FOR EXEMPTIONS FROM CERTAIN CERTIFICATE OF NEED CONTENT REQUIREMENTS (Feb. 8, 2013).

**3. *Effects of Promotional Practices. Minnesota Rule 7849.0120(A)(3).***

There is no evidence in the record that ITC Midwest has engaged in any promotional practices that have increased the demand for electricity.<sup>194</sup>

**4. *Facilities Not Requiring Certificates of Need to Meet the Future Demand. Minnesota Rule 7849.0120(A)(4).***

Minnesota Rule 7849.0120(A)(4) requires consideration of “the ability of current facilities and planned facilities not requiring Certificates of Need to meet the future demand.” This subfactor assesses the ability of facilities that would not require a Certificate of Need to meet future demand.<sup>195</sup>

ITC Midwest evaluated the 161 kV Rebuild Alternative as a potential alternative to meet the immediate and future identified needs in Minnesota and surrounding states as required by this rule. The 161 kV Rebuild Alternative would not require a Certificate of Need because there would be no change in voltage.<sup>196</sup> ITC Midwest, MISO, and CEI all concluded it is not a reasonable and

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<sup>194</sup> See also *In the Matter of the Application of ITC Midwest LLC for a Certificate of Need for the Minnesota-Iowa 345 kV Transmission Line Project in Jackson, Martin, and Faribault Counties, Minnesota*, Docket No. ET-6675/CN-12-1053, ORDER GRANTING REQUESTED EXEMPTIONS (Feb. 8, 2013) (granting an exemption to ITC Midwest from the content requirement, Rule 7949.0240, which requires “an explanation of the relationship of the proposed facility to . . . promotional activities that may have given rise to the demand for the facility.”).

<sup>195</sup> Under Minn. Stat. § 216B.2421 there are two types of facilities that could meet future demand yet not require a Certificate of Need: 1) transmission lines a) less than 100 kV, b) between 100 kV and 200 kV but less than 10 miles long and not crossing a state border, or c) above 200 kV but less than 1,500 feet long; and 2) generation facilities less than 50 MW.

<sup>196</sup> See Minn. R. 7849.0030, subd. 1 (providing that Certificate of Need is required for new facilities and expansions that meet the definition of a “large energy facility”).

prudent alternative because it could not meet the existing and future needs, as detailed in Section V.E. of this Brief.

**5. *Making Efficient Use of Resources. Minnesota Rule 7849.0120(A)(5).***

The Project makes efficient use of resources because the reliability, generation outlet and economic efficiency needs cannot be met without the Project.

**6. *Effect of Denial***

Denial of the Project would prevent construction of a key link in the 345 kV regional backbone system. Absent the addition of new transmission facilities in southwest Minnesota, SPSs will remain in place, wind curtailment will continue, no new generation will be able to interconnect to the transmission system in southwest Minnesota and congestion will continue to impede the efficient delivery of energy and raise energy production costs.

In addition, should the MN-IA 345 kV Project not be approved, engineering studies undertaken for existing wind generation projects would have to be redone because the system topology in those studies included MVP 3.<sup>197</sup> It would also delay wind projects needed to meet Minnesota RES

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<sup>197</sup> Ex. 302 at 8 (Porter Rebuttal).

requirements and require new analyses to determine the appropriate alternative facilities. As Mr. Chatterjee summarized:

The inability to construct a key element of the regional expansion plan -- especially a 'backbone' element such as the one\*\* proposed in the Application that is designed for both reliability and its economic attributes -- could require considerable re-design of the transmission system that would involve delay, additional expense, and impact on the reliable addition of new wind turbine supplies and service to load.<sup>198</sup>

**B. Minnesota Rule 7849.0120(B): A more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record, considering:**

ITC Midwest's burden of proof is met by providing evidence establishing the needs and showing that the proposed project is a reasonable and prudent way to satisfy the articulated needs. The burden falls on other parties to prove that any alternative they wish to sponsor is (i) sufficiently presented in the record to be considered, and (ii) is more reasonable and prudent than the applicant's proposal. In making its decision, the ALJ and the Commission "shall consider" only those alternatives for which "there exists substantial evidence on the record with respect to each of the criteria listed in part 7849.0120."<sup>199</sup> This rule requires

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<sup>198</sup> Ex. 400 at 39-40 (Chatterjee Direct).

<sup>199</sup> Minn. R. 7849.0110.

opponents of the proposed Project to come forward and establish the existence and characteristics of a more reasonable and prudent alternative.<sup>200</sup>

Only when the other party demonstrates a “more reasonable and prudent alternative,” will a permit be denied.<sup>201</sup> If a party wants a particular alternative to be considered, that party must make sure that sufficient evidence is submitted to satisfy the Commission’s requirement that “only those alternatives proposed before the close of the public hearing and for which there exists substantial evidence on the record with respect to each of the criteria listed in part 7849.0120” be considered.<sup>202</sup>

No other party advocated for an alternative to MVP 3. As detailed above, ITC Midwest, MISO and CEI all testified that the 161 kV Rebuild Alternative is not a reasonable and prudent alternative to MVP 3. The DOC DER agreed that the 161 kV Rebuild Alternative had not been shown on the record to be a more

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<sup>200</sup> “Under the certificate of need process established by statute and rule, an applicant bears the burden of proving the need for a proposed facility. An applicant fails to meet this burden when another party demonstrates that there is a more reasonable and prudent alternative to the facility proposed by the applicant. Minn. Stat. § 216B.243, subd. 3; Minn. R. 7851.0120, subp. 8. This regulatory scheme is simply a practical way to prevent the issuance of a certificate of need when there is a more reasonable and prudent alternative to the proposed facility without requiring the applicant to face the extraordinary difficulty of proving that there is not a more reasonable and prudent alternative.” *In the Matter of the Application of the City of Hutchinson for a Certificate of Need to Construct a Large Natural Gas Pipeline*, 2003 WL 22234703 at \* 7 (interpreting parallel pipeline rule); see also George A. Beck, MINNESOTA ADMINISTRATIVE PROCEDURE, § 10.3.1 (2d ed. 1998); *Peterson v. Mpls. St. Ry.*, 226 Minn. 27, 33, 31 N.W.2d 905, 909 (1948) (burden of producing sufficient evidence on specific issues).

<sup>201</sup> *In re Application of the City of Hutchinson*, 2003 WL 22234703 at \*7.

<sup>202</sup> Minn. R. 7849.0110.



feasible and prudent alternative to MVP 3.<sup>203</sup> Therefore, MVP 3 is the only project proposal on the record that meets the identified needs.

Minnesota Rule 7849.0120(B) lists four specific subfactors for consideration in determining whether a more reasonable and prudent alternative has been established. These subfactors are discussed below:

1. *The appropriateness of the size, type, and timing of the proposed facility compared to those of reasonable alternatives. Minnesota Rule 7849.0120(B)(1).*

The appropriateness of the size and type of transmission line proposed for MVP 3 in comparison to the 161 kV Rebuild Alternative was detailed in section V.E. of this Brief. The 345 kV MVP 3 project is the right voltage to meet the identified significant needs: reliability, generation outlet, and efficiency of energy supply (system losses and congestion). The timing is also appropriate. The in-service date for MVP 3 is 2017 and the line will relieve existing generation curtailments and relieve the Fox Lake - Rutland - Winnebago Jct. constraint when it becomes operational. MVP 3 will also enable wind farms with approved power contracts, including the Odell wind farm, to come on line. MVP 3 will also provide generation outlet for future wind projects and it is important to ensure that adequate capacity exists to promote development of these future projects.

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<sup>203</sup> Ex. 209 at 3 (Rakow Statement).

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. Minnesota Rule 7849.0120(B)(2).***

The Commission should also grant the Certificate of Need when considering the costs of developing the Project and cost of energy supply under the Project compared to such costs with the 161 kV Rebuild Alternative.

ITC Midwest will recover the majority of its costs for the proposed project through MISO Schedule 26A charges. These charges are based upon the MVP Usage Rate (“MUR”) as calculated pursuant to Attachment MM of the MISO Tariff. A key component of the MUR is the MVP revenue requirement of each MVP owning Transmission-Owning Member of MISO. The MVP revenue requirement is calculated pursuant to a formula provided for in Attachment MM of the MISO Tariff. To ensure public review of the calculation of each MVP owner’s calculation of its revenue requirement, Section 2(g) of Attachment MM requires public posting to the MISO OASIS of its revenue requirement calculation.<sup>204</sup>

Further, the determination of the MVP revenue requirement is based on a series of inputs from ITC Midwest’s Attachment O formula rate. As part of the process for updating ITC Midwest’s Attachment O formula rate, the MISO Tariff

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<sup>204</sup> Ex. 30 at 21-22 (Collins Rebuttal).

provides for information sharing procedures and review by interested parties. Importantly, the MISO Tariff, Attachment O, explicitly identifies state regulatory commissions as interested parties and provides them standing to both conduct discovery and challenge calculation of the inputs to the formula rate at FERC.<sup>205</sup>

Of the total MVP 3 costs, approximately 13.3 percent would be recovered from Minnesota's network load under MISO's allocation formula.<sup>206</sup> Accordingly, the approximately \$6.8 million estimated annual revenue requirement for the Project would be spread across all Minnesota MISO load.<sup>207</sup>

ITC Midwest's zonal network customers in Minnesota would pay four percent, approximately \$279,000, of Minnesota's portion.<sup>208</sup> ITC Midwest's zonal network customers in Minnesota would also pay 14 percent of the associated zonal revenue requirement, an additional \$169,000 for the associated facilities.<sup>209</sup> In contrast, as a baseline reliability project, the 161 kV Rebuild Alternative would be assigned 100 percent – the entire \$8.5 million annual revenue requirement – to ITC Midwest's customers.<sup>210</sup> Mr. Grover compared the cost allocation of these two options in his testimony:

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<sup>205</sup> Ex. 30 at and Schedule 2 (Collins Rebuttal).

<sup>206</sup> Ex. 31 at 4 (Grover Rebuttal).

<sup>207</sup> Ex. 31 at 5 (Grover Rebuttal).

<sup>208</sup> Ex. 31 at 5 (Grover Rebuttal).

<sup>209</sup> Ex. 31 at 5 (Grover Rebuttal).

<sup>210</sup> Ex. 31 at 4-5 (Grover Rebuttal).

**Figure 7. Cost Shifting Impacts to Minnesota Ratepayers  
MVP Project 3 vs. 161 kV Rebuild Alternative<sup>211</sup>**

	MVP Project 3	161 kV Rebuild Alternative
Total Project Revenue Requirement	\$52.4 million	\$8.5 million
Minnesota Ratepayers	\$7.0 million	\$1.2 million
ITC Midwest Zonal Network Customers	\$3.2 million	\$8.5 million
ITC Midwest Zonal Network Customers in Minnesota	\$448,000	\$1.2 million

The costs of the Project compared to the 161 kV Rebuild Alternative should also be considered in the context of the long-term reliability each would provide. As testified to by multiple witnesses in this proceeding, the Project is necessary “to support[] the long-term ability of the transmission system to reliably integrate wind generated resources in Southwest Minnesota and Iowa” given the growth in wind generation in the Project area and increased reliance on renewable energy.<sup>212</sup> In contrast, “building the 161 kV Rebuild Alternative would not only fail to address immediate needs, it would be shortsighted given the likely future of additional generation growth in southwest Minnesota and surrounding states.”<sup>213</sup>

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<sup>211</sup> Ex. 31 at 6 (Grover Rebuttal).

<sup>212</sup> Ex. 29 at 24 (Berry Rebuttal).

<sup>213</sup> Ex. 30 at 14-15 (Collins Rebuttal).

**3. *The effects of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives. Minnesota Rule 7849.0120(B)(3).***

In Minnesota, the wind industry supports, directly or indirectly, approximately 3,000 jobs, more than \$7.5 million in annual wind energy production tax payments to local governments, and more than \$8 million in annual lease payments to Minnesota landowners.<sup>214</sup> By enabling the Odell, Courtenay, Pleasant Valley, and Border Winds wind farms to proceed, MVP 3 will further wind generation development which will provide additional socioeconomic benefits to the state and region.

**4. *The expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives. Minnesota Rule 7849.0120(B)(4).***

This subfactor relates, in part, to Minnesota Statutes Section 216B.243, subdivision 3(9) which requires consideration of “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.”

MVP 3 clearly provides superior reliability benefits. For example, only MVP 3 enhances the regional bulk transmission system by providing a 345 kV tie between Minnesota and Iowa, and only MVP 3, in combination with MVP 4,

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<sup>214</sup> Ex. 6 at 59 (Certificate of Need).

resolves the 37 constraints in Minnesota and Iowa. Comparatively, MVP 3 enables the reliable integration of more wind generation, has the greatest impact on production costs and provides the greatest generation outlet capability. Moreover, implementation of the 161 kV Rebuild Alternative would not alleviate existing local reliability concerns because it would require the implementation of new or revised SPSs; whereas MVP 3 allows for their retirement.

The Commission should find that that the record demonstrates that the 161 kV Rebuild Alternative is not a reasonable and prudent alternative to MVP 3 based on an analysis of these factors. In particular, the unrebutted engineering witnesses unanimously testified that the 161 kV Rebuild Alternative is not a reasonable and prudent alternative because it does not meet the identified needs or provide the same economic benefits as MVP 3.

C. **Minnesota Rule 7849.0120(C): 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. *Relationship to Overall State Energy Needs. Minnesota Rule 7849.0120(C)(1).*

Evaluating the first sub-factor, Minn. R. 7849.0120(C)(1), concerns assessing the relationship of the Project to overall state energy needs. The Project will help ensure compliance with the state's RES by allowing additional wind generation to connect to the transmission system.

2. *Effects on the Natural and Socioeconomic Environments. Minnesota Rule 7849.0120(C)(2).*

The second sub-factor, Minn. R. 7849.0120(C)(2), concerns assessing the impacts on the natural and socioeconomic environments of the proposed Project compared to the no build alternative. While the new transmission lines will have impacts on the natural environment, these impacts can be moderated through the use of mitigation measures described in the route permit proceeding. Also, as noted above the Project will have a beneficial impact on the socioeconomic environments by enabling further investment in renewable generation.

3. *Effects in Inducing Future Development. Minnesota Rule 7849.0120(C)(3).*

The third sub-factor, Minn. R. 7849.0120(C)(3), concerns assessing the effects of the proposed facility in inducing future development. The Project will not induce future development. However, the Project will enable additional wind generation projects which will facilitate economic development in surrounding communities.<sup>215</sup>

4. *Socially Beneficial Uses of the Output. Minnesota Rule 7849.0120(C)(4).*

The fourth sub-factor, Minn. R. 7849.0120 C(4), requires an assessment of the socially beneficial uses of the proposed Project including its uses to protect or

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<sup>215</sup> Ex. 6 at 59 (Certificate of Need Application).

enhance environmental quality. The output of a transmission line is the transportation of electricity from one location to another location.

The Project has the effect of reducing costs ratepayers incur for energy generation and the reduction in emissions associated with reduced generation.<sup>216</sup> This is because the new transmission line will reduce resistive losses on the electric transmission system which, in turn, reduces the amount of net energy generation to serve load.<sup>217</sup>

Further, the Project will provide socioeconomic benefits through wind energy production tax payments to local governments and direct and indirect support of jobs.<sup>218</sup>

**D. Minnesota Rule 7849.0120(D). 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**

This rule addresses whether there is reason to conclude at this time that the proposed Projects would fail to comply with the regulations of other governmental agencies. This rule also includes considerations in Minnesota Statutes Section 216B.243, subd. 3. ITC Midwest has committed to comply with all relevant policies, rules, and regulations of other state and federal agencies and

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<sup>216</sup> Ex. 6 at 83-84 (Certificate of Need Application).

<sup>217</sup> Ex. 6 at 83-84 (Certificate of Need Application).

<sup>218</sup> Ex. 6 at 59 (Certificate of Need Application).



local governments applicable to the construction and operation of the Project, and there is no evidence in the record that ITC Midwest could not or would not comply with any applicable requirements of other state and federal agencies and local governments. To the contrary, approval of MVP 3 is needed to comply with state and federal policies.

With respect to Minnesota and other states' RES requirements, several witnesses testified that the Project is necessary to meet RES requirements in Minnesota and throughout the MISO Midwest footprint.<sup>219</sup> The Project is also intended to reduce production costs by relieving constraints on the system in Minnesota and Iowa, which would, in turn, be expected to reduce the energy prices paid by Minnesota ratepayers.<sup>220</sup>

In addition, consistent with Minnesota and the Midwest's policy to increase renewable energy use, the Project will support development of a significant amount of efficient, renewable energy. Wind, in particular, is a favored renewable energy source under the Certificate of Need statute.<sup>221</sup>

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<sup>219</sup> Ex. 29 at 7 (Berry Rebuttal); Ex. 402 at 6, 13 (Chatterjee Surrebuttal); Ex. 300 at 7 (Goggin Direct) (“[I]n addition to Minnesota, there are seven states within the MISO footprint that have RESs that allow for the use of renewable energy from Minnesota and nearby states where the Project will enable additional wind generation by reducing transmission congestion.”).

<sup>220</sup> Ex. 29 at 8 (Berry Rebuttal); Ex. 23 at 26 (Schtazki Direct).

<sup>221</sup> See Minn. Stat. § 216B.243, subd. 3a.

Minnesota's preference for wind energy is also evident based on the following legislation:

- Minnesota Statutes Section 216B.1691, subdivision 2a requires utilities serving retail load in the state to provide 25 percent of their total retail electric sales from eligible renewable resources by 2025, and further requires Xcel Energy, the state's largest utility, to provide 30 percent of its load from renewable resources by 2020, with 25 percent coming specifically from wind generation.
- Minnesota Statutes Section 216B.2422, subdivision 4 provides that 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 allow rate recover for a nonrenewable energy facility, absent a showing that a renewable energy facility is not in the public interest.
- Minnesota Statutes Section 216B.2423, subdivision 1 requires utilities operating a nuclear-powered electric generating plant in Minnesota to purchase or install up to 425 MW of wind power by 2002.
- Minnesota Statutes Section 116C.779, subdivision 2 requires utilities operating a nuclear-powered electric generating plant to annually transfer funds to a renewable development account until 2018. Until January 1, 2021, up to \$10.9 million of the amount transferred annually is to go to renewable energy production incentives and \$9.4 million of that amount is to be used specifically for wind energy incentives.

Minnesota's preference for wind energy is also supported by favorable tax treatment given to wind energy facilities. Under Minnesota Statutes Section 272.02, subd. 22, all real and personal property of wind energy conversion systems are exempt from property taxes. Minnesota Statutes Section 297A.68, subdivision 12 also exempts wind energy conversion systems,

and the materials used to manufacture, install, construct, repair, or replace wind systems, from State sales tax.

Similarly, the Project is consistent with federal policies aimed at increasing renewable energy use. For instance, through the federal Renewable Electricity Production Tax Credit,<sup>222</sup> a wind generator may earn tax credits for the first ten years of a renewable energy plant's operating life, allowing wind energy generation costs to be even more competitive with traditional fossil fuels. Another example is the Modified Accelerated Cost Recovery System ("MACRS"), under which the Internal Revenue Service has allowed businesses to recover investments in solar, wind, and geothermal property through depreciation deductions.<sup>223</sup> The Project will also support carbon reductions, including those that would be required by the United States Environmental Protection Agency recently proposed rules on the release of carbon dioxide.<sup>224</sup>

Most importantly, the Project supports policies and regulations related to regional planning. The Project is part of MVP 3, which came out of the MTEP11. The MTEP11 resulted directly from MISO's compliance with FERC Order No. 890, adopted in 2007, in which the FERC directed all transmission providers, like

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<sup>222</sup> 26 U.S.C. § 45 (2012).

<sup>223</sup> 26 U.S.C. § 168 (2012).

<sup>224</sup> Carbon Pollution Emission Guidelines, 40 C.F.R. Part 60 (June 18, 2014), available at: <http://www.gpo.gov/fdsys/pkg/FR-2014-06-18/pdf/2014-13726.pdf>.

MISO, to develop a transmission planning process in accord with certain principles including openness, coordination and transparency.<sup>225</sup> In Order No. 1000, issued in 2011, the FERC directed transmission providers to (i) “participate in a regional transmission planning process that produces a regional transmission plan”, and (ii) include in their local and regional transmission planning processes provisions to identify and evaluate transmission needs driven by economic and public policy requirements established by state or federal laws or regulations.<sup>226</sup>

MISO developed the MVP Portfolio to increase system efficiency and reduce costs, in addition to meeting specific state and federal public policy objectives. Moreover, the FERC specifically reviewed and approved MISO’s MVP process as the best way to overcome the challenges inherent in maintaining and expanding the region’s grid. Accordingly, the Project, as part of MVP 3 and the MTEP, supports the federally identified need for regional transmission planning. Moreover, as indicated above, “[i]n the event the [MVP projects] are

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<sup>225</sup> *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, FERC Stats. & Regs. ¶ 31,241, *order on reh’g*, Order No. 890-A, FERC Stats. & Regs. ¶ 31,261 (2007), *order on reh’g*, Order No. 890-B, 123 FERC ¶ 61,299 (2008), *order on reh’g*, Order No. 890-C, 126 FERC ¶ 61,228, *order on clarification*, Order No. 890-D, 129 FERC ¶ 61,126 (2009).

<sup>226</sup> *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000, FERC Stats. & Regs. ¶ 31,323 (2011), *order on reh’g*, Order No. 1000-A, 139 FERC ¶ 61,132, *order on reh’g*, Order No. 1000-B, 141 FERC ¶ 61,044 (2012).

not approved and constructed, some of the wind generation that is relied upon by Minnesota utilities to meet the RES will be curtailed or not interconnected.”<sup>227</sup>

**E. Minnesota Statutes Section 216B.2426 (Distributed Generation)**

Minnesota Statutes Section 216B.2426 relates to whether the applicant has considered the opportunities for distributed generation. The statute provides that “[t]he commission shall ensure that opportunities for the installation of distributed generation, as that term is defined in section 216B.169, subdivision 1, paragraph (c), are considered in any proceeding under section 216B.2422, 216B.2425, or 216B.243.”<sup>228</sup>

This statute is satisfied because ITC Midwest considered the addition of generation resources instead of transmission facilities and concluded generation could not eliminate the deficit of generation outlet capacity on the transmission system.<sup>229</sup>

**F. Summary of Rule and Statutory Analysis**

The foregoing analysis confirms that ITC Midwest met its burden to prove by a preponderance of the evidence that MVP 3 is needed and that there is no more reasonable and prudent alternative on the record. The collective testimony

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<sup>227</sup> Ex. 402 at 4 (Chatterjee Surrebuttal).

<sup>228</sup> Minn. Stat. § 216B.2426.

<sup>229</sup> Ex. 6 at 87 (Certificate of Need Application).

and evidence demonstrate that MVP 3 is needed for multiple reasons. First, it is needed to alleviate existing SPSs and provide a 345 kV tie between Minnesota and Iowa which will enhance local and regional reliability. Second, it is needed to increase the transmission outlet capability in the Buffalo Ridge area. This capacity will be used by existing wind projects that are currently curtailed, new projects, including 750 MW of wind energy approved in Docket Nos. E002/M-13-603 and E002/M-13-716 that are necessary to meet Minnesota's RES and future projects to meet Minnesota's RES and the RPS requirements of other states. Third, MVP 3 is needed to improve the efficiency of the energy supply in Minnesota and neighboring states by reducing losses and congestion. The engineering and PROMOD analyses show that MVP 3 will reduce transmission system losses and lead to lower energy production costs. By enabling more wind generation, MVP 3 will also reduce emissions.

### **VIII. RECOMMENDED COMPLIANCE FILINGS**

The DOC DER and ITC Midwest recommended certain compliance requirements for MVP 3 and future projects.

DOC DER had two recommendations. First, Dr. Rakow recommends that the Commission order ITC Midwest to make a compliance filing containing a spreadsheet ITC Midwest can use to calculate the cost of alternatives in future

Minnesota Certificate of Need filings in a consistent manner.<sup>230</sup> Dr. Rakow further recommended that the Commission require that the spreadsheet enable ITC Midwest to include the Commission's carbon dioxide internal costs and the externality values when considering line losses.<sup>231</sup> ITC Midwest does not oppose these requirements, but believes further consultation with DOC DER is necessary to determine the specific form that would be acceptable to the DOC DER. Therefore, ITC Midwest proposes to work with DOC DER and discuss development of a form that will provide the information that will best facilitate review of future projects by DOC DER and the Commission.

Second, DOC DER recommended that the Commission "limit the recovery of any cost overruns to no more than the cost approved in this proceeding through riders".<sup>232</sup> The referenced rider, the Transmission Cost Recovery Rider ("TCR"), Minnesota Statutes Section 216B.16, subd. 7b, allows a utility to recover the costs net of revenues for its transmission projects that obtain a Certificate of Need prior to the assets being placed in rate base. The rider also allows public utilities to recover "charges incurred by a utility under a federally approved tariff that accrue from other transmission owners' regionally planned

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<sup>230</sup> Ex. 205 at 21, 44 (Rakow Direct); Ex. 207 at 12 (Rakow Rebuttal); Ex. 208 at 35 (Rakow Surrebuttal).

<sup>231</sup> Ex. 205 at 21 (Rakow Direct).

<sup>232</sup> Ex. 211 (Johnson Errata).

transmission projects that have been determined by the Midcontinent Independent System Operator to benefit the utility or integrated transmission system.” Mr. Johnson testified the rider allows public utilities the “extraordinary” recovery of costs in advance of a general rate case.<sup>233</sup>

ITC Midwest’s rates are regulated solely by the Federal Energy Regulatory Commission and, as noted above, are subject to the control and challenge procedures in Attachment O of the MISO FERC Electric tariff. ITC Midwest rates are not regulated under the TCR and ITC Midwest takes no position on the Commission’s authority over transmission cost recovery riders pursuant to Minnesota Statutes Section 216B.16, subd. 7b.<sup>234</sup>

ITC Midwest also proposed a compliance filing to address certain concerns regarding cost estimates. To ensure that the Commission has timely information, ITC Midwest commits that it will provide the Commission with updated cost estimates for the Lakefield Junction – Huntley and Huntley – Iowa border segments when it files all plan and profile documents for each segment.<sup>235</sup> ITC Midwest will also provide final actual costs within the 120 days after the Project

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<sup>233</sup> Ex. 203 at 14 (Johnson Direct).

<sup>234</sup> See Federal Power Act §§ 201(b)(1), 205(a), and 206(a); 16 U.S.C. §§ 824b(1), 824d(a), and 824e(a) (2012) (granting FERC exclusive jurisdiction over interstate transmission electric rates, including the authority to determine whether such rates are just, reasonable, and unduly discriminatory or preferential).

<sup>235</sup> Ex. 30 at 23 (Collins Rebuttal).



is placed in service.<sup>236</sup> ITC Midwest also commits to provide the Commission with notice of any submission ITC Midwest makes to MISO or the FERC that pertains to ITC Midwest's costs for MVP 3.<sup>237</sup> This will assist the Commission with its review of revenue requirement calculations so that it can decide how to engage in the review and challenge process.<sup>238</sup>

## IX. CONCLUSION

ITC Midwest respectfully requests that the ALJ conclude it has satisfied the Commission's requirements to establish three separate needs: reliability, generation outlet and efficient delivery of energy. ITC Midwest further requests that the ALJ conclude that MVP 3 will address these needs and that there is no more reasonable and prudent alternative on the record. In addition, ITC Midwest requests that the ALJ recommend that the Commission grant a Certificate of Need for the MN-IA 345 kV Project with the identified spreadsheet and cost update compliance requirements. Finally, ITC Midwest requests that that the ALJ adopt the Proposed Findings submitted along with this Brief.

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<sup>236</sup> Ex. 30 at 23 (Collins Rebuttal).

<sup>237</sup> Ex. 30 at 23 (Collins Rebuttal). This brief proposes a specific time period for filing final cost information.

<sup>238</sup> Ex. 30 at 22 (Collins Rebuttal).

Dated: July 11, 2014

**Respectfully submitted:**

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